

Monitoring Agreement and Progress Report

Reporting Period	October – December 2015
Local Authority	North Lanarkshire Council
Key Contact at Authority	
Attainment Advisor	

Agreed Improvement Plan

1	Data and Monitoring – Procurement of standardised assessment tool							
2	015/16 Allocation	£132,000	Planned Qua	arterly Spend	£132,000			
2015/16 Allocation		£132,000	Actual Quarterly Spend		0			
Teacl Other	Resources: hers rs (please state type source):	Agreed in Pla	an:	Secured: N/A				

Progress to date (please comment on areas of progress and slippage from plans):

- The procurement of CEM is in its final stages.
- Extensive consultation with all schools and other stakeholders has taken place around the development of an authority-wide monitoring and tracking system. This will enable schools to identify and support pupils experiencing poverty-related barriers to their learning.
- A number of development sessions took place to devise the prototype tracking and monitoring system. Contributors included members of the project team and the Attainment Advisor.
- Primary 1 CEM baseline assessment was administered across all primary schools. This was collated and used to inform practice at both authority and school level.

Reflections on Impact: (Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?)

- Schools are becoming more confident in using CEM and other data to identify children experiencing barriers to their learning and implement appropriate interventions.
- Analysis from CEM data at an authority level highlighted underachievement in the area of phonological awareness amongst some of our most deprived children. This led to development work and training opportunities (see literacy section).

Next steps:

- Effective practice around the intelligent use of CEM data, and how this can be embedded within a whole-school monitoring and tracking system, will be disseminated to all Head Teachers.
- Agreement will be reached by end of January 2016 on the initial version of the CANcan monitoring and tracking system. This will be available to schools by end of February 2016.
- Training will be offered to all schools on using data to develop and implement appropriate
 interventions to narrow the attainment gap. Attainment Advisor will support this work in
 partnership with the project team and school staff.
- Training will be provided on the administration and analysis of CEM data Primary 1, 3, 5 and 7.

2	Literacy (as per revised plan) * spread across Literacy, Nurture and Physical Health					
2015/16 Allocation		£132,000	Planned Quarterly Spend			
		£2,032,000*	Actual Quarterly Spend		£42,200	
Teacl Other	Resources: hers rs (please state type source):	Agreed in Pla	an:	Secured: 5.2FTE		

Progress to date (please comment on areas of progress and slippage from plans)::

Regular 'literacy layer' sessions were facilitated between October and December 2015. These sessions focused on consultation, planning and actions based on the NLC CANcan project plan. Specific areas for focus included:

- Principles and research underpinning the attainment challenge
- Consultation around the development of a database for monitoring and tracking
- Principles and research underpinning evidence based practice in the area of literacy
- Consultation with HTs around the choice of evidence based resources to be used within in the Authority
- Training for Senior Managers in assessment and intervention of children experiencing difficulties with literacy
- Training to school staff in the Primary One Assessment and Action Resource (delivered in conjunction with the Attainment Advisor)
- Training and consultation around the development of an enhanced Early Level literacy
 approach particularly focusing on Nursery to P1 transition and the P1 curriculum, including
 phonological awareness (in conjunction with Speech and Language Therapy)
- VERP training to Early Level staff
- VIG training to Psychologists, CLD staff, Speech and Language Therapists and Health Professionals
- The use of Early Years Practitioners to support SIMD 1-3 pupils in primary 1-3 in 40 of our schools with the highest levels of deprivation (funded by NLC)
- Considerable joint working with Speech and Language therapy to identify the most effective, evidence based approaches to work with school staff and Psychologists.
- Literacy training for Psychologists focusing on the application of evidenced based principles

Our Attainment Advisor has attended all literacy layer meetings and literacy training sessions. The CANcan team has worked collaboratively with schools, the Literacy Base, Speech and Language Therapy and Psychological Service to take forward this work.

Reflections on Impact: (Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?)

- A shared understanding has emerged around the field of monitoring and tracking in literacy.
- Staff involved in the training report to be more knowledgeable in the area of assessment of literacy difficulties. Follow up work will confirm how this knowledge has been embedded however early feedback from Psychological Service suggests that schools are more confidently triangulating assessment data and analysing this information to inform interventions (examples at school level are available).

- Staff report to be using CEM Baseline data (along with other intelligence) to identify P1 children requiring specific monitoring, tracking and intervention. In many instances the Primary One Assessment and Intervention Resource has been employed for this purpose.
- Case study data gathered of VIG and VERP indicate outcomes for children are being demonstrated. For example VIG sessions have been conducted with a primary age boy and his foster parent. The boy was engaged in on-going conflict with his twin and this was causing tension within the family home. He also was struggling to bond with family members and the placement was becoming precarious. After participating in the VIG process the family reported that the young boy was better integrated within the home and the relationship with his twin brother had dramatically improved. His behaviour in school had also improved and he was able to spend more time focusing on learning tasks.

Next steps:

- Provide on-site coaching and mentoring session in schools to support planning and implementation of attainment challenge work
- Provide training on evidence based approaches approved by SG in Dec 2016 e.g. phonological awareness, Wave 3, Rainbow Reading
- Following final consultation, establish electronic system to support effective monitoring and tracking in primary schools.
- Continue to develop the Early Level work with Speech and Language Therapy and 12 pilot schools
- Develop a training pack in the area of Literacy Difficulties to be delivered in schools by the Headteacher or link Psychologist. This will allow all staff to access this learning opportunity.

2	Nurture (as per revised plan) * spread across Literacy, Nurture and Physical Health						
2015/16 Allocation		£132,000	Planned Quarterly Spend				
	to 15/10 Allocation	*£2,032,000	Actual Quarterly Spend		£67,200		
Teac Othe	Resources: hers rs (please state type source):	Agreed in Pla 12 Family Lin		Secured: 0			

Progress to date (please comment on areas of progress and slippage from plans):

- A nurture self-evaluation tool has been developed and will be available to schools in the near future. The Attainment Advisor has been involved in this work.
- Solihull training has been identified and trainers secured for schools in the nurture layer. This will take place in February 2016.
- Input was provided to schools within the nurture layer on attachment and self-evaluation around the area of nurture. The Attainment Advisor has been involved in this work.
- The recruitment process for 12 Family Link Workers is now complete.
- There have been high-level professional discussions to determine the specific aspects of the role of Family Link Workers within CANcan, including new models for engagement with parents/carers and schools' practitioners.
- An information/orientation session took place with 300+ classroom practitioners in the nurture layer. The Attainment Advisor and Project Lead played a central role in this session.

Reflections on Impact: (Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?)

Early feedback from schools who have received Solihull training has been extremely
encouraging. Case Study evidence indicates that Solihull has had a positive impact on
approaches to supporting children and their families.

Next steps:

- CANcan Family Link Workers will be in post from 11th January 2016. Practitioners will be deployed across all 67 'keys to success' schools with additionality in the nurture layer.
- A briefing/engagement session will take place with CANcan CLD Senior Practitioners week beginning 18th January 2016.
- Solihull training will be delivered to schools within the nurture layer by end of February 2016.
- The nurture self-evaluation tool will be launched and made available to schools by mid-February 2016.
- The nurture layer schools will work with the Attainment Adviser who will assist in identifying a nurture baseline measure and bespoke action plan for each school
- We will continue to explore ways to embed principles of Solihull training through the school link
 Psychologist, Continuous Improvement Officer and Attainment Advisor

2	Physical Active Health (as per revised plan) * spread across Literacy, Nurture and Physical Health					
2045/4C Allocation		£132,000	Planned Quarterly Spend			
2	2015/16 Allocation	*£2,032,000	Actual Quarterly Spend		0	
Teac Othe	Resources: hers rs (please state type source):	Agreed in Pla 1 lead, 5 men facilitators		Secured: 0		

Progress to date (please comment on areas of progress and slippage from plans)::

- International research has been shared with school leaders involved in this layer. As a consequence schools are more aware of the link between physical active health and educational attainment.
- A tiered model involving a project manager, 3 mentors and 9 practitioners has been further developed. This model will allow effective provision to be delivered across 18 schools.
- Arrangements are in place for the recruitment of the team and this will be progressed during January and February 2016.
- Contact has been made with other potential facilitators working in this area and we continue to explore professional learning and training of school based staff.
- Physical Active Health layer schools are currently implementing the Miracle Mile.
- The NASA programme has been introduced to the physical active health layer schools and is confidently underway in some of them.

NB. Progress in this area has been delayed pending allocation of funds to the project.

Reflections on Impact: (Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?)

- Verbal feedback indicates that the implementation of miracle mile is already having an impact on behaviours and concentration levels in some schools.
- NASA's Train Like an Astronaut project has cause excitement due to the links made who was launched to the International Space Station on 15

December 2015. Schools are following his progress and using it to set physical fitness and research goals

 Progress in this area has particularly been curtailed due to slippage in getting our revised plans agreed. Official confirmation only received on 22 December 2015.

Next steps:

As detailed in revised project submission:

- Progress the recruitment of 5 Mentors and 9 facilitators
- Implement initial training and benchmarking processes

3	Leadership (as per revised plan)					
2015/16 Allocation		£132,000	Planned Quarterly Spend		£15000 £260,000	
		£15,000	Actual Quarterly Spend		£83,900	
Teac Othe	Resources: hers rs (please state type source):	Agreed in Plan/a	an:	Secured: n/a		

Progress to date (please comment on areas of progress and slippage from plans):

- All primary schools have been grouped into families of six, based on school roll and SIMD.
- A lead Head Teacher has been nominated for each family group; they attended a developing leadership session in early November.
- Support materials were developed for the initial family group meeting; the Attainment Advisor was involved in developing these resources.
- Each family group has identified three themes to explore during the course of the session and have selected related challenge questions from HGIOS4.
- Each family group has met on two occasions thus far and will meet a further 2-3 times prior to June 2016.
- A Twitter account has been set up to help move around ideas freely and expedite rapid sharing of ideas and effective practice.
- A GLOW site has also been set up to allow schools to share and access useful documents and resources. All documents uploaded to GLOW will be 'validated' by family groups.
- VERP training to Early Level staff
- VIG training to limited number of Psychologists, CLD staff, Speech and Language Therapists and Health Professional as full approach currently tied up in procurement red tape.

Reflections on Impact: (Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?)

- Extremely positive feedback has been received from almost all family groups. Head Teachers
 have spoken of the value of networking with schools of similar profile and appreciate the focus
 on schools being empowered to support and challenge one another and find solutions which
 meet their specific context.
- All family groups have identified tracking attainment over time as a key priority. This has allowed 'Leadership' lead to begin to connect ideas from across all family groups.
- Case study data gathered of VIG and VERP indicate outcomes for children are being demonstrated

Next steps:

- Family groups will receive input on the draft CANcan monitoring and tracking system week beginning 18th January and, as part of ongoing consultation, will have the opportunity to discuss and offer feedback.
- The GLOW site will begin to be populated with 'validated' resources.
- The self-improving schools forum will take place in June 2016, providing an opportunity for family groups to share their learning with other 'families' and to agree on next steps.
- Family groups will begin to facilitate opportunities for leaders at all levels to come together.
- Continue to roll out VIG and VERP training to staff.

4	4 Project Team (as per revised plan)					
2045/4C Allocation		£132,000	Planned Quarterly Spend		х	
2	015/16 Allocation	£181,000	Actual Quarterly Spend		£115,500	
Teac Othe	Resources: hers rs (please state type source):	Agreed in Pla	an:	Secured:		

Progress to date (please comment on areas of progress and slippage from plans):

- Weekly meeting between Project Lead and Attainment Advisor to discuss progress, work schedules and plan next steps.
- Bi-monthly meeting take place with Head Teachers from the 67 CANcan 'keys to success' schools. The Attainment Advisor is invited to attend these meetings.
- The CANcan Core Group meets on monthly basis; the Attainment Advisor is a member of this group. All CANcan business and progress is reported and discussed and actions to be taken agreed. All meetings are minuted

Reflections on Impact: (Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?)

- CANcan has a very high profile within North Lanarkshire. The new Chief Executive and SRO have visited 10 'key to success' schools.
- A report has been submitted to Learning and Leisure Service Committee with agreement to provide update and progress reports twice a session.
- A Twitter account @CANCANNorthlan has been set up to help share events, ongoing work and effective practice. This also keeps the work at the forefront of school thinking.
- The Literacy and Nurture layers, along with Data and Monitoring and Leadership have been effectively led by the members of the CANcan Core Group; all areas have been significantly progressed (see relevant sections for detail).

Next steps:

- Continue with the deep dive approach within Literacy, Nurture and Physical Active Health as detailed in relevant sections above and revision submissions.
- Further progress Data and Monitoring and Leadership (see relevant sections).
- Possibly introduce additional layers (Numeracy and Mental Health) in Term 4, should resources permit in the new financial year.





Appendix 11. Nurture Layer Schools Improvement Themes

Scottish Attainment Challenge Year End Progress Review

North Lanarkshire Council

School	Psychologist	Senior Practitioner	Improvement theme (self evaluation/plan)	1 st steps (development planning)	Notes
Primary School A			Improve parent partnership working through delivering an integrated service with home, school and CLD to support meeting the holistic needs of identified families ensuring equity for all. P1 curriculum strongly underpinned by play- improvements focusing on nurture.	Families identified. Focus on nurturing communities (Info from CLD)	
Primary School B	✓	✓ ————————————————————————————————————	Nurture: Effective approaches to early intervention, family learning and support. Continue to develop nurture across the school. • Development of 6 principles of nurture • Increased parental engagement • Every class a nurturing environment		Dedicated nurture room P1 and 2
Primary School C	1	✓	Nurture principles –nurturing communities. Further develop work from Solihull training. Embed principles of nurture Positive behaviour- policy review		
Primary School D	1	✓	Provide inclusive nurturing learning environment built on positive relationships. Children feel listened to and secure in	Nurture space being developed. Staff training undertaken. Family	

			discussing personal concerns	learning focus. (info from CLD)	
School	Psychologist	Senior Practitioner	Improvement theme (self evaluation/plan)	1 st steps (development planning)	Notes
Primary School E	✓	✓	Staff awareness of 6 principles. Parental engagement with learning. Implementation of Solihull Offering Understanding your Child to parents.	Staff awareness of 6 principles Engagement with parents and carers particularly hard to reach HGIOS 4 – audit family learning and parental engagement	Targeted interventions HMIE identified key strength
Primary School F	✓	✓ ————————————————————————————————————	6 principles of nurture embedded and evidenced through all interactions. Detailed actions and measures of success outlined Collaborative working with CLD, psychological service and parents. UNCRC understood by children and all stakeholders. Restorative approaches. Mental Health interventions and support.		Solihull training still to be delivered
Primary School G	✓	✓	Included in health promotion: meeting children's emotional needs Parental involvement: nurturing children's emotional intelligence. Improvement priorities focus on attainment.		No SE re nurture. Staff shortage an issue.

Nurture Layer Schools Improvement Themes

School	Psychologist	Senior Practitioner	Improvement theme (self evaluation/plan)	1 st steps (development planning)	Notes
Wishaw/Shotts					
Primary School H	✓		Our children & their family's needs, progress and achievement will be robustly tracked & monitored through our Nurturing approaches in order to help inform discussion and promote further learning using GIRFEC, Staged Intervention & HNIOS Frameworks. All stakeholders will increase their motivation, resilience and achievement through adopting a Growth Mindset approach.		SE undertaken with all stakeholders including parent council and community organisations. Nurture group well established Nurture Family Learning programme. Work with nurseries 5 families identified.
Primary School I	✓	✓	Language is a vital means of communication Children's Learning understood developmentally- further training on attachment and brain development Nurturing curriculum Nurturing communities Philosophy for children	Wider systemic issues identified	Headteacher undertaking VIG. Staff member undertaking VERP Family engagement priority
Primary School J	✓	✓	Nurture and family engagement Solihull Key adults Soft start Enhanced transition for P1		Focus on Polish community engagement

Nurture Layer Schools Improvement Themes

School	Psychologist	Senior Practitioner	Improvement theme (self evaluation/plan)	1 st steps (development planning)	Notes
Primary School K	1	✓	Professional learning opportunities around nurture. Develop capacity in Family Learning opportunities in collaboration with CLD senior practitioner		
Primary School L	1	1			
Primary School M	1	✓	Health and wellbeing priority – deeper understanding of SHANARRI amongst children PAThS Opportunities to involve parents in children's learning		Isolation, staff shortage. Need to develop parental involvement (from CLD practitioner)
Primary School N	1	1	Improve parental engagement through development of an understanding of nurture and embed nurture principles within the school. Targeting support		

School	Psychologist	Senior Practitioner	Improvement theme (self evaluation/plan)	1 st steps (development planning)	Notes
Primary School O	✓	✓	Nurturing Schools Framework Nurture/Health working party to focus on self evaluation and planning for improvement Impact of Solihull.		
Primary School P	✓	✓	Identified pupils from SIMD 1-3 who may benefit from further interventions will be offered the following: • Targeted support will be offered to parents for cooking sessions • Family fitness and fun after school clubs • Solihull Parent course	All behaviour is communication: understanding the function of behaviour Nurturing staff	Physical active health identified
Primary School Q	1	✓	Develop teacher capacity in nurturing. Target interventions to ensure equity. Circletime and PAThs Growth Mindset SfG and RoE. Family learning sessions supported by CLD		
Primary School R	✓	/			
Primary School S	✓	√			

School	Psychologist	Senior Practitioner	Improvement theme (self evaluation/plan)	1 st steps (development planning)	Notes
Primary School T	✓	✓	Embed nurture in all aspects of the work of the school. Culture, ethos and actions will provide a source of stability and consistent responding. Create conditions that will encourage the promotion of emotional wellbeing for children affected by nurture and attachment difficulties. 6 principles of nurture Increased parental engagement.		
Primary School U	1	✓	Focus on Solihull approach Working party to develop activity around containment Work with parents through approaches recommended by working party Pilot new programme for H&WB		
Primary School V	√	✓	Care and Nurture/ Attachment Issues and the Impact On Attainment – Links to SIMD Staff will examine the impact of children who experience issues around Care and Nurture in the home and look at how this affects attainment results as well as social and emotional issues. Staff will focus on children		Using HGIOS 4 Parent Council leading on this.

	living in SIMD 1,2 and 3 and how their progress in mathematics and language compares to their peers from SIMD 4-9. Staff will attend development days on Solihull and, "Not Now Bernard," presented by Jenny Nock. The staff will work in partnership with CLD worker to extend the range of parent partnerships within the school community. The Parent Council will also support self-evaluation around The National Framework- Sharing Information for Better Learning.	
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West Dunbartonshire

Year 1 Q3 Progress Report



Scottish Attainment Challenge - Challenge

Year 1 EOY



Updated - Scottish Attainment Challenge

Year 2 Mid Year



Scottish Attainment Challenge - West Dur

Year 2 Q3 Highlights and Challenges Primary & Secondary



West Dunbartonshire
- Secondary Highlight - Primary Highlights an

Year 2 EOY Primary & Secondary







West Dunbartonshire West Dunbartonshire Appendix 1 - WDC Council - End Year ReCouncil - End Year ReEnd Year Report - Set

Evaluation Attainment Scotland Fund Local Authorities Mini-Survey

- 1. We would like to ask about your experiences in working with Education Scotland, the Scottish Government and/or Attainment Advisers. What do think is working well?
- 2. What do you think could be improved in working with Education Scotland, the Scottish Government and/or Attainment Advisors?
- 3. What, if any, UNINTENDED positive consequences from taking part in the Attainment Scotland Fund have there been, either for your authority or for schools in your authority?
- 4. What, if any, UNINTENDED negative consequences from taking part in the Attainment Scotland Fund have there been, either for your authority or schools in your authority?
- 5. To what extent do you think the different improvements you are making as part of the Attainment Scotland Fund are sustainable beyond the four years of the funding, and why?
- 6. Is there anything else you'd like to share about your experiences so far with the Attainment Scotland Fund?



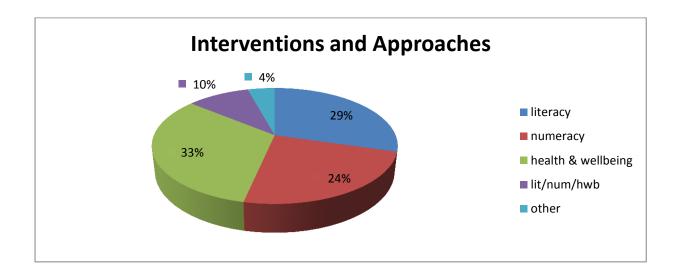


Scottish Attainment Challenge Schools' Programme 2016/17 Evaluative Reports Review

The following information is taken from 2016/17 Evaluative Reports submitted by the 46 primary schools and 28 secondary schools included in the Schools' Programme in May 2017. It should be noted that the interventions and approaches included here represent only the work schools undertook using Attainment Scotland Fund money. This may not represent the totality of the work that schools carried out during 2016/17 that positively impacted on attainment.

The purpose of this review is to provide an overview of the activity within the Schools' Programme 2016-17. This is intended to support collaboration between schools and authorities and provide scope for sharing what works. The interventions and approaches outlined by the schools consist of a range of commercially produced resources, materials developed by local authorities (LAs) and bespoke programmes devised by individual and groups of schools

The chart below shows the breakdown of interventions and approaches across literacy, numeracy and health and wellbeing over the previous year.



Key findings

Evaluative reports were submitted by all 74 schools involved in the Schools' Programme in May 2017. The reports included a total of **796** interventions and approaches focussing on **literacy**, **numeracy and health and wellbeing**. These are broken down below.

- 235 literacy interventions and approaches were identified across 66 of the 74 schools.
- 190 numeracy interventions and approaches were identified across 55 of the 74 schools.

- 259 health and wellbeing interventions and approaches were identified across 68 of the 74 schools.
- 78 combined literacy, numeracy and health and wellbeing interventions and approaches were identified across 33 of the 74 schools.

A wide range of measures were used by schools to describe the implementation and impact of approaches.

The key levers of Learning & Teaching, Leadership and Families and Communities were also evidenced in the Schools' Programme evaluations for 2016/17. The table below outlines the breakdown of the interventions and approaches across these 3 levers.

School Self- Evaluation of Proposals	Learning & Teaching	Leadership	Families & Communities
Literacy	63 (85%)	24 (32%)	27 (36%)
Numeracy	50 (68%)	23 (31%)	20 (27%)
Health & Wellbeing	39 (53%)	32 (43%)	35 (47%)
L/N/HWB	24 (32%)	14 (19%)	13 (18%)
Other	7 (9%)	13 (18%)	3 (4%)

Families and Communities

Families and communities interventions and approaches feature strongly across the Schools' Programme evaluative reports. These show that **76% of schools** (56 from 74) across all 12 LAs outlined family and community related interventions and approaches related to **literacy**, **numeracy and health and wellbeing**

Partnership working with the 3rd Sector

A number of 3rd Sector partnerships are included in the Schools' Programme Evaluations for 2016/17. In total, **78% of schools** across 10 LAs have highlighted 3rd Sector opportunities within **literacy**, **numeracy**, **health and wellbeing**. Below is a summary of the 3rd Sector partnerships collated from the 2016/17 Schools' Programme Evaluations.

- **59**% of schools included **3**rd **Sector** opportunities as part of their **literacy** interventions and approaches (34 out of 58 schools).
- 26% of schools included 3rd Sector opportunities as part of their numeracy interventions and approaches (15 out of 58 schools).
- 67% of schools included 3rd Sector opportunities as part of their health & wellbeing interventions and approaches (39 out of 58 schools).
- 19% of schools (11 out of 58 schools) included 3rd Sector opportunities across combined literacy, numeracy and health and wellbeing interventions and approaches.



Monitoring Agreement and Progress Report

Reporting Period	October - December 2015
Local Authority	West Dunbartonshire Council
Key Contact at Authority	
Attainment Advisor	

Agreed Improvement Plan

1 Transition 1 – early level project to establish a multi-agency 'Family Support Campus'					
2017/10 11 11		CO1 E10	Planned Qu	Planned Quarterly Spend	
	2015/16 Allocation	£81,510	Actual Qua	rterly Spend	£38, 262
Teac Other Planr 1.5F £17,8 1FTE (betw Early	rs (please state type of resource): ned staffing from March 2015: TE Outreach workers (£35,471 + 872) E Educational Psychologist veen £56,853 and £63,281) stages teacher 0.5FTE (£21,804) stant psychologist 0.2FTE	Agreed i	Secured: 0.5FTE EST (£8,42 assistant psycholog 0.2FTE (4,465) 0.4 FTE HT Second £17,602		chologist 5)
early	ary HT seconded (0.4) to support level literacy improvement				,

Progress to date (please comment on areas of progress and slippage from plans):

TRANSITIONS 1

An addition to the original project submission:

Action plans produced to support a strategy to improve early level attainment in literacy. The key work streams are: transformation of early level curriculum models; early level literacy improvement.

Consultations and discussion have been undertaken with HSCP colleagues to scope joint projects and resolve recruitment issues

Reciprocal Teaching introduced in all primary schools and planned for all early learning and childcare establishments.

EST's in partnership with early years staff, introduced RT in all early years establishments. Working group established to develop early level guidance.

All pre-five practitioners, early stages teachers, P.1 teachers have attended training: day one on play based learning. Attendees carrying out action research before recall day 2. Incredible Years parenting trainer of trainers course completed by 3 additional member of WDC Educational Services staff.

Incredible Years Classroom Management – training dates are in place for staff

Reflections on Impact: (Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?)

Evaluation of early level curriculum provision has identified as a key area for improvement curriculum content and learning experiences planned to support early linguistic and communication. This has resulted in a workstream being planned to improve our service provision.

Children are being exposed to the Reciprocal Teaching methodologies, learning the terminology associated and engaging in the process.

Two parenting programmes have been organised for two primary schools with the view to expanding this to targeted schools and ELCCs.

Staff in early years and primary one classrooms are trialling approaches to play-based learning as a result of training delivered to all primary one teachers and early years staff. Children are benefitting from this training and impact will be reported on day two of the training.

WDC Play Based Learning Google community created.

Next steps:

Play based Learning

All pre-five practitioners, early stages teachers, attend training day two. Attendees to implement project and develop around the following tasks:

- TASK 1: How have you taken forward further discussions on "Why Play?" to develop a shared understanding with others of the value of Play in Early Learning?
- TASK 2: In reviewing your environment for Early Learning through Play, what changes have you made and why? What impact has it made to children's development in Literacy / Numeracy / Health and Wellbeing?

Action research development for recall training day three.

Quality Assurance measures to be developed e.g. QIO visit 2 focus, collaborative working within learning communities, moderation, impact on attainment and achievement

Family Support Hubs

9 backfill teachers

5 raising attainment teachers

Training programme developed for staff on key strategies: reciprocal teaching; Nurture; Incredible years

Plan developed for the introduction of parental support

Enhanced transitions working group established

Risk Matrix development working group established

2	Transition 2 – primary to secondary support focusing on improving learning and teaching in maths through employing maths specialists and a range of other interventions, to improve transition					
	2015/16 Allocation	£476,752	Planne	d Quarterly S	pend	£203,071
			Actual Quarterly Spend £204, 5			£204, 571
Staff Resources: Transitions 1 Teachers Others (please state type of resource):				Agreed in Plan: Yes	Secur All Sec	cured

EDO		
Transitions 2 (AMENDED PROJECT)		
Staffing already in place – ESO numeracy		
 Planned staffing from Jan 15 – 2 x PT posts for 		(approx. cost
STPTA LLC – RAIL (transitions)– backfill 0.4	TBC	£42,763.5 per LLC)
management time for each PT and enhanced salary		
to point 1 PT)		
 Planned staffing from August 15 –2 s PT posts for 5 		(approx.£213,817.5)
LLC's –		

Progress to date (please comment on areas of progress and slippage from plans):

- 5 Maths raising attainment teachers have been employed, providing each learning community with maths specialist teacher. EDO appointed
- Detailed action plan produced for maths attainment teachers, key workstreams are;
 - Support SIPP Projects
 - Developing a positive attitude to Numeracy and Mathematics across our whole learning community, fostering high aspirations and an ethos of achievement / Tackling Mindsets.
 - Ensuring all our learners are secure in conceptual development of Numeracy and Mathematics skills through a shared understanding of numerical development, for example Stages of Early Arithmetical Learning (SEAL).
 - Enabling all our learners to demonstrate confidence in analysing information, solving problems and making informed choices using their skills in Numeracy and Mathematics.
 - Encouraging active involvement of parents and carers to support learners within Numeracy and Mathematics.
 - Ensuring continuity and progression in Numeracy and Mathematics learning through effective transition at each stage.
- Each of the 5 LC's have committed to a SIPP research project, focusing on improving Numeracy.
- Meet maths PT's to design an action research project. Focus: Fractions, decimals and percentages at second / third level
- Maths Raising attainment teachers released from schools. Focus schools allocated to each; liaise with primary HT's re role and remit to ensure clear and effective communication
- Agreement reached between 5 secondaries for an action research project at S2 involving all PT's of maths. One secondary HT has agreed to lead this aspect.

ADAPTATION TO ORIGINAL PROJECT PLAN

After consultation with secondary and primary HT's it was decided to adapt the original project submission for extended transition.

Focus locations

Focus attention and enhanced transition to be developed within all learning communities with an identified group of learners. Initially the bid was to develop enhanced transition from P7-S1 however through consultation with secondary HT's and representatives from the primary sector it was decided that for maximum impact that the project should straddle second into third level with a focus on numeracy.

Year 1 – Planning and identification of learners

Year 2 – Pilot programme STPTA I5's

Year 3 – STPTA year 2 – p5 and p6 group All other LLC's roll out

Pilot this in St Peter the Apostle LC

Roll out to other LC

P5, 6 and 7 going to secondary school to learn numeracy as a block

Project Outline

Year 1

0ct - Dec

Convene planning group from pilot LLC

Proposed planning group – Primary HT(s), DHT transition, STAR secondary, QIO, P5 teachers, ESO Numeracy, PT maths, representatives from secondary numeracy across learning group

- Develop action plan for implementation in LLC
- Identification of key teachers/personnel that will support programme potential to develop 2 x PT posts per LLC – RAIL (transitions)
- · Identification of data to identify gaps in numeracy in relation to local LLC context
- Identification of professional learning needs in relation to project
- Identification of personnel that would need to be in post to support delivery

Jan - March

- Identification of learner's from identified primaries at P4

 SIMD deciles 1-3
- From within these deciles identify learners who are on cusp on lowest 20%, on identified measures (just into middle 60%) using GL data, individual school/llc data sets
- Plan bespoke enhanced transition programme year 1
- Develop learner workshop what they can expect
- Develop parental workshop what they can expect

April - June

- Term 4 engage with learners and parents delivery of workshops
- Term 4 learners engage in attitudinal survey in relation to numeracy
- Term 4 learners complete baseline assessment

Year 2

- Pilot programme in STPTA
- Ongoing termly evaluations learners, parents, staff
- Convene implementation group from all other LLC's replicate process taking into account lessons learned and ongoing evaluations.

Reflections on Impact: (Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?)

- Strategy to raise attainment produced providing a clear framework for improvement linked to national and international research.
- Improved quality of teacher planning and reflection for delivery of units of learning in maths as evidenced on WDC WEDAR site.
- Improved quality of learner experiences in P1 / P3 as evidenced on WDC WEDAR site.
- Raised profile of benchmarking as maths attainment teachers to conduct assessment of all children in P1 / P3 in maths / numeracy in January 2015.

Next steps:

- Produce programme for summer school- numeracy focus. Identify target groups of pupils and design a programme to support their needs
- Support school leaders to review curriculum models with the aim of transforming models
 of delivery for maths / numeracy using a more rigorous, evidence based model for
 tackling inequity in maths / numeracy.
- Conduct assessment of impact on attainment of P1 &P3 numeracy projects implemented August – December 2015. This exercise will be carried out January 2016.

- Plan parental open days on supporting a shared understanding of numerical development using SEAL (Stages of Early Arithmetic Learning) Identify a key stage to target in parental learning programme phase one.
- Support the primary /secondary extended transition project (Themed Project 4)

3	School Improvement Partnership Programme – extending on the range of collaborative work to involve more schools. The focus will be on improving attainment in literacy and numeracy					
					£31,354	
2015/16 Allocation £234,500 Actual Quarterly Spend £3				£31,354		
Teach Other The s Propo activit partic	Staff Resources: Teachers Others (please state type of resource): The secondment of a HT 0.4FTE to Proposed commissioning of staff to participate in collaborative activities – maximum of 4 meetings per staff member participating in SIPP Proposed employment of supply staff to enable one learning				Secured: All Secured £31,354	

Progress to date (please comment on areas of progress and slippage from plans):

An addition to our original project submission

- A proposal for a WDC 'Supported Self Improving Model' to tackle inequity has been produced to support / challenge schools with under performance. This will be piloted in one establishment in January 2016. To support improvement headteacher to headteacher; school to school improvement partnerships will be formed.
- Commitment by 25 schools to 8 raising attainment SIPP Projects plans agreed and drawn up
- Suite of training opportunities planned and agreed with Glasgow University Partnership
- WDC School Improvement Partnerships Google Website established.
- Awareness raised of digital data collection and collation using Google Forms
- Collaborative Action Research (CAR) Plans produced for the research projects.
- Training for all staff involved in CAR's in November 2015 delivered in partnership with WDC and Robert Owen Centre
- 'Myself as a Learner' purchased to use in all primary schools.
- Presentation at ADES and Education Scotland on our local authority approach to CAR.

Reflections on Impact: (Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?)

- Approaches to mental agility and Cognitive Guided Instruction being used to increase the number of pupils gaining success in maths / numeracy.
- Teachers are critically evaluating the impact of strategies to teach literacy and numeracy on tackling inequity.
- School leaders are critically reviewing improvement plans to review impact of plans and provision on tackling inequity

 Raised profile of accountability for attainment /performance based on attainment data, validation data, school leadership.

Next steps:

- Finalise and advertise dates for suite of training opportunities
- Extend communication through Google +
- Meet with small number of groups to plan SIP Projects
- Further develop data collection and collation methods and processes for SIPs
- Collect attitudinal pre-survey results
- Collate and analyse pre-assessment results for all SIP Projects
- Evaluate data collected from phase one of project development.

4	STEM – a strategy and staffing to use STEM to improve literacy and numeracy, and interest in STEM subjects					
204	2015/16 Allocation £113,873 Planned Quarterly		y Spend	£53,587		
20			Spend	£	53,587	
Teach Other EDO 3 PTs	Staff Resources: Teachers Others (please state type of resource): EDO STEM 3 PTs (0.4 FTE) have been appointed (1 in each STEM Hub) HT Secondee (0.4 FTE)			Agreed in Plan: YES		Secured: All Secured £53,587

Progress to date (please comment on areas of progress and slippage from plans):

- Principal Teachers have now been appointed across the three STEM Hubs and are collaborating to lead developments within each school with a view to raising attainment in literacy and numeracy.
- Principal Teachers have been charged with ensuring that, although the Hubs are being
 used to deliver STEM education, teachers are planning learning with a focus on literacy
 and numeracy. Learning experiences to develop reading, writing, talking, listening and
 numeracy in the Hubs are being planned and piloted.
- Functional writing rubrics have been developed in order to allow baseline quantitative
 data to be collected prior to a series of interventions being delivered. The same
 functional rubrics will be used to evaluate progress. Target groups of pupils have been
 identified for close monitoring, intervention, tracking.
- An attitudinal survey of pupils and parents will be conducted to gather information about levels of confidence in STEM related subjects and careers.
- Class groups have been identified and a tracking tool has been developed to allow pupil literacy and numeracy attainment to be recorded over time. This will allow attainment data to be filtered by SIMD profile and gender.
- Glasgow Science Centre are working in partnership to produce 'Inspire and Challenge' activities for use in our STEM Hub schools.
- Core curricula are currently being developed in each of the STEM Hubs to provide a framework for learning for pupils working at all levels. .
- In partnership with SSERC and Glasgow University a project to support the application of numeracy problem solving skills in science is planned.
- All secondary HT's have been consulted to assess our local capacity for secondary staff and senior pupils to work across sectors to support STEM development and learning.

 Negotiations are progressing with the Engineering Development Trust (EDT) to produce a programme of industry supported STEM activities for P7.

Reflections on Impact: (Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?)

- Increased focus on the impact of curriculum provision on literacy and numeracy attainment.
- Children learning maths in active, motivating experiences developing learner confidence particularly children in lower SiMD Deciles
- Wider range of quality of experience in STEM subjects
- Communication between and across schools
- Positive role models in schools (S5 / S6 pupils) supporting the learning of younger pupils
- Improved environments for learning to increase pupil motivation and ability to engage in learning
- The STEM Hubs have provided opportunities for our vulnerable children to gain success and a sense of achievement through using and applying their literacy and numeracy skills in STEM activities.

Next steps:

- Meet with EDT to finalise arrangements for their programmes;
- Review baseline data and plan for the capture of qualitative data;
- Problem Based Learning training plan implementation in all schools;
- Develop skills frameworks for Numeracy and Sciences in line with the Significant Aspects of Learning.

5	Other – Data Officer and Programme Manager					
2015/16 Allocation £117,830		Planned Quarterly Spend			£5,684	
		£117,830	Actual Quarterly Spend			
Staff Resources: Teachers Others (please state type of resource):				Agreed in Plan:		although job ed and position sed in January

Progress to date (please comment on areas of progress and slippage from plans):

Not secured although job profile produced and position being advertised in January 2016

Reflections on Impact: (Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?)
Next steps:



Combined Final Quarter/End Year Review

Reporting Period	April 2015 – March 2016 Annual Report
Local Authority	West Dunbartonshire Council
Key Contact at Authority	
Attainment Advisor	

Agreed Improvement Plan

1a	Transition 1 – early level project to establish a multi-agency 'Family Support Campus'			
2015/	16 Allocation	£81,510	Planned Quarterly Spend	£41, 240
201	5/16 Actual Spend	£64,084	Actual Quarterly Spend	£7612
Teach Others	Resources: ners s (please type of	Agreed in Plan:	Secured this quarter: Secured in total:	£7612 £64,084
resou	rce):			

Year 1 Progress to date: Please comment on areas of progress and slippage from plans.

- Training matrix and training programme/s for key strategies: Nurture; IY; in place
- Continue dialogue with SW to identify how the family hub concept can be supported.
- Discussions undertaken with HTs involved in the project and colleagues from SLT to scope work on training, environmental audit and programme development.
- Educational Psychologist has been appointed (start date mid-March 2016)
- Reciprocal Teaching (RT) is ongoing in primary schools.
- Meeting with outreach worker and HT with regard supporting parents across transition
- A working group on RT in ELCCs has been set up to develop early level guidance. (draft guidance now completed)
- IY classroom management training has started for staff in target schools
- A review of literature has been commenced to identify key factors which make a difference

Year 1 Reflections on Impact: Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?

- Children are now experiencing RT methodologies, they are learning the terminology and engaging in the process
- Staff are engaging in training
- Further Nurture groups have been established and children are benefiting from these experiences.
- Two parenting programmes have been organised for two primary schools with a view to expanding this to targeted ELCCs in August 2016.

Year 1 Measurement of progress

Please provide details of how you have measured progress or impact of this element of your plan. What did this show? Please provide any data or other evidence you have on the progress or impact of this element of your plan.

- West Dunbartonshire Council Project Board: Reports to measure progress and impact
- Dates agreed to begin collecting baseline measures to track improvements in attainment and engagement in learning
- Plans for surveying staff knowledge and understanding of key influences on what makes a difference in closing the attainment gap and the impact of poverty on attainment
- A range of baseline data gathering tools have been identified

1b	Transition 1 – the development of early level play based learning			
201	5/16 Allocation	£81,510	Planned Quarterly Spend	
20	15/16 Actual Spend		Actual Quarterly Spend	
Staff Teach	Resources:	As per Transition 1a	Secured this quarter:	As per Transition 1a
	s (please state of resource):		Secured in total:	

Year 1 Progress to date: Please comment on areas of progress and slippage from plans.

- Our cloud site Learning Through Play; all documents uploaded. Evidence that staff are beginning to use this site.
- All leaders, P1 and early stages teachers trained and piloting play based project.
- Through a task based approach, built into the three day training courses, for early level
 practitioners, written task work shows that participants have a deeper understanding of
 the pedagogy of play.
- 2 day leaders course:
 - feedback on tasks collated and shared
 - task completed by leaders
 - one priority next step provided by all leaders.

Year 1 Reflections on Impact: Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?

- Improved quality of learner experiences in early years settings and P1 reported.
- Best practice emerging within learning communities at P.1 and early years (specific schools and early years settings).
- Increased focus on learning through play and clear links to literacy and numeracy attainment.
- Learning environments are more exciting and motivating.
- Trends evident in project submissions.
- Leaders are clearer about what they are trying to achieve linking ideas to curriculum rationale and vision.
- Early years setting HMI feedback very good for learners' experiences including Reciprocal Teaching.

- Information leaflet for parents draft ready Sharing a Book.
- Early Years literacy questionnaire responses collated.
- · Draft early level reciprocal teaching.

Year 1 Measurement of progress

Please provide details of how you have measured progress or impact of this element of your plan. What did this show? Please provide any data or other evidence you have on the progress or impact of this element of your plan.

- West Dunbartonshire Council Project Board: Reports to measure progress and impact
- All course participants have completed the first part of their project and provided written
 evidence of this; collated for each learning community. Participants are beginning to
 share this on the Learning Through Play site.

2a Transition	2 – Maths Specialists to raise at	tainment in Numerac	;y
2015/16 Allocation	£476,752	Planned Quarterly Spend	£188,980
2015/16 Actual Spend	£446, 636	Actual Quarterly Spend	£202,901
Staff Resources:	Agreed in Plan: Staff Resources:	Secured this quarter:	All Secured £202,901
Teachers Others (please state type of resource):	Transitions 1 Teachers Others: 9 backfill teachers 5 raising attainment teachers EDO	Secured in total:	£446,636

Year 1 Progress to date: Please comment on areas of progress and slippage from plans.

- BGE presentation Highlighted the work of the raising attainment team and the key drivers which will form a Numeracy strategy.
- Training delivered- The raising attainment Maths teachers have provided the following training within a number of schools:-

Cognitively Guided Instruction

Mental Agility

Number Talk/ Number Sense

Reciprocal Maths

- Lesson modelling/lesson study The Maths raising attainment teachers are modelling CGI lessons in 20 schools at all stages and reciprocal Maths in 4 schools at two different stages. Number Talks/ Sense has been delivered collegiately to one school that will carry it forward at all stages.
- Working closely with the assessment and moderation project which has enabled teachers to work collaboratively, arriving at a shared understanding of standards and expectations for the broad general education. It involved teachers and other professionals working together, drawing on guidance and exemplification and building on existing standards and expectations.
- Training attended Nrich (Also attended by 36 primary and secondary teachers. All teachers who attended have been asked to complete a short PDSA action plan.) Learning through play

Maths Conference – Stirling University- Various topics

Glow TV

Collaborative Action Reseach

Coaching – Improving Maths Resilience

Coaching – Effective Professional Dialogue Single Steps Learning Big Maths Global Citizenship in Mathematics National Numeracy Hub Conference

- Reviewing the range of Mathematical approaches being used.
 As well as attending these training events, each member of staff is critically reviewing these sessions which will help form a Numeracy strategy.
- PT Maths The 5 Maths Principal teachers have agreed to do a collaborative action research project over the final term. XXX will provide training for the PTs and their staff. The Maths PTs are now using ourcloud to share resources. This will be further developed over the next session.
- Planned intervention: The Maths raising attainment team will work with 11 P7 classes, 10 P6 classes and their teachers to Focus on Developing Number Sense through thinking and talking about number. This intervention will take place over an 8 week block. Impact will be measured both qualitatively and quantitatively.

Year 1 Reflections on Impact: Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?

- QIOs have observed CGI lessons in their term 2 visits and have highlighted the enthusiasms of the staff delivering these lessons.
- The Clydebank High Learning community Maths champs have seen the benefit of CGI and have asked the raising attainment team to work with them modelling lessons.
- Some concerns raised by some teachers/HTs about content & value of the fractions, decimals and percentages assessments. However the profile of assessments, data analysis and accountably for performance has been raised.
- Feedback from teachers working on CGI:
 When asked if the (CGI) planning sessions inspire staff to change their Maths teaching,
 100% of teachers involved said yes.
 When asked if the found the CGI model lessons useful, 22% said they were useful and
 78% said extremely useful.

Year 1 Measurement of progress

Please provide details of how you have measured progress or impact of this element of your plan. What did this show? Please provide any data or other evidence you have on the progress or impact of this element of your plan.

- West Dunbartonshire Council Project Board: Reports to measure progress and impact
- P1 & P3 Assessments Assessments were completed in all schools across the authority with the exception of XXX Primary, XXX unit and XXX unit in XXX.
- Analysis of data P1 data has highlights some gaps in knowledge, the majority of schools achieved above 40 %. It can be seen that school in the lowest percentages did not take part in the assessment and moderation process in August and November. P3 data again highlights some gaps in pupil knowledge, with the authority average at 45%.

2b	Transition 2 numeracy	- Enhanced transition se	econd/third level to	o raise attainment in
2015	5/16 Allocation	£476,752	Planned Quarterly Spend	
201	15/16 Actual Spend	As Transition 2a	Actual Quarterly Spend	
Teac		Agreed in Plan: Transitions 2 (AMENDED	Secured this quarter:	
	rs (please type of urce):	PROJECT) Staffing already in place – ESO numeracy • Planned staffing from Jan 15 – 2 x PT posts for SPTA LLC – RAIL (transitions) – backfill 0.4 management time for each PT and enhanced salary to point 1 PT) • Planned staffing from August 15 – 2 PT posts for 5 LLC's	Secured in total:	As Transition 2a

Year 1 Progress to date: Please comment on areas of progress and slippage from plans.

- Met with planning group and finalised action plan
- Developed PT post person specification and job profile.
- PT post with staffing awaiting on a job number to enable this this to go live
- Discussion with pilot HT's in relation to use of partners in delivery of the project active schools, parenting, psych services, Forest Schools, libraries, Community learning and development
- Identification that the S3 cohort in STPTA could be trained to deliver mathematical mind set and resilience using paired number, number buddies – liaison with math's STARS re this.
- Decision by group to include in action plan some learner profiling 1 in 4 of target group.
 Template for profile to be developed.

Year 1 Reflections on Impact: Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?

- To date no impact on learners
- Outcome of enhanced dialogue in relation to what enhanced transition might look like for members of planning group – impact on shared understanding within the planning group.
- Awareness of who the learners are within the identified cohort that would require the enhanced transition programme.

Year 1 Measurement of progress

Please provide details of how you have measured progress or impact of this element of your plan. What did this show? Please provide any data or other evidence you have on the progress or impact of this element of your plan.

- West Dunbartonshire Council Project Board: Reports to measure progress and impact
- From the learners in SIMD 1-3 identified those who are not on target to achieve appropriate to their age and stage in relation to numeracy **total 40 learners in pilot**

3	collaborative w		rogramme – extending schools. The focus wil	
201	5/16 Allocation	£234,500	Planned Quarterly	£29, 470

2015/16 Allocation	£234,500	Planned Quarterly Spend	£29, 470
2015/16 Actual Spend	£68, 735	Actual Quarterly Spend	£11,161
Staff Resources: Teachers	Agreed in Plan: For teachers to be	Secured this quarter:	All Secured £11,161
Others (please state type of resource):	For teachers to be involved in a SIP Project (4 Collaborative Meetings and 1 lesson study) the costs are: £539.18 (Commissioning/ Supply cover)	Secured in total:	£234,500

Year 1 Progress to date: Please comment on areas of progress and slippage from plans.

Involvement:

There are 9 working SIP Projects in place across 1 Secondary School, 25 Primary Schools and 4 Nurseries

Two Secondary Projects are emerging STARS Project focusing on Parental Engagement and Secondary Maths PT teachers

• Training:

All HTs and CTs involved in SIP Projects have been offered training. This has been in partnership with the Robert Owen Institute :

Collaborative Action Research Processes

Collecting and using Quantitative and Qualitative Data

Implementing a Lesson Study

Training planned for March and the May:

Effective Professional Dialogue using coaching and the GROW Model (March)

Analysing Data Effectively

Planning

All groups have consistently used the WDC model of Collaborative Action Research to plan their projects

Sharing:

Presented at the BGE Meeting on the links between SIPP and HGIOS 4 (26/1/16)
Presented at the National SIPP Conference about the WDC approach to SIPP and the links with HGIOS 4

Year 1 Reflections on Impact: Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?

- New methodologies such as Big Maths, CGI, Reciprocal Reading and Reciprocal Maths being implemented in schools
- 40 class teachers are implementing Action Research Projects
- At least 30 teachers are involved in Lesson Studies
- All projects have implemented a pre-test that will be used to measure impact
- Those involved have commented on how the process is developing leadership skills in class teachers and that there have been other spin offs from the collaborative meetings such as staff inviting probationers to observe lessons, shared ideas beyond the shared projects, increased use digital technology such as Google+, Google Mail and Google Forms

Year 1 Measurement of progress

Please provide details of how you have measured progress or impact of this element of your plan. What did this show? Please provide any data or other evidence you have on the progress or impact of this element of your plan.

1. Implementing:

8 are working collaboratively to plan and implement – 1 only to assess

All 9 projects have completed their pre-test eg. Word problem pre-test, Mental Maths pretest, Metacognition Strategy Index pre-test, Reading Routes Assessments, Spence Anxiety Assessment, P1 observations of questioning and play

Maths SIP Partnerships are being effectively supported by Raising Attainment Maths Teachers through training at collaborative meetings and modelling lessons

6/9 have planned or are already implementing Lesson Studies or a Learning Rounds

2. Monitoring:

Myself as a Learner Assessment has been prepared as a Google Form and set up ready for use for each individual school. Each school has also be allocated a Google Folder where future assessments/evaluations can be uploaded and then completed by all schools – results being able to be viewed centrally and at a school level

Presently based on progress through the planning, pre-testing, collaborative meetings and lesson studies

Arranging interim monitoring meetings (March/April) with each project leader to evaluate progress, challenges and successes

3. Measuring impact on pupil progress and attainment – (quantitative data – attainment)

Post tests are still to be completed but the following assessments are in place to measure progress. Results will start coming in during April and May 2016:

Project 1 – CGI – DA LCC (Knoxland and Braehead) – Stage P4 and P5

Project 2 – CGI – VOLA LCC (Christie Park, Renton, Jamestown, Lennox, Jamestown ELCC, Dalmonach ELCC) – Stage 1 and P6/P7

Project 9 – Reciprocal Maths – DA/OLSP LCC (St Peter's, St Patrick's, Aitkenbar, Dalreoch) P4 and P5

- 1. Comparison between pre and post word problem assessments will evidence if children have improved their word problem solving skills
- 2. Comparison between P3 (2014) and P5 (2016) GL Numeracy Standardised Scores will evidence if individual pupil's attainment has improved above expected levels in P5 cohort (unfortunately this information is not available for the P4 cohort)
- Comparison between P5 (2014) and P7 (2016) GL Numeracy Standardised Scores will evidence if individual pupil's attainment has improved above expected levels in P7 cohort (unfortunately this information is not available for the P4 cohort
- 4. Comparison between Pre-School Numeracy Baseline (2015) and P1 Numeracy Baseline (2016) will evidence if individual pupil's attainment has improved above expected levels in P1 cohort

Project 7 – Reciprocal Reading - Cross Authority (Renton, Haldane, St Anthony's) – P5 and P6

- 1. Comparison between pre and post Reading Routes Assessment will evidence if there has been an improvement in understanding, evaluating and analysing skills for the P5 and P6 cohort
- 2. Comparison between P3 (2014) and P5 (2016) GL Literacy Standardised Scores will evidence if individual pupil's attainment has improved above expected levels in P5 cohort (unfortunately comparative information is not available for this cohort for P4 (2015))
- 3. Comparison between the P5 (2015) and P6 (2016) GL Literacy Standardised Scores will evidence if individual pupil's attainment has improved above expected levels in the P6 cohort
- 4. Comparison between the pre and post Metacognition Strategy Index Assessment

will evidence if pupils metacognition skill have improved

Project 3- Mental Maths – XXXX) – P3 and P5

Project 4 – Mental Maths – XXXX) P2

- Comparison between pre and post Mental Agility Assessments (oral and written) will evidence is there has been an improvement in pupils' speed and accuracy of mental agility
- 2. Comparison between P3 (2014) and P5 (2016) GL Numeracy Standardised Scores will evidence if individual pupil's attainment has improved above expected levels in P5 cohort (unfortunately this information is not available for the P4 cohort)

Project 10- Health and Wellbeing – VOLA LCC (XXXX – P2 and P6

1. Comparison between the pre and post Spence Anxiety Scale Assessment to evidence if there has been an impact on lowering pupils' anxiety levels

Project 6 – Early Numeracy Learning Through Play – OLSP/VOLA (HaXXXX)

- 1. Comparison of pre and post observations of P1 Pupil case studies
- 2. Comparison between Pre-School Numeracy Baseline (2015) and P1 Numeracy Baseline (2016) will evidence if individual pupil's attainment has improved above expected levels in P1 cohort

Project 5 – Science Enquiry Skills – VOLA (XXXX

1. Pre and post observations of questioning skills in Pre School and P1 Pupils compared against the Bloom's Taxonomy Scale

4	STEM – a strategy and staffing to use STEM to improve literacy and numeracy, and interest in STEM subjects			
2015	5/16 Allocation	£113,873	Planned Quarterly Spend	£60, 285
20	15/16 Actual Spend	£207, 919	Actual Quarterly Spend	£147, 657
Staff Resources: Teachers		Agreed in Plan: Teachers	Secured this quarter:	All Secured £147,657
Others (please state type of resource):		Others: EDO STEM 3 PTs (0.4 FTE) have been appointed (1 in each STEM Hub) HT Secondee (0.4 FTE) Pupil resources	Secured in total:	£207,919

Year 1 Progress to date: Please comment on areas of progress and slippage from plans.

- Implementation of functional writing rubrics. Baseline assessment information gathered.
- Pupils have participated in a standalone functional writing lesson, from which assessment information has been drawn. They are currently working on the STEM challenges planned last term as part of the Attainment Challenge project.
- Primary HTs have been consulted regarding the P7 EDT initiative. Feedback suggested that this would be better to be implemented in August 2016.
- STEM Hub PTs trained in Project Based Learning. Further training will take place in May 2016.
- STEM Hub HTs consulted on and have agreed to evaluate staff confidence in STEM by using the draft Education Scotland Self-Evaluation toolkit.
- St Patrick's Primary School staff have participated in the first Inspire and Challenge training day provided by the Glasgow Science Centre. Staff have been issued with a challenge which they must complete prior to the next training input.
- Bespoke STEM Hub deign produced in partnership with Glasgow Science Centre

Year 1 Reflections on Impact: Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?

- HTs describe increased learner engagement and motivation in STEM subjects in an integrated, flexible way.
- Learners across all stages can discuss their own learning in relation to STEM. This
 shows a greater understanding of the STEM subjects, in addition to a greater level of
 motivation and a greater ability to articulate their own learning.
- Increased opportunities to develop Maths skills in a range of contexts, developing higher order thinking skills and skills for life.
- Improved learners' experiences, taking cognisance of the four contexts of learning and the principles for curriculum design. New, integrated learning environments and the provision of additional resources has contributed to this, in addition to the use of STEM challenges and the development of pedagogy.
- Increased focus on the impact of curriculum provision on literacy and numeracy attainment.
- The use of pre-existing STEM challenges tackle teacher bureaucracy and provide a starting point in the collaborative planning process.
- Communication links between the three STEM Hub PTs has provided a support network in their own development and supports collaborative planning, consistency of assessment, etc.
- Increased quality of pupil social interactions and cooperative learning skills.
- Positive role models in schools (S5/6 pupils) supporting the learning of younger pupils.
- The STEM Hubs have provided opportunities for our vulnerable children to gain success and a sense of achievement through using and applying their literacy and numeracy skills in STEM activities.
- Increased leadership capacity of the new STEM Hub PTs.

Year 1 Measurement of progress

Please provide details of how you have measured progress or impact of this element of your plan. What did this show? Please provide any data or other evidence you have on the progress or impact of this element of your plan.

- West Dunbartonshire Council Project Board: Reports to measure progress and impact
- Attitudinal questionnaires have been distributed to and completed by pupils in P2, P3 and P3 in the three STEM Hub schools. Results are currently being analysed by the Principal Teachers from the three STEM Hub schools.
- A spreadsheet has been produced to detail information on pupil profiles (including SIMD decile, gender, attendance, exclusions, staged intervention and pupils on track). This

will be used by the three STEM Hub schools to track and measure progress.

 The first functional writing unit will conclude at Easter 2016 and quantitative data will be analysed with a view to closing the gap between pupils in SIMD 1 – 3 and SIMD 4 – 10. This data will be reported on following its analysis.

5	Other – Data Officer and Programme Manager							
201	5/16 Allocation	£117,830	Planned Quarterly Spend	£14, 052				
2015/16 Actual Spend		£10, 579	Actual Quarterly Spend	£10, 579				
Staff Teach	Resources:	Agreed in Plan:	Secured this quarter:	£10,579				
	s (please state of resource):		Secured in total:	£10,579				

Year 1 Progress to date: Please comment on areas of progress and slippage from plans.

• Appointment made 24th March 2016, due to start 18th April 2016

Year 1 Reflections on Impact: Please comment on what looks and feels different for schools and children as a result of the Att. Scotland Fund. What impact is it having?

Year 1 Measurement of progress

Please provide details of how you have measured progress or impact of this element of your plan. What did this show? Please provide any data or other evidence you have on the progress or impact of this element of your plan.

Overall Reflections on Year One (2015/16)

6 Reflections on Year 1

What progress towards impact has your **overall strategy** had across your schools in Year 1? What is working well?

- Overall teachers are motivated and actively engaged in critical reflection of learning and teaching.
- Teachers are critically evaluating the impact of strategies to teach literacy and numeracy on tackling inequity.
- School leaders are critically reviewing improvement plans to review impact of plans and provision of tackling inequity
- Raised profile of accountability for attainment/performance based on attainment data, validation data, school leadership
- The STEM Hubs have provided opportunities for our vulnerable children to gain success and a sense of achievement through applying their literacy and numeracy skills in STEM activities

- Effective communication and collaboration across schools, informal networking is developing well
- Improved quality of teacher planning and reflection for delivering units of learning in maths/numeracy in early and first level

What overall improvements do you feel have been made as a result of your involvement in the Scottish Attainment Challenge in the following areas:

1) Leadership

- West Dunbartonshire Supported Improvement Model developed and piloted. This
 model has been produced to provide a collegiate approach between schools with
 varied capacity and expertise, to address need through the process of professional
 accountability using HGIOS4 and GTCs Professional Standards
- Attainment Profile of WDC schools produce profiles raised to identify schools for supported improvement to raise attainment
- Tackling inequity included in Learning Community priorities for improvement through analysis of data to plan/ target improvements
- Partnerships with Glasgow Science Centre, SSERC, Engineering Development Trust, Edina Trust, etc
- Leaders' using a more forensic approach to gathering and analysing data.
 Through teacher teacher, school school, collaborative action research projects

2) Learning and Teaching

 Learning environments being adapted to provide play based, problem based learning to support skills for learning, life and work

Literacy (T1)

Early Level Literacy Skills

Adapted Curriculum Model

Literacy & English Progression Framework

Consistent Approaches to Teaching Core Literacy Skills

WDC Training Programme (Phonics, Spelling, Linguistic Development)

Reciprocal Teaching

Progression Pathways

Numeracy (T2)

National Numeracy Progression Framework

National Mathematics Progression Framework

Problem Based Approaches (CGI)

Number Sense

Reciprocal Maths

Maths Resilience

STEM (T4)

Inspire & Challenge

Problem Based Approaches (Single Steps Learning)

STEM Hubs

Literacy, Numeracy, HWB Through STEM

Progression Pathways

• SIPP (CAR)

Action Research Partnerships

Plan Research Question

Produce Data Gathering Plan

Identify Through Research, Interventions

Plan Lesson Study

Analysis of Data

Assessment and Moderation

Focus on Numeracy, Literacy and HWB

Collaborative Planning / Moderation In School / Across Schools / Across Sectors

WDC Moderation Framework

Significant Aspects of Learning

• Early Level Play

Early Level Curriculum

Early Level Environment for Learning

Tracking, Monitoring Individual Groups of Pupils

WDC Training Programme

3) Families and Communities

- Outreach teachers have identified families requiring support.
- Profiles of children have been produced
- Experience of Incredible Years
- Parental open days are being planned to support a shared understanding of numerical development using SEAL (Stages of Early Arithmetic Learning)

What do you think has gone less well in the implementation of your plans in both your local authority and schools within your authority in Year 1 and what learning have you taken from this?

- Timing of funding release was not as conducive to a prompt launch of projects in academic session 2015-16 as all improvement planning had been produced by June.
- Issues in recruiting staff delayed implementation
- There were some concerns regarding the progress of our transitions 1 project, however, we are now confident that with staffing in place this will come back on track

7 Sustainability

To what extent do you think the improvements you have made are sustainable and why?

- The Attainment Projects have been integrated as part of our local objectives for improvement. These projects support the local authority strategic objectives 'Improve life chances for children and young people' and 'Improve the wellbeing of communities and protect the welfare of vulnerable people'. The projects feature as strategic risks in the local authority service plan.
- The 4 themed projects are clearly linked to the 6 drivers for improvement in the National Improvement Framework. Our leaders are being directed to inter relate our themed projects to the national drivers for change.
- Leadership opportunities created for Senior Managers to lead and manage strategic projects. This is building capacity for raised attainment in our establishments and learning communities.

Main points of 2016 Attainment Gap

GL Attainment in 2016

9712 pupils in P3, P4, P5, P6, P7 and S2 were tested in schools in March 2016. Pupils at all stages sat the NGRT reading test, while pupils in P3, P5, P7 and S2 sat the Progress in Maths test.

Average Score - Standard Age Score

- The tests produce the expected score for pupils at a certain age. This is called the standard age score and the average is set at 100 for each year group and based on a UK-wide sample.
- The following data presents the difference in respect of the average score (100) to within confidence limits of 90% for NGRT reading test:

NGRT P3

- o P3 pupils scored statistically above the average score expected
- o The average score for P3 pupils was 102 compared to an average score of 100
- o Pupils are on average 8 months ahead of what is expected for their age

NGRT P4

- P4 pupils scored statistically lower than average score expected
- o The average score for P4 pupils was 97 compared to an average score of 100
- o Pupils are on average 1 month **behind** of what is expected for their age

NGRT P5

- o P5 pupils were not statistically difference from the average score expected
- The average score for P5 pupils was 99 compared to an average score of 100
- o Pupils are on average 3 months ahead of what is expected for their age

NGRT P6

- P6 pupils were not statistically difference from the average score expected
- The average score for P6 pupils was 101 compared to an average score of 100
- Pupils are on average 5 months ahead of what is expected for their age

NGRT P7

- o P7 pupils score statistically above the average score expected
- o The average score for P7 pupils was 102 compared to an average score of 100
- o Pupils are on average 5 months ahead of what is expected for their age

NGRT S2

- o S2 pupils were not statistically difference from the average score expected
- The average score for S2 pupils was 99 compared to an average score of 100
- o Pupils are on average 12 months **behind** of what is expected for their age
- The following data presents the difference in respect of the average score (100) to within confidence limits of 90% for PIM maths test:

PIM P3

- P3 pupils were not statistically difference from the average score expected
- o The average score for P3 pupils was 98 compared to an average score of 100

o The majority of schools were not statistically different than the average score expected

PIM P5

- o P5 pupils were not statistically difference from the average score expected
- o The average score for P5 pupils was 98 compared to an average score of 100
- o The majority of schools were not statistically different than the average score expecte
- The small number of children in XX and XX meant it was not possible to complete a valid statistical analysis

PIM P7

- o P7 pupils were not statistically difference from the average score expected
- o The average score for P7 pupils was 94 compared to an average score of 100
- o The majority of schools were not statistically different than the average score expected,

PIM S2

- o S2 pupils were not statistically difference from the average score expected
- o The average score for S2 pupils was 94 compared to an average score of 100
- o All schools were not statistically different than the average score expected

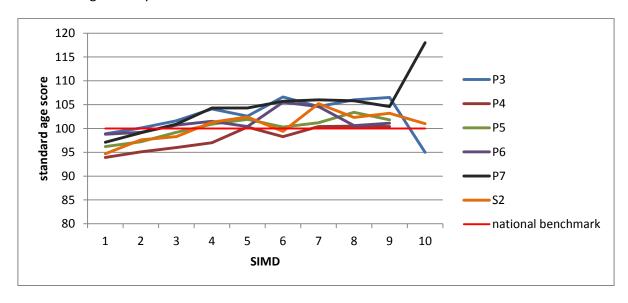
Differences in SIMD in 2016

• As expected pupils from the most deprived areas on average had lower scores than the least deprived, this can be seen in Figures 1 and 2 for reading and maths

Reading

	Reading					
	P3	P4	P5	P6	P7	S2
SIMD 1	98.9	93.9	96.2	98.8	97.1	94.7
SIMD 9	106.5	100.4	101.8	101.1	104.6	103.2
SIMD 10	95				118	101

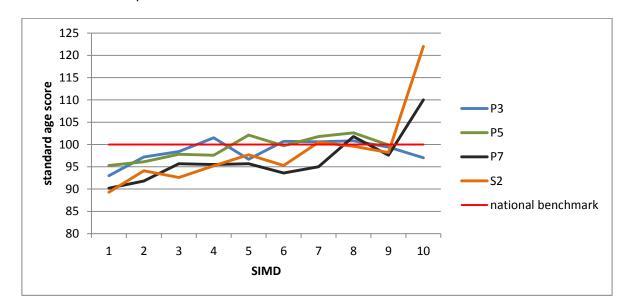
Figure 1: The Reading Score by SIMD decile



Maths

	Mathematics			
	P3	P5	P7	S2
SIMD 1	93	95.3	90.2	89.3
SIMD 9	99.4	99.9	97.6	98.2
SIMD 10	97		110	122

Figure 2: The Maths Score by SIMD decile



- The difference in standard age score between the pupils in the 20% most deprived (SIMD 1-2) and 20% least deprived (SIMD 9-10) is:
 - o for P3 is 7 points for reading and 3 points for maths
 - o for P4 is 11 points for reading
 - o for P5 is 5 points for reading and 4 points for maths
 - o for P6 is 2 points for reading
 - o for P7 is 7 points for reading and 7 points for maths
 - o for S2 is 7 points for reading and 8 points for maths
- The attainment gap is variable for mid primary school (P3-P5) but by P7 it has plateaued at a difference of 7-8 points for both reading and maths by P7. The reading data must be interpreted with caution as the importance of reading age declines after primary school.
- The horizontal red line in the graphs shows the standard age score of 100.
 - o in P3 Reading, pupils in SIMD 2-9 have an average score similar or higher than 100
 - o in P3 Maths, pupils in SIMD 4 and 6-9 have an average score similar or higher than 100
 - o in P4 Reading, pupils in SIMD 5, 7-9 have an average score similar or higher than 100
 - o in P5 Reading, pupils in SIMD 4-9 have an average score similar or higher than 100
 - o in P5 Maths, pupils in SIMD 5 and 7-8 have an average score similar or higher than 100
 - o in P6 Reading, pupils in SIMD 3-9 have an average score similar or higher than 100
 - o in P7 Reading, pupils in SIMD 3-10 have an average score similar or higher than 100
 - o in P7 Maths, pupils in SIMD 8 and 10 have an average score similar or higher than 100
 - o in S2 Reading, pupils in SIMD 4-5 and 7-10 have an average score similar or higher than 100
 - o in S2 Maths, pupils in SIMD 7 and 10 have an average score similar or higher than 100

Differences between deprivation by stage

- This can be seen in Figures 3 and 4, ordered in ascending order by the size of the attainment gap.
- For each stage pupils in the most deprived 20% have lower scores than the least deprived 20%, this is likely to be significant using the 90% confidence intervals for WDC as an authority. This data must be interpreted with caution due to small numbers of pupils in SIMD 9-10.
- The size of the attainment gap varies depending on stage and test (reading or maths), with the largest gap in P4 reading and the smallest in P6 reading
- In reading, the gap is varied but generally increases as you move through the school. Pupils in SIMD 9-10 average score above the national benchmark (100) at all stages, while the average score for SIMD 1-2 generally declines
- In Maths, the size of the gap increases as the child moves through the school, with a jump from P5 to P7, although the decline is less for SIMD 9-10
- Figure 5 compares the difference from the national benchmark (100) for pupils in SIMD 1-2. It shows that for reading and maths pupils in P7 and S2 are furthest behind the average score for their age. Pupils in P5 are less behind the national benchmark.

Figure 3: Difference between most and least deprived quintile in Reading by stage

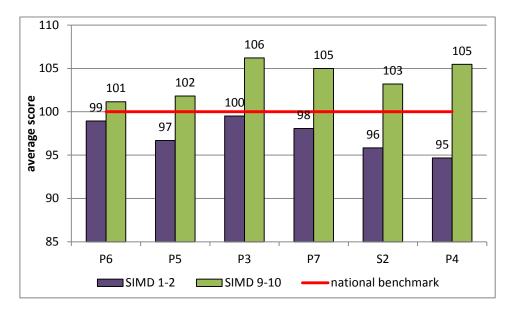


Figure 4: Difference between most and least deprived quintile in Maths by stage

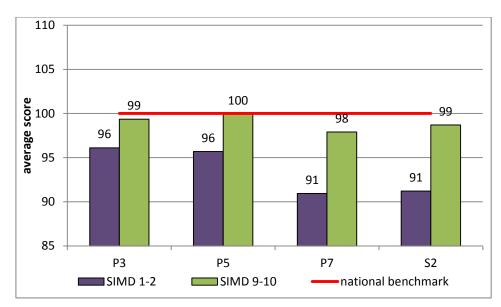
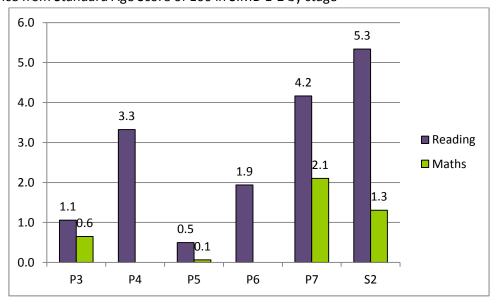


Figure 5: Difference from Standard Age Score of 100 in SIMD 1-2 by stage





End Year Progress Review Report Secondary Programme March 2017

Reporting Period	April 2016 – March 2017
Local Authority	West Dunbartonshire
Key Contact at Authority	
Attainment Advisor	

Summary of Spend

Intervention	2016/17 Allocation	2016/17 Amount Spent
Health and wellbeing	£303,186	£191,613
Literacy and Numeracy	£156,000	£98,001
Skills Academy	£113,774	£62,547
Total	£572,960	£352,161

Agreed Improvement Plan

1 Health and wellbeing – multiagency hub						
2016/17 Allocation	£303,18	36				
2016/17 Actual Spend	£191,61	13				
	E	xpenditure brea	akdown			
			Total this financial year			
Staffing:		FTE	Costs			
Teachers	Teachers		£73,686			
Education/development of	fficers					
Educational psychologists	;					
Data analysis officers						
Family/home link worker		6	£64,427			
Speech and language the	rapists					
Early years professionals						
Other staff, namely: Admin						
Non-staffing please specify type:		Total costs this	fin. year			
Police/ Counselling		£53,500				

Activities: Please comment on progress in implementing your planned activities in the year 2016/17

Consultation and planning meetings conducted with secondary heads and senior managers Recruitment Exercise conducted

Curricular reviews completed and plans for improvement to delivery equity completed Review of current process for multi –agency support to plan a revised process, roles and responsibilities

Groups of young people for intervention identified Nurture training completed

Slippage from plans: Please comment on slippage from your original plans for implementing activities in the year 2016/17

Hub is as yet not fully functioning.

1	Health and wellbeing – multiagency hub: evidence on short and medium-term outcomes					
	What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	By when? (estimate) Status (completed / ongoing / no progress)				
Short –term outcomes	 Target groups of pupils and families identified using attainment data to identify young people at risk of missing out. Profile of young people requiring enhanced provision is high priority in all secondaries Evaluation of current provision and areas for improvement to tackle inequity is a priority area for improvement in 5 secondaries Joint service provision in school setting evaluated to support delivery of a bespoke integrated programme 					
	Are you collecting evidence to measure these outcome(s)? If so, ple specify which type of evidence for which aim (if not, just put 'N/A')	ase				
	School Improvement Planning Improved curricular models with equity provision evident Senior Leader awareness and commitment to agenda to improve					

What does this evidence show on the extent to which the above outcomes have been achieved to date? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free.

Planning shows a change in the of curriculum provision in secondary Staff recognise the need to adapt and change approaches to teaching, learning Open and positive attitude to change and improvement in the range of approaches used to support pupils and families

What medium-term outcome(s) does this initiative aim to achieve? (Medium-term outcomes are often in the form of changed actions, practice, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)

By when? (estimate) Status (completed / ongoing / no progress)

NA

Medium -term outcomes

Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')

Second phase of implementation April - June

What did this evidence show? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

Reflections on progress to date: Can you share any learning on what has worked well in implementing this initiative?

Allocating time for detailed planning and review of provision in partnership with education leaders

Funding of a 'Campus Cop' has supported the work of schools to ensure young people are safe and aware of risks in the community

Reviewing with colleagues in social work and health our existing supports and resources to identify alternative models of support

Extension of pupil / family counselling services

Can you share any learning on what has worked less well or could be improved?

•

2	Literacy and num	iteracy and numeracy – Learning, Teaching and Assessment				
2016/	/17 Allocation	£156,00	00			
2016/	/17 Actual Spend	£98,001	1			
		E	xpenditure bre	eakdown		
				Total this financial year		
Staffi	ing:		FTE	Costs		
Teacl	hers		3	£17,321		
Educ	ation/development of	fficers				
Educ	ational psychologists	1				
Data	analysis officers					
Famil	y/home link worker					
Spee	ch and language the	rapists				
Early	years professionals					
	staff, namely:					
Non-	Non-staffing please specify type:		Total costs thi	s fin. year		
	Professional learning/ cover/ commissioning		£80,680			

Activities: Please comment on progress in implementing your planned activities in the year 2016/17

- Target groups of pupils and families identified using attainment data to identify young people at risk of missing out.
- Profile of young people requiring enhanced provision is high priority in all secondaries
- Evaluation of current provision and areas for improvement to tackle inequity is a priority area for improvement in 5 secondaries
- Plan / review of use attainment data from primary to identity young people requiring an enhanced curriculum model in S1
- Teaching teams established from across the curriculum for identified learners
- Review of teaching methodology in S1 / S2 to identify areas for improvement in practice to meet learner need
- Pilot of maths recovery, maths anxiety in maths / numeracy lessons in S1/S2
- Training and review for teachers on assessing levels in literacy and numeracy
- Strategic groups for literacy and numeracy include as leaders of learning staff from the schools leading this project

- Training and roll out of BGE Tracking Toolkit
- Planning to develop a 'Junior Jat' in local learning community

Slippage from plans: Please comment on slippage from your original plans for implementing activities in the year 2016/17

Slight delay in recruitment

2	Literacy and numeracy – Learning, Teaching and Assessment: evident short and medium-term outcomes	ence on				
	What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	By when? (estimate) Status (completed / ongoing / no progress)				
Short –term outcomes	 Target groups of pupils and families identified using attainment data to identify young people at risk of missing out. Profile of young people requiring enhanced provision is high priority in all secondaries Evaluation of current provision and areas for improvement to tackle inequity is a priority area for improvement in 5 secondaries Joint service provision in school setting evaluated to support delivery of a bespoke integrated programme 					
hort –ter	Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')					
U)	Observational evidence from school improvement and validation visits Improvement Planning PEF Planning					
	What does this evidence show on the extent to which the above out	comes have				
	been achieved to date? Please highlight key findings only – both positive an					
	part of the evaluation, we may request further details on your evidence for partic interesting findings. If you did not collect evidence for these outcome(s) or result available, just put 'N/A'. This part only needs to be completed at the end of year you already like to share findings, please feel free.	s are not yet				

The project has influenced the planning in other secondary schools
Improvement in the range of approaches being planned to support a transformed
BGE experience for young people at risk of missing out
Teaching staff, curriculum and senior school leaders recognise the need to change

Teaching staff, curriculum and senior school leaders recognise the need to change and improve.

Wider range of approaches to teaching numeracy being trialled in secondary.

What medium-term outcome(s) does this initiative aim to achieve? (Medium-term outcomes are often in the form of changed actions, practice, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)

By when? (estimate) Status (completed / ongoing / no progress)

Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')

Medium -term outcomes

What did this evidence show? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free.

Reflections on progress to date: Can you share any learning on what has worked well in implementing this initiative?

Can you share any learning on what has worked less well or could be improved?

Allocating time for detailed planning and review of provision in partnership with education leaders

Providing a project plan as a basis for discussion to support and guide change and improvement

Deploying the maths attainment team to work in partnership with secondary maths departments

3	Skills Academies				
2016/	17 Allocation	£113,77	'4		
2016/	17 Actual Spend	£62,547	,		
		E	xpenditure br	eakdown	
0.4 669			Total this financial year		
Staffi	Staffing:		FTE	Costs	3
Teach	Teachers		3	£14,5	16
Educa	ation/development of	fficers			
Educa	ational psychologists	3			
Data a	Data analysis officers				
Family/home link worker					
Speed	Speech and language therapists				
Early years professionals					
Other staff, namely:		2	£22,5	31	

Activities: Please comment on progress in implementing your planned activities in the year 2016/17

£10,000

£15,500

Total costs this fin. year

Admin.....

Vocational supplies

materials

Non-staffing please specify type:

Miscellaneous supplies/ classroom

Extension of the vocational provision in XXXX Academy to include hairdressing and nail bar. Construction and media skills academies are currently being developed

Consultation with secondary heads and senior phase team about a consortium model for skills academies in West Dunbartonshire

Consultation with curriculum leaders in modern languages, technical, art and physical education to support the development of a bespoke integrated curriculum provision in the skills academy. Programme content is underway.

Scoping exercise to identify sites and resource implications to set up construction, media and dance academy.

Senior phase team working in partnership with school staff to jointly plan academies

Slippage from plans: Please comment on slippage from your original plans for implementi'ng activities in the year 2016/17

Delay in establishing construction and media academies

3	Skills Academies: evidence on short and medium-term outcomes	
	What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	By when? (estimate) Status (completed / ongoing / no progress)
Short –term outcomes	 Profile of young people requiring enhanced provision is high priority in all secondaries Evaluation of current provision and areas for improvement to tackle inequity is a priority area for improvement in 5 secondaries Joint service provision in school setting evaluated to support delivery of a bespoke integrated programme Improved attitude towards changing existing BGE curriculum to provide a flexible model that engages and motivates learners at risk of missing out Are you collecting evidence to measure these outcome(s)? If so, ple specify which type of evidence for which aim (if not, just put 'N/A')	ease
	Observational evidence from school improvement and validation visits Improvement Planning PEF Planning Outcomes from planning and review meeting	
	What does this evidence show on the extent to which the above out been achieved to date? Please highlight key findings only – both positive an part of the evaluation, we may request further details on your evidence for partic interesting findings. If you did not collect evidence for these outcome(s) or result available, just put 'N/A'. This part only needs to be completed at the end of year you already like to share findings, please feel free.	d negative. A ularly 's are not yet
	Positive attitude to change More flexible curriculum model planned Teachers willing to work collaboratively in the context of the beauty / nail to support learning in modern languages Teachers willing to develop bespoke curriculum model	academy

By when? (estimate) What medium-term outcome(s) does this initiative aim to achieve? **Status** (Medium-term outcomes are often in the form of changed actions, practice, etc. (completed Please be specific in the target group: does it involve all teachers, parents or / ongoing / pupils, or a particular sub-set?) no progress) Next phase of implementation April –June Medium -term outcomes Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A') N/A What did this evidence show? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free.

Reflections on progress to date: Can you share any learning on what has worked well in implementing this initiative

Prioritising staff development through allocation of time to meet, discuss and plan Identification of locale skills academies has influenced the decision making by all secondary head teachers who are now considering ways the academies could be delivered as a consortia model

Can you share any learning on what has worked less well or could be improved?

 A challenge is accessing staff who are qualified to deliver certificated course in construction.

-ong -term outcomes

OVERALL PROGRESS AND REFLECTIONS

4 Overall progress towards long-term outcomes and reflections

The long-term outcomes of the Attainment Scotland Fund are to:

- a. Improve literacy and numeracy attainment
- b. Improve health and wellbeing
- c. Close the attainment gap between pupils from the most and least deprived areas. Are you collecting any evidence to measure these long-term outcomes in your authority? If so, please specify the type of evidence you are collecting (if not, just leave blank)

Produced a West Dunbartonshire Tracking Toolkit for BGE to track pupil progress in standardised assessments, CfE levels and to identify risk factors that could inhibit pupil attainment and achievement.

Evidence of pupils, school and learning community performance has been tracked for 4 years.

Attainment and Equity Profiles have been produced and shared with all Head Teachers

Schools have set targets for improvement with attainment visits used to gather evidence of planning to reduce equity gap

What did this evidence show so far? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just leave blank. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free.

Please refer to attached document WDC Attainment Gap 2016

Can you share any learning on what has worked well in your overall strategy to achieve impact?

- West Dunbartonshire Improvement Framework: validation and quality assurance of schools performance with NIF drivers and HGIOS4
- School, learning community and local authority attainment and equity profiles.
- Using a risk profile to deliver a proportionate approach to school improvement by senior and education officers
- Programme of attainment visits has been completed by our Attainment Advisor, Senior Education Officers and Education Officers.

Can you share any learning on what has worked less well or could be improved?

Is there anything else you'd like to share or give feedback on?					



End Year Progress Review Report Primary Programme March 2017

Reporting Period	April 2016 - March 2017
Local Authority	West Dunbartonshire
Key Contact at Authority	
Attainment Advisor	

Summary of Spend

Intervention	2016/17 Allocation	2016/17 Amount Spent
Transition 1a & 1b	£168,780	£234,242
Transition 2a & 2b	£591,600	£604,372
School improvement partnership	£350,000	£221,365
STEM	£104,240	£154,185
Programme	£107,830	£108,285
Total	£1,322,450	£1,322,450

Agreed Improvement Plan

1	Transition 1a & 1b		
2016/	17 Allocation	£234,242 (after a	agreed change requests)
2016/	17 Actual Spend	£234,242	
	E	xpenditure break	down
			Total this financial year
Staffi	ng:	FTE	Costs
Teach	ners		
Educa	ation/development officers	0.8	£74,339
Educa	ational psychologists	2.8	£108,979
Data	analysis officers		£
Famil	y/home link worker		£
Spee	ch and language therapists		£
Early	years professionals		£
Other	staff, namely:		£
Non-	staffing please specify type:	-	Total costs this fin. year
Profe	ssional Learning	£40,000	
	ellaneous supplies/ room materials	£10,921	

Activities: Please comment on progress in implementing your planned activities in the first year (2016/17)

- Baseline vocabulary and problem solving data collected on pre-school children making transition to P1 in the 2 project primary schools has been collected and analysed.
- Training has been developed and delivered to all staff in the 3 nurseries and 2 primaries and outreach workers on understanding the impact of poverty and their role in closing the gap.
- Working jointly with SLT, areas of focus have been identified to improve language rich environment of early years centres within the project.
- Outreach workers have undertaken a series of activities to encourage parental involvement including for example, Book Bug session, Stay and Play sessions, home visits.
- Data has been gathered from parents of pupils making transition from pre-school to primary on the effectiveness of transition arrangements.
- Incredible Years Teacher Classroom Management Programme (IYTCM), a 6 day training programme has been delivered and completed by 15 staff from project early years centres and primaries.
- Incredible Years Parenting Programme has commenced within one of the primary schools with 12 families participating.
- Awareness raising session has been delivered by SLT to P1 teachers and outreach workers on 'communication in primary school'.
- Training on 'Word Aware' by project leads, headteachers and principal teachers to support a more effective provision of learning to improve vocabulary.

Slippage from plans: Please comment on slippage from your original plans for implementing activities in the first year of 2016/17

1	Transition 1a – Early level: evidence on short and medium-term out	comes
Short –term outcomes	What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	Status (completed / ongoing / no progress)
Short –tern	 Within the project establishments (3 early years centres, 2 primaries and 3 outreach workers): Increased understanding of teachers, early years workers and outreach workers in understanding the poverty related attainment gap and their individual roles and responsibilities in working to impact on this. Awareness of parents in the project establishments has been raised 	

- of the transition project and the importance of the parental role in supporting children's learning.
- Increased understanding of the language based vocabulary gap at transition to primary and the impact that his has on learning.
- Increased teachers and early years workers of the meaning of parental involvement and ways to enhance this.
- Increased awareness of the Incredible Years suite of programmes and the contribution that this approach can make in helping parents to engage with their children's learning.

Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')

- Pre and post training questionnaires have been completed which captures information on 1, 3--5 above.
- Feedback from outreach workers on their contact with parents.
- Feedback from teaching staff and senior managers

What does this evidence show on the extent to which the above outcomes have been achieved to date? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

- Shared agenda of working together to close the poverty related attainment gap.
- Schools, early year centres and parents have a clearer shared perspective on the 'closing the poverty related attainment gap' agenda and the role that they have to play with this endeavour.
- Coherence and consistency of approach in terms of deployment of outreach workers to support parents.

		By when? (estimate)
Medium –term outcomes	What medium-term outcome(s) does this initiative aim to achieve? (Medium-term outcomes are often in the form of changed actions, practice, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	Status (completed / ongoing / no progress)
Medium ·	 Improvements in vocabulary of children within the early years centres. Improvements in the quality of staff to pupil interactions as evidenced in their use of questioning and engaging children in learning conversations. In classes where teachers have been trained in IYTCM there is 	Dec 16

	evidence of the Incredible Years strategies in action.	Mar 17
•	For parents who have participated in IY parenting group they report more confidence in building positive relationships with their children,	Mar 17
	notice improvements in behaviour and show greater understanding of impact on learning.	Mar 17
•	In all project establishments there is evidence of increased quality of parental involvement in learning.	Jan 17
•	Staff within project establishments evidence that they have considered whether their practice is 'poverty proof'.	
•	Reciprocal teaching evidence within the establishments with impact on children's literacy development.	
•	Staff working at early level have a better understanding of literacy and language development as evidenced in their planning of	

Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')

- Mentoring and coaching sessions with trained staff bringing evidence of practice to the sessions.
- Questionnaire and focus group data collected from parent participants in IY group.
- Schools to report on activities around parental involvement and level of parental engagement.
- Pre and post-test measure of vocabulary.
- Use of VERP methodology.

learning.

· Questionnaire completed by all staff.

What did this evidence show? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

- Increased emphasis for parents on their role in supporting children's learning.
- Children continue to experience RT methodologies, they are learning the terminology and engaging in the process with improvements in reading comprehension in evidence.
- Improved well-being for children part of nurture groups.
- Improved well-being for pupils whose teachers have completed IYTCM training.
- Improvements in vocabulary.

Reflections on progress to date: Can you share any learning on what has worked well in implementing this initiative?

- Word Aware Training
- Second Incredible Years Parenting Group
- Accredited Child Development Course in partnership with West College Scotland and CLD
- Outreach Workers supporting families rather than teachers

Targeted maths input in 4 pilot schools

Can you share any learning on what has worked less well or could be improved?.

1 Tra	ansition 1b – Ea	rly level Play and Learning
2016/17 Allocation		£
2016/17 Actual Spend		£

Expenditure breakdown

		Total th	is financial year	
Staffing:	FTE		Costs	
Teachers			£	
Education/development officers			£	
Educational psychologists			£	
Data analysis officers			£	
Family/home link worker			£	
Speech and language therapists			£	
Early years professionals			£	
Other staff, namely:			£	
Non-staffing please specify type:		Total co	sts this fin. year	
	£			
	£			
	£			

Activities: Please comment on progress in implementing your planned activities in the first year (2016/17)

- Attainment in literacy and numeracy
- Literacy progression planner updated to track early literacy attainment i.e. literacy in its widest sense, i.e. emergent writing, syllable structure, environmental print, reciprocal reading skills.
- Literacy data toolkit updated to provide further scope for establishments to interrogate data.
- Work stream to produce guidance on early level literacy and numeracy to reduce the equity gap
- Reciprocal Teaching
- Reciprocal Teaching early level guide completed and distributed.
- Reciprocal Teaching pre and post assessment underway at early years (five children in every pre-five centre).
- Training to improve learner experiences
- Building on the programme of professional learning for early years and P1 practitioners, a new programme of professional development is underway for P2 and P3 staff. This is designed to develop play-based approaches to learning through play. To ensure a continuous provision of child centred learning experiences to support children's cognitive, social and emotional development.
- Principal Teacher Raising Attainment appointed to support to roll out of play based learning across Early Learning and Childcare Settings and Early Level Primary teaching staff.
- Improved quality of learner experiences in most early years' settings and P1 reported

through HMI, validation reports, and quality visits.

- Curriculum planning
- Learning community improvement plans include developing play-based approaches to learning through play.
- Parental engagement
- Information leaflet for parent Sharing a Book school bag drop and allocation for nurseries, libraries, health centres etc.
- Review of Boxhall Profile as an effective tool to assess, monitor and track individual learners and applicability from 3-18 years.

Slippage from plans: Please comment on slippage from your original plans for implementing activities in the first year (2016/17)

1	Transition 1b – Early level Play and Learning: evidence on short and term outcomes	d medium-
		By when? (estimate)
	What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	Status (completed / ongoing / no progress)
Short –term outcomes	 Increased confidence and skills of teachers in early years' establishments and P1 - P3 teachers in schools using play-based approaches to learning. Increased focus on learning through play and clear links to literacy and numeracy attainment Learning environments are more exciting and motivating Leaders are reviewing and adapting curriculum design and their balance 	
Shor	Are you collecting evidence to measure these outcome(s)? If so, ple specify which type of evidence for which aim (if not, just put 'N/A')	ease
	 Qualitative evidence from training undertaken to support Learning thr Literacy and numeracy baselines to measure attainment Reciprocal Teaching reading assessments Qualitative evidence taken after training to measure impact on learning environment Teacher Judgement evidence towards P1 achieved level Quality improvement and validation visits Attainment profiles and equity gap 	

What does this evidence show on the extent to which the above outcomes have been achieved to date? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please fel free. If not, just leave blank.

- Improved quality of learner experiences in some early years settings and P1 reported.
- Learning environments are more exciting and motivating.
- Leaders are clearer about what they are trying to achieve linking ideas to curriculum rationale and vision to meet the needs of the equity challenge.

By when? (estimate) What medium-term outcome(s) does this initiative aim to achieve? (Medium-term outcomes are often in the form of changed actions. Status practice, etc. Please be specific in the target group: does it involve all (completed teachers, parents or pupils, or a particular sub-set?) / ongoing / no progress) Improved and effective use of play based approaches to learning by teachers in early years establishments and P1 - P3 Adaptation of curriculum model to give a balanced curriculum which has more emphasis on Learning Through Play Curriculum balance and content personalised to the needs of individuals and groups

Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')

- Evidence on numbers of teachers using play based learning or Incredible Years approaches and feedback on the effectiveness of these approaches
- Quality improvement and validation visit
- Attainment profiles and equity gaps changes over time

What did this evidence show? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

Improved quality of learner experiences in some early years settings and P1 reported

- Learning environments are more exciting and motivating
- Leaders are clearer about what they are trying to achieve linking ideas to curriculum rationale and vision to meet the needs of the equity challenge

Reflections on progress to date: Can you share any learning on what has worked well in implementing this initiative?

- Teacher and Head Teacher training programme on 'Developing play based approaches to learning'
- Literacy toolkit updated which will provide further scope for establishments to
- interrogate data
- Teacher collaborative research on the impact of play on pupil engagement
- Early literacy skills programme and professional learning being developed (in response to literacy questionnaire at early years)
- Word Aware plan in place for early level implementation
- Draft guidelines for play-based approaches ready
- Our Cloud site for sharing learning, planning and resources on play based learning

Can you share any learning on what has worked less well or could be improved?

2 Transition 2a & 2b		
2016/17 Allocation	£604,372 (after	r agreed change requests)
2016/17 Actual Spend	£604,372	
Ехр	enditure breakdowr	1
0. 50	To	otal this financial year
Staffing:	FTE	Costs
Teachers	15.8	£571,528
Education/development officers	0.4	£8,447
Educational psychologists		
Data analysis officers		
Family/home link worker		
Speech and language therapists		
Early years professionals		
Other staff, namely (cover)		
Non-staffing please specify type:	To	tal costs this fin. year
Professional learning	£320	
Miscellaneous supplies/ classroom materials	£24,067	

Activities: Please comment on progress in implementing your planned activities in in the first year (2016/17)

- The pace of the project has been accelerated due to the appointment of 2 Raising attainment officers and the commissioning of a dance development officer.
- Team trained in the analysis and use of data to target interventions
- Identification of control group of learners
- Leads developed our cloud page for sharing within team
- Set up of twitter account for outward facing communication and for parents and families #WDCcreatemaths
- Action plan for year 2 finalised with delivery timetables
- implementation plan developed
- Presentation for planning group of Head Teacher's and p5 class teachers delivered. A shared understanding of aim of pilot programme and timeline
- Presentation for Curriculum Leader's in STPTA delivered
- S1 transition leaders identified and are to be trained in maths mindset linked to DYW agenda and will achieve accreditation through Saltire award.
- Film maker commissioned for development of the documentary to be associated with project
- All data for linked schools and control schools collated
- All learners in pilot data collected
- All team now will participate on WDC leadership programme to build their capacity to drive forward project.
- Team days for the cohort developed
- Beyond the bell family sessions produced
- Collaborative planning for all staff involved arranged for this session

Slippage from plans: Please comment on slippage from your original plans for implementing activities in the first year (2016/17)

2	Transition 2a – Primary to secondary: evidence on short and media outcomes	um-term
mes		By when? (estimate)
hort -term outcomes	What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	Status (completed / ongoing / no progress)

Improved use of data to identify young people at risk of missing out and not meeting age and stage milestones.
 Staff aware of the agenda to tackle inequity and the value of data analysis to support planning.
 Awareness of how the identified cohort view themselves as learners
 Production of data profiles for all learners to plan programmes of intervention
 Family engagement in the project

August
2016
September
2016
October
2016
October
2016

Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')

Confidence of families encouraged to participate in programme.

- Health and well being outcomes Myself As A Learner questionnaire, individual reflections by learners
- Maths and numeracy attainment GL assessment data as this has been identified from the outset as a longitudinal study.

What does this evidence show on the extent to which the above outcomes have been achieved to date? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

- Enhanced transition aspect children report feeling confident in going to high school
- From start of project family session parental engagement continues to rise with the most recent being 93% for the cohort one response is that one dad who has never attended any school event or parents night attended the family session for first time and for the first time ever went along to the parents night for his son.
- Children report the activities as fun and engaging
- All children have had a member of their family join them at family learning sessions which is a positive statistic for this cohort of children

Medium –term outcomes	What medium-term outcome(s) does this initiative aim to achieve? (Medium-term outcomes are often in the form of changed actions, practice, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	Status (completed / ongoing / no progress)
Medium –te	 A shared understanding of aim of pilot programme for children and families. Increased confidence in parents to support their children's learning at home. Increased confidence of S1 transition leaders to engage with P5 pilot group. 	October 16 January 17 March 17 November

2016

•	Enhanced transition developed to include regular 'Beyond the Bell'	16
	activities and IDL challenges for the identified cohort.	
_	Children's solf percention and confidence becoming more positive	June 17

Children's self perception and confidence becoming more positive.

Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')

- Saltire Award progress
- Increased number of opportunities for family learning
- Qualitative data gathered through video evidence
- Myself as a learner information
- SEAL assessment

What does this evidence show? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

- Increased opportunities for collaborative planning for staff
- Increased opportunities for collaborative learning across the LLC for children
- Opportunities for the children to apply their learning in new and unfamiliar contexts
- Class teachers and LA involved report increased confidence in the children involved and their engagement with the creative tasks, enjoyment of the learners, some children are more relaxed when tackling problems, less maths anxiety, more willing to 'have a go' children are able to focus for a longer time on maths

Reflections on progress to date: Can you share any learning on what has worked well in implementing this initiative?

- Planning and delivery of maths through creativity sessions
- S1 transition leaders have been involved in sessions working collaboratively with cohort
- Family session to theatre with numeracy and maths challenges
- Impact documentary to capture attitudinal change and experiences filming and production ongoing
- Collaborative planning between secondary subject teachers, primary class teachers and Creative Arts Officer

Can you share any learning on what has worked less well or could be improved

2	Transition 2b – Primary to secondary				
2016/17 Allocation		£			
2016/1	7 Actual Spend	£			
	Ex	penditure brea	akdown		
Staffing:			Total this financial year		
		FTE	Costs		
Teachers			£		
Education/development officers			£		
Educational psychologists			£		
Data analysis officers			£		
Family/home link worker			£		
Speech and language therapists			£		
Early years professionals			£		
Other staff, namely:			£		
Non-staffing please specify type:			Total costs this fin. year		
		£			
		£			
		£			

Activities: Please comment on progress in implementing your planned activities in the first six months of 2016/17

- Training to 3 out of the 5 Local Learning Communities on the National Numeracy and Mathematics Framework.
- A numeracy strategy has been produced (draft) to support HT to implement effective approaches to raise attainment
- Local attainment data was used to identify primary schools whose pupils would benefit
 from numeracy/maths interventions. 11 Schools were identified. 4 have an extra
 teacher working on a specific action plan to improve numeracy/maths attainment in
 upper stages of Primary. The other 7 schools have a raising attainment teacher working
 with them for two terms.
- **Primary Intervention:** From the GL Data 7 primary schools were identified for the numeracy raising attainment teachers to work with. The team will work with small targeted groups of learners for two terms. The first term focuses on Number Sense and improving learners' confidence and resilience in numeracy and maths. The second term used SEAL approaches (Stages of Early Arithmetic Learning) to identify gaps in learners' knowledge and plan improvements to address the gaps.
- **Secondary Intervention:** The purpose of this pilot scheme is to foster cross sectorial collaboration with primary and secondary teachers in numeracy and mathematics. This is a 6 week program which looks at the use and importance of lesson starters for S1 pupils.
- Challenge Teachers: One teacher in every primary and secondary school from within
 existing staffing has been identified at a maths challenge teacher. They are responsible
 for attending 4 WDC professional learning sessions; attending 3 partnership innovation
 team meetings (PIT); lead and inform improvement of numeracy and promotion of the
 National Numeracy and Maths HUB within in their school.
- CLPL Program: 4 CLPL sessions have been developed to inform maths challenge teachers and probationers of the following:- Maths Anxiety, Early Counting, Numeracy

Resources and Number Talk.

Slippage from plans: Please comment on slippage from your original plans for implementing activities in the first year (2016/17)

2 Transition 2b – Primary to secondary: evidence on short and medium- outcomes	
	By when? (estimate)
What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	Status (completed / ongoing / no progress)
 Improved collaboration between secondary teachers and primary teachers Increased focus on numeracy attainment in all schools with a challenge teacher Secondary learning environments are more exciting and motivating 	Oct'16 Dec'16 Oct'16
 Increased confidence, resilience and emerging improvements in Numeracy of the targeted groups of pupils working with the raising 	June 17 June17
Leaders are clearer about what they are trying to achieve and how challenge teachers can be used to improve numeracy within their school	
	 What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?) Improved collaboration between secondary teachers and primary teachers Increased focus on numeracy attainment in all schools with a challenge teacher Secondary learning environments are more exciting and motivating Increased confidence, resilience and emerging improvements in Numeracy of the targeted groups of pupils working with the raising attainment team Leaders are clearer about what they are trying to achieve and how challenge teachers can be used to improve numeracy within their

Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')

- All challenge teachers have an action plan which will be monitored closely to review impact on attainment and achievement of focus groups of pupils
- Attitudinal surveys and assessment data will be collected from pupils working with the raising attainment team
- SEAL Assessment

What does this evidence show on the extent to which the above outcomes have been achieved to date? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

Results of intervention to targeted groups (September – October) show an average increase of score of 17% using pre and post Number Assessment. In the post assessment, children used an average of 3 more strategies for addition and 1 more

	strategy for subtraction compared to the pre assessment				
	What medium-term outcome(s) does this initiative aim to achieve? (Medium-term outcomes are often in the form of changed actions, practice, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)				
Si	 Improved quality of teacher dialogue Improved confidence of vulnerable pupils in maths using SEAL Strategies to improve attainment in maths/numeracy of target groups by headteachers Process to identify children at risk of missing out on attaining for their age and stage Are you collecting evidence to measure these outcome(s)? If so, plean	200			
tcome	specify which type of evidence for which aim (if not, just put 'N/A')				
Medium –term outcomes	 All challenge teachers will have an action plan for their schools, which will be monitored closely Attitudinal surveys and assessment data will be collected from pupils working with the raising attainment team Professional dialogue Scrutiny of GL data Tracking improvement in attainment of focus groups of pupils and schools SEAL Assessment 				
	What does this evidence show? Please highlight key findings only – bo and negative. As part of the evaluation, we may request further details on evidence for particularly interesting findings. If you did not collect evidence outcome(s) or results are not yet available, just put 'N/A'. This part only not completed at the end of year report, but if you already like to share finding feel free. If not, just leave blank.	your e for these eeds to be			

- Evidence from a Pupil Questionnaire / Focus group shows a trend of more positive attitude/confidence towards Numeracy / Maths.
- Results of intervention to targeted groups show an average 23% increase in targets met across all intervention groups.

Reflections on progress to date: Can you share any learning on what has worked well in implementing this initiative?

- Established professional network Maths Challenge Teachers who have attended the
 first of three Partnership Innovation Meetings (representation from 32 schools).
 Evaluations from the initial meeting demonstrate confidence at developing an Action
 Plan to raise attainment in an aspect of Numeracy / Maths in individual schools.
 Impact of individual plans will be evaluated in May.
- Programme of CLPL the delivery of Numeracy / Maths Sessions which are based

on current research (Maths Anxiety and Early Number / Counting) have contributed to the development of practitioner understanding and confidence in teaching Numeracy and Maths.

Maths Attainment Team as Challenge Leaders of Learning

Can you share any learning on what has worked less well or could be improved?

3 Scho	ol improvem	ent Partnership)			
2016/17 Allocation £221,365 (after a			er agreed chang	e requests)		
2016/17 Actual Spend £221,365						
		Expendi	ture breakdow	n		
Staffing:				Total this financial year		
			FTE	Cost	S	
Teachers - inc commissioning				£186	6,160	
Education/development officers			1	£34,	705	
Educational	psychologists					
Data analysis officers						
Family/home	link worker					
Speech and	language the	rapists				
Early years professionals						
Other staff, r	namely:Sup	ply				
Non-staffing please specify type:				Total costs this fin. year		
Miscellaneous supplies/ classroom materials		£500				

Activities: Please comment on progress in implementing your planned activities in the first year (2016/17)

- Activities completed between January 2016 and June 2016
- All 9 projects were supported by 3 more training sessions: "Implementing a Lesson Study", "Effective Professional Dialogue" and "Data Analysis" to support the Lesson Studies and Completion of the Findings Report
- A programme of 5 Training Sessions to support Collaborative Action Research has now been piloted and can be implemented next year independently from Glasgow University support
- The Collaborative Action Research Policy has been written outlining the process and support package in place for CAR Projects. The support package includes:
- Planning templates are in place to support the 4 CAR collaborative meetings
- Expectations have been shared that all schools will be involved in a CAR Project as part
 of their Learning Community Improvement Plan and consequently all 5 Learning
 Communities have committed to implementing a CAR Project in the 2016-17 session
- Training sessions in "Introduction to Collaborative Action Research" and "Qualitative and

Quantitative Data" have either taken place or are planned for all Learning Communities

- 5 training sessions in the CAR Process offered to all staff involved
- Staff are attending 4 collaborative meetings throughout the year
- Support available from XXX, School Improvement Partnership Development Officer and XXX, Data Management Officer

Slippage from plans: Please comment on slippage from your original plans for implementing activities in the first year (2016/17)

3	School improvement partnership: evidence on short and medium-te outcomes	rm
	What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	Status (completed / ongoing / no progress)
Short –term outcomes	Project 1 (Clydebank LLC) Increased motivation and skills amongst teachers in the effective use of the methodology of Cognitively Guided Instruction Stage still to be agreed Project 2 (VOLA LLC) Increased motivation and skills amongst teachers in the effective use of the methodology of Cognitively Guided Instruction. Scaling up by the P1, P6 and P7 teachers involved across 4 schools in 2015-16 by modelling and buddying to P4, P5, P2 and ELCC as well as further involvement of S1. Modelling and buddying opportunities to occur across all VOLA Primary Schools Project 3 (VOLA LLC) Increased motivation and skills amongst teachers in the effective use of the methodology of Problem Based	December 2016 All groups set up and functioning
S	Learning through the Single Steps. Primary Schools and ELCCs involved across the LLC measuring the impact on one cohort per each establishment Project 4 (OLSP LLC) Increased motivation and skills amongst teachers in the effective use of the methodology of Active Mental Maths Early, First and Second Level Groups created to implement interventions across the LCC including ELCC, Primary and Secondary staff	
	Project 5 (SPTA LLC) Increased motivation and skills amongst teachers in the effective use of the methodology of Reciprocal Reading Early Years/First Level practitioners to measure the impact of the intervention	

<u>Project 6 (Dumbarton LLC)</u> Increased motivation and skills amongst teachers in developing positive <u>Growth Mindsets</u> to raise attainment in Numeracy and/or Literacy (writing)

<u>Project 7 (WDC/Renfrewshire)</u> Increased motivation and skills amongst teachers in the effective development of <u>Metacognition</u> through Reciprocal Reading. P5 and P6 teachers across XXX, XXX P.S. and XXX P.S.

June 17

Support also being offered to:

Secondary Maths Collaborative Group

STARS – Secondary Raising Attainment Teachers

Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')

Each project group will identify teacher-generated qualitative and quantitative assessments / questionnaires / focus groups to measure the impact of their intervention with a focus on children in SIMD 1 and 2

We are also asking, where appropriate, the following standardised assessments should be implemented to measure attainment:

GL Numeracy GL Reading Myself as a Learner Literacy Baseline Numeracy Baseline

A tracking grid has been produced for each project to record their quantitative data on to. A comparison of data from standardised assessments and teacher generated assessments will be conducted.

We are comparing results based on the standardised scores for GL and Myself as a Learner and are developing Benchmarks for the Baselines with a particular focus on children in SIMD 1 and 2

What does this evidence show on the extent to which the above outcomes have been achieved to date? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

No evidence available until June

-term

What medium-term outcome(s) does this initiative aim to achieve? (Medium-term outcomes are often in the form of changed actions, practice, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)

By when? (estimate)

Status

	(completed / ongoing / no progress)
 To close the gap to raise attainment by ensuring that learners are improving through making small tests for change To increase opportunities for practitioner to collaborate across schools To increase opportunities for practitioners to take a leadership role To increase practitioners confidence and competence in using data effectively to inform improvement To increase and deepen partnerships across schools to improve outcomes for learners 	June 2017

Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')

- Numbers of practitioners involved in CAR Projects
- Google Questionnaire to all practitioners to measure changing attitudes
- Analysis of agreed standardised assessments (GL, Myself as a Learner, WDC Literacy and Numeracy Baseline) across all projects to measure impact in comparison to different cohorts with a particular focus on SIMD 1 and 2
- Number of schools that continue partnerships in 2017-18

What does this evidence show? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

Pupil attainment data analysis of impact completed June 17

Reflections on progress to date: Can you share any learning on what has worked well in implementing this initiative?

- There is an increase in the number of staff involved in critical enquiry
- There is an increase in the number of early years practitioners involved in critical enquiry
- There is an increase in the number of staff collaborating across schools
- There is an increase in the number of staff engaging with data such as the Baseline data, SIMD, GL
- Model used to produce a 'Supported School Improvement Model' for Head Teachers led by the central attainment team using scrutiny of school performance data

Can you share any learning on what has worked less well or could be improved?

- Provision of a package of support and training offered to each Project Team
- Support from CAR Education Development Officer, Data Management Officer and

Raising Attainment Maths Teachers

• The pilot of Supported School Improvement Model has led to improved leadership performance. The pilot is being extended to include a larger number of schools.

4	STEM				
2016/	17 Allocation	£154,185 (after a	greed change requ	iests)	
2016/	17 Actual Spend	£154,185			
		Expenditu	e breakdown		
			Total	this financial yea	ar
Staffi	Staffing:		FTE	Costs	
Teach	ners		1.2	£72,751	
Educa	ation/development of	ficers	0.5	£21,314	
Educa	ational psychologists				
Data	analysis officers				
Famil	y/home link worker				
Speed	ch and language the	rapists			
Early	years professionals				
Other	Other staff, namely:				
Non-staffing please specify type:		Total	costs this fin. yea	ar	
Professional Learning		£58,800			
Miscellaneous supplies/ classroom materials		£1320			

Activities: Please comment on progress in implementing your planned activities in the first year (2016/17)

Staff Professional Learning

STEM activities have been included in Learning Community and School / Centre Improvement Plans. STEM has increased in profile across the authority and colleagues have been supported in their Professional Learning. Pedagogical approaches such as Inspire & Challenge, Problem Based Learning and SSERC scientific enquiry have been supported as Professional Learning opportunities and are in the process of being cascaded to other staff and other Learning Communities.

Promoted Staff

Principal Teachers appointed in each of the STEM Hub schools to plan interventions, gather data, model good practice and to quality assure learning experiences.

Intervention in Functional Writing in STEM

Functional writing was identified as a focal area for the first intervention. Learners were assessed on a cold piece of writing and were supported through logging the recordings of findings from various STEM challenges in STEM log books. Their writing was then assessed at the end of the intervention and data was compared.

Pupil Interviews, Attitudinal Surveys

A number of pupil interviews and attitudinal surveys took place where the views of learners,

staff, PTs and HTs were collated. This was used to gauge staff confidence levels, pupil awareness, etc

Development of Learning Environments

The three original STEM Hubs have been used as models of good practice to exemplify the design and use of flexible learning spaces. Through collaboration with Glasgow Science Centre, one of these hubs has been further developed to become a state-of-the-art facility designed to inspire and challenge learners in their STEM studies. A number of workshops have taken place where staff have been supported in and given the opportunity to consider how existing spaces could be better used to support modern, flexible STEM learning. As a result of all of this, a number of schools have now been supported with structural adaptations to their buildings in order to develop their own STEM Hubs and enhance STEM learning.

Resources

A number of resources have been purchased for schools including BBC Micro:bit controllers, LittleBitz electronics hardware and Chromebooks in order to support STEM learning.

PreSTEM

All P7 learners in West Dunbartonshire are participating in a STEM transition programme in conjunction with the Engineering Development Trust entitled Energy and Your School. Pre and post intervention surveys are being taken to assess its effectiveness across West Dunbartonshire and its impact on learners.

Slippage from plans: Please comment on slippage from your original plans for implementing activities in the first year (2016/17)

4	STEM: evidence on short and medium-term outcomes	
utcomes	What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	By when? (estimate) Status (completed / ongoing / no progress)
Short –term outcomes	 Increased learner motivation and engagement in P2, P3 and P6 in the three STEM Hub schools Development of learner skills is independent scientific enquiry in P2, P3 and P6 in the three STEM Hub schools Increased learner collaborative skills in P2, P3 and P6 in the three STEM Hub schools Increased staff confidence in delivery of STEM in the three STEM Hub schools Increased staff focus on Equity and Excellence, resulting in a higher 	

quality of experience for all learners in the three STEM Hub schools

Increased attainment and closing of the attainment gap in Functional Writing.

Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')

Outcomes 1, 2 and 3 has been measured through learner interviews, pre and post intervention attitudinal surveys and teacher observations.

Outcome 4 has been measured through pre and post intervention attitudinal surveys.

Outcome 5 has been measured through learner interviews and Head Teacher / Principal Teacher observations.

Outcome 6 has been measured through the assessment of a cold piece of writing prior to intervention and the assessment of a STEM log book post intervention using consistent criteria to ensure rigour in the assessment evidence.

What does this evidence show on the extent to which the above outcomes have been achieved to date? Please highlight key findings only - both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

- Head Teachers describe increased learner engagement and motivation in STEM subjects in an integrated, flexible way.
- Learners across all stages can discuss their own learning in relation to STEM. This shows a greater understanding of the STEM subjects, in addition to a greater level of motivation and a greater ability to articulate their own learning.
- Increased opportunities to develop maths skills in a range of contexts, developing higher order thinking skills and skills for life.

What medium-term outcome(s) does this initiative aim to achieve? (Medium-term outcomes are often in the form of changed actions. practice, etc. Please be specific in the target group: does it involve all Medium -term outcomes teachers, parents or pupils, or a particular sub-set?)

By when? (estimate)

Status (completed / ongoing / no progress)

- Improvement in attainment in literacy and numeracy in P2, P3 & P6.
- Closing of the attainment gap in literacy and numeracy as a result of increased engagement in learning within the STEM Hubs.
- 10% increased attainment in reading ages on the targeted cohort of learners.
- 10% increased attainment in numeracy on the targeted cohort of learners.

Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')

All outcomes measured by quantitative pre and post assessment data.

What does this evidence show? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

The lessons have been successful in supporting improvement in attainment with an average increase in score of 29% per pupil.

Reflections on progress to date: Can you share any learning on what has worked well in implementing this initiative?

The bespoke STEM Hub initiative with 'Inspire and Challenge' learning programme has improved the quality of experience of learning in science, technology and maths. It has improved primary teacher confidence in the teaching science and has promoted hands on learning through discovery for pupils.

The Hub is supporting the agenda to regenerate learning environments as flexible, stimulating creative learning spaces.

This supports all learners to engage and be confident about learning in the STEM subjects.

Can you share any learning on what has worked less well or could be improved?

5	Programme				
2016/17 Allocation £108,285 (after a			greed change	requests)	
2016/	17 Actual Spend	£108,285			
		Expenditu	re breakdowr	ı	
			Т	otal this financial y	/ear
Staffi	ng:		FTE	Costs	
Teach	ners				
Educa	ation/development of	ficers	0.8	£67,360	
Educa	ational psychologists				
Data	analysis officers		1	£40,874	
Famil	y/home link worker				
Spee	ch and language the	rapists			
Early	years professionals				
Other	staff, namely:				
Non-staffing please specify type:		Т	otal costs this fin.	year	
Miscellaneous supplies		£51			

Activities: Please comment on progress in implementing your planned activities in the first year (2016/17)

- Identification of individual schools for Attainment Visit supported by our Attainment Advisor, Senior Education Officer and Education Officers.
- Process for managing improvement for individual groups produced.
- Refreshed Quality Assurance Model to provide a more proportionate model of support and challenge to schools.
- · Leaders' conference on 'Delivering Excellence and Equity'.
- Framework produced for improving quality of planning to tackle inequity.
- Analysis of data to produce attainment and equity profile of all establishments, learning communities and LA.
- Review of curriculum rationale and balance by all leaders to ensure appropriate to their context and expectation of Delivering Excellence and Equity, NIF, HGIOS4.

Slippage from plans: Please comment on slippage from your original plans for implementing activities in the first year (2016/17)

5	Programme: evidence on short and medium-term outcomes	
Short -term outcomes	What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	By when? (estimate) Status (completed / ongoing / no progress)
	 Planning to reduce equity gap, high profile priority for all establishments. Improved process to support/challenge schools to reduce equity gap. Informed school leaders and teachers about how to raise attainment. 	June – October 2016
Sho	Are you collecting evidence to measure these outcome(s)? If so, ple specify which type of evidence for which aim (if not, just put 'N/A')	ease
	 Outcomes identified in action plans provided by 'target' schools to im attainment levels for individuals and groups underachieving. Data of attainment progress on monitoring and tracking toolkit. School improvement plans and quality of curriculum models / balance to reflect learner need. Survey of HT confidence and knowledge about tackling inequity 	

What does this evidence show on the extent to which the above outcomes have been achieved to date? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

- In 21 attainment visits, 20 out of 21 schools could identify their attainment and equity gap.
- Data is being used to identify individual pupils and cohorts requiring both short term and long term interventions.
- The majority of Head Teachers rated that they were confident about tackling the
 equity gap. They identified that support from the local authority about research
 based interventions would be supportive to them.

What medium-term outcome(s) does this initiative aim to achieve? (Medium-term outcomes are often in the form of changed actions, practice, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)

By when? (estimate)

Status (completed / ongoing / no progress)

• Reduction in attainment gap in schools under performing when compared to schools with similar SIMD profiles.

June 2017

Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')

- Standardised data on literacy, numeracy early years baseline data.
- Attainment and equity profiles for individual pupils, schools, local learning communities.
- Attendance and late coming data using risk matrix to identify factors affecting attainment levels. Identification of appropriate intervention applied to improve.

What does this evidence show? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

- Attainment Gap data to be submitted in August 2017 post submission of national data collection
- Please refer to attached report WDC Attainment Gap

Reflections on progress to date: Can you share any learning on what has worked well in implementing this initiative?

- Data visits have shown how well schools are engaging with the data and where additional support and challenge is needed.
- Increased knowledge and understanding of self-evaluation and driving improvement is shared with the performance management team
- Risk matrix used to identify aspects for development and next cohort identified
- Strategic drive to support a more forensic and intelligent use of data
- Used a proportionate Supported School Improvement Model to collaboratively support and challenge schools based on data from their attainment and equity profile, leading to improved performance at a school and learner level
- Enabled education leaders to engage in critical analysis of data to identify interventions that will reduce the equity gap

Can you share any learning on what has worked less well or could be improved?

ong -term outcomes

OVERALL PROGRESS AND REFLECTIONS

6 Overall progress towards long-term outcomes and reflections

The long-term outcomes of the Attainment Scotland Fund are to:

- a. Improve literacy and numeracy attainment
- b. Improve health and wellbeing
- c. Close the attainment gap between pupils from the most and least deprived areas. Are you collecting any evidence to measure these long-term outcomes in your authority? If so, please specify the type of evidence you are collecting (if not, just put 'N/A')

Produced a West Dunbartonshire Tracking Toolkit for BGE to track pupil progress in standardised assessments, CfE levels and to identify risk factors that could inhibit pupil attainment and achievement.

Evidence of pupils, school and learning community performance has been tracked for 4 years.

Attainment and Equity Profiles have been produced and shared with all headteachers

Schools have set targets for improvement with attainment visits used to gather evidence of planning to reduce equity gap

What did this evidence show so far? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just leave blank. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

Please refer to attached document WDC Attainment Gap 2016.

Can you share any learning on what has worked well in your overall strategy to achieve impact?

- West Dunbartonshire Improvement Framework: validation and quality assurance of schools performance with NIF drivers and HGIOS4
- School, learning community and local authority attainment and equity profiles.
- Using a risk profile to deliver a proportionate approach to school improvement by senior and education officers
- Programme of attainment visits has been completed by our Attainment Advisor, Senior Education Officers and Education Officers.

Can you share any learning on what has worked less well or could be improved?

Is there anything else you'd like to share or give feedback on?



Highlights and Challenges Secondary Programme January 2017

Reporting Period	October – December 2016
Local Authority	West Dunbartonshire
Key Contact at Authority	
Attainment Advisor	

Financial Expenditure Reporting

1	Health and we	llbeing - multia	agency	/ hub		
201	6/17 Allocation	£303,186		Planned Quarterly Spend		£150,000
20	016/17 Actual Spend	£66,400		Actual Quarterly Spend		£66,400
2	Literacy and N	umeracy - Lea	rning,	Teaching and Asse	ssment	
201	6/17 Allocation	£156,000		Planned Quarterly Spend		£78,000
20	016/17 Actual Spend	£12,670		Actual Quarterly Spend		£12,670
3	Skills Academ	ies				
201	6/17 Allocation	£113,774		Planned Quarterly Spend		£56,000
20	016/17 Actual Spend	£14,952		Actual Quarterly Spend		£14,952
4	Staffing					
Staffing secured this quarter: 2 x 0.4 DHT's Senior Phase Officer x 2 Family Link x 6 Noreen extended 1.0 FTE Police Officer Pupil Counselling HT Secondee x 5 (0.2) Staffing secured in total: 2 x 0.4 DHT's Senior Phase Officer x 2 Family Link x 6 Noreen extended 1.0 FTE Police Officer Pupil Counselling HT Secondee x 5 (0.2)						
How many GTCS registered teachers is this funding supporting? 1.8					1.8	
How many other staff is this funding supporting?						
Number of schools supported by this funding? 7						

			c 11 0
How many pupils	are benefiting	from this	tunding?

What progress are you making towards being able to report on the extent to which you are achieving your short, medium and long-term outcomes (reporting required in October 2016 and April 2016) and are there any challenges?

240

Short term outcomes

- Target groups of pupils and families identified using attainment data to identify young people at risk of missing out.
- Profile of young people requiring enhanced provision is high priority in all secondaries
- Evaluation of current provision and areas for improvement to tackle inequity is a priority area for improvement in 5 secondaries
- Joint service provision in school setting evaluated to support delivery of a bespoke integrated programme.
- Local employment projections used to plan an improved skills programme for construction, tourism

Highlights (e.g. activity this quarter, year 2 proposals progress, recruitment):

Recruitment exercise completed to appoint:

- Principal Teacher
- Literacy, numeracy, health and well being teachers (Jan)
- Social worker
- Grade 5 Health Worker
- Extension of pupil counselling <u>service</u>
- Education Psychologist
- Life Skills Officer/ 2 Senior Phase Officers
- Skills Development Officers (Noreen VOLA extending to full time)
- Police Officer (Campus Cop)
- Pupil and Family Support Workers
- Includem Family Support Workers (STV) (£50,000)
- Hub Manager 2 DHT (0.4)

Nurture Education Training planned

Literacy training programme for secondary staff planned

Joint planning and review with social work and health to support a modified onsite support package for pupils and families in and beyond the school day

Liaison with Active Schools to plan a possible holiday programme

Meeting with Children in Scotland to scope out an out of hours programme

Training for senior managers and clerical staff on BGE tracking toolkit to support:

- Consistent approach to tracking
- Improved use of assessment to support judgement of levels
- Early identifiers of risk to support early intervention
- Early identifiers of risk to support a targeted, relevant curriculum programme in S1 for pupils unable to achieve outcomes for their age and stage

Service plan agreement with education psychologist, health and social work to provide an enhanced school based model managed and directed in partnership with senior school

leaders

Meeting with XXXX Education Scotland to scope out our plans for family learning and youth engagement

Challenges (e.g. slippage, staffing, reporting):

- Intervention projects take time to plan in detail as meeting across a range of partners is required to ensure effective deliver. This impacts on being able to report at this point on outcomes for young people
- Funding confirmation in October. October December detailed planning with education staff, partner services and third sector providers.



Highlights and Challenges Primary Programme January 2017

Reporting Period	October – December 2016
Local Authority	West Dunbartonshire
Key Contact at Authority	
Attainment Advisor	

Financial Expenditure Reporting

1	Transition 1 – 6	early level			
2016/17 Allocation		£168,780 £218,780	Planned Quarterly Spend	£60,000	
20	016/17 Actual Spend	£175,984	Actual Quarterly Spend	£58,684	
2	Transition 2 – p	orimary to secon	dary		
201	6/17 Allocation	£591,600	Planned Quarterly Spend	£148,000	
20	016/17 Actual Spend	£435,918	Actual Quarterly Spend	£132,275	
3	School Improve	ement Partnersh	ip		
2016/17 Allocation		£350,000 £250,000	Planned Quarterly Spend	£62,500	
2016/17 Actual Spend		£139,663	Actual Quarterly Spend	£44,432	
4	STEM				
201	6/17 Allocation	£104,240 £154,240	Planned Quarterly Spend	£37,000	
20	016/17 Actual Spend	£114,800	Actual Quarterly Spend	£39,754	
5	Programme				
201	6/17 Allocation	£118,700 £107,830	Planned Quarterly Spend	£27,000	
20	016/17 Actual Spend	£86,020	Actual Quarterly Spend	£27,893	
6	Staffing				

Staffing secured this quarter:	Staffing secured in total: Teachers 12.8 Education Development Educational Psychologis Family/ Home link works	Officers 4.6
How many GTCS registered teachers is this fu	12.8	
How many other staff is this funding supporting	7.65	
Number of schools supported by this funding?	34	
How many pupils are benefiting from this fundi	Maths – 456 SIPP – 500 STEM – 312	

What progress are you making towards being able to report on the extent to which you are achieving your short, medium and long-term outcomes (reporting required in October 2016 and April 2016) and are there any challenges?

Transition 1a

- Shared agenda of working together to close the poverty related attainment gap.
- Schools, early year centres and parents have a clearer shared perspective on the 'closing the poverty related attainment gap' agenda and the role that they have to play with this endeavour.
- Coherence and consistency of approach in terms of deployment of outreach workers to support parents.
- Increased emphasis for parents on their role in supporting children's learning.
- Children continue to experience RT methodologies, they are learning the terminology and engaging in the process with improvements in reading comprehension in evidence.
- Improved well-being for children part of nurture groups.
- Improved well-being for pupils whose teachers have completed IYTCM training.
- Improvements in vocabulary.

Transition 1b

- Improved quality of learner experiences in some early years settings and P1 reported.
- Learning environments are more exciting and motivating.
- Leaders are clearer about what they are trying to achieve linking ideas to curriculum rationale and vision to meet the needs of the equity challenge.

Transition 2a

- Results of intervention to targeted groups (September October) show an average increase of score of 17% using pre and post Number Assessment. In the post assessment, children used an average of 3 more strategies for addition and 1 more strategy for subtraction compared to the pre assessment. Evidence from a Pupil Questionnaire/ Focus group shows a trend of more positive attitude/confidence towards Numeracy/Maths.
- Results of intervention to targeted groups (SEAL approach October December 2016) show an average 23% increase in targets met across all intervention groups.

Transition 2b

- The experiences that the children are getting are bespoke and targeted
- Increased opportunities for collaborative planning for staff

- Increased opportunities for collaborative learning across the LLC for children
- Opportunities for the children to apply their learning in new and unfamiliar contexts
- Class teachers and LA involved report increased confidence in the children involved and
 their engagement with the creative tasks, enjoyment of the learners, some children are
 more relaxed when tackling problems, less maths anxiety, more willing to 'have a go'
 children are able to focus for a longer time on maths. One school reports that the
 programme is helping the children involved feel active participants in something
 meaningful. Working in small groups using numerous teaching styles is invaluable to these
 children who can often struggle with the everyday mechanics of the classroom.
- Enhanced transition aspect children report feeling confident in going to high school
- From start of project family session parental engagement continues to rise with the most recent being 93% for the cohort one response is that one dad who has never attended any school event or parents night attended the family session for first time and for the first time ever went along to the parents night for his son.
- Children report the activities as fun and engaging.

STEM

- The analysis of data shows a significant improvement in the understanding and skills of pupils in Data Analysis. A summary analysis has been appended to this report.
- There was minimal difference in poverty related attainment at the beginning of the intervention indeed those pupils from SIMD 1-3 performed better than pupils from the other deciles in the pre-intervention assessment. This gap was reduced post-intervention.

Highlights (e.g. activity this quarter, year 2 proposals progress, recruitment):

Transition 1a

- Word Aware Training
- Second Incredible Years Parenting Group
- Accredited Child Development Course in partnership with West College Scotland and CLD
- Feedback from parents on transition to school
- Interviews conducted
- Targeted maths input in 4 pilot schools

Transition 1b

- P.2 /P.3 training underway 'Developing play based approaches to learning'
- Literacy toolkit updated which will provide further scope for establishments to interrogate data
- Play CAR/SIPP underway 30 projects
- Early literacy skills programme and professional learning being developed (in response to literacy questionnaire at early years)
- Word Aware plan in place for early level implementation
- Draft guidelines for play-based approaches ready

Transition 2a

- Established professional network Maths Challenge Teachers who have attended the first
 of three Partnership Innovation Meetings (representation from 32 schools). Evaluations
 from the initial meeting demonstrate confidence at developing an Action Plan to raise
 attainment in an aspect of Numeracy/Maths in individual schools. Impact of individual plans
 will be evaluated in May.
- Programme of CLPL the delivery of Numeracy/Maths Sessions which are based on

current research (Maths Anxiety and Early Number/Counting) have contributed to the development of practitioner understanding and confidence in teaching Numeracy and Maths.

- Development of an OurCloud Numeracy Resource, with exemplification of the Numeracy Benchmarks, to be used by parents/pupils is underway. The RA teachers are working with staff/pupils from SPTA to produce a format/resource. Heads of establishments/parents/pupils will be consulted on this.
- Development of a Numeracy Progression Framework to be used across all establishments in WDC is underway.
- Raising Attainment Teachers have been providing targeted intervention to small groups of P6 pupils in schools identified through examination of attainment/SIMD data.
- The second term (October December) focused on a SEAL approach (Stages of Arithmetical Learning) to identify/address gaps in learners' knowledge and address these. Raising Attainment Teachers have been trained in the use of SEAL.
- The RA teachers have developed a tracking tool which will be an aid in showing improvement for the children who are being targeted.
- The Maths Challenge Teachers (a teacher from each school in WDC) have participated in two CLPL sessions (Maths Anxiety and Early Number). They have participated in a Partnership Innovation Meeting where they have been asked to develop a brief Action Plan, in consultation with their H.T., which will contribute to raised attainment in Numeracy/Maths within their own establishment. Further meetings will take place in February and May to assess impact of projects on pupil attainment in Numeracy/Maths in individual schools.

Transition 2b

- Targeted maths input in 4 pilot schools
- Delivery of math's through creativity sessions
- Delivery of a day of print making and animation linked to numeracy gaps identified form data
- Mental maths though dance delivered
- Family session to theatre with numeracy and maths challenges
- Planning upcoming family learning session with home economics and design and engineering department
- Impact documentary to capture attitudinal change and experiences filming and production ongoing
- Attitudinal surveys completed using myself as a learner
- Evaluation with class teachers, LA's and parents on impact of the project

STEM

- A termly focus (Numeracy until Christmas, Literacy until Easter, Literacy & HWB until Summer);
- A larger cohort of pupils used to add rigour to the data analysis;
- Focused classroom based lessons in the morning, with associated hands-on, practical STEM activities in the afternoon to reinforce learning;
- Pre and post assessments and analysis filtered by SIMD, gender, staged intervention, etc.
- Following a review of GL attainment data, the first session's intervention focused on Data Analysis. The intervention has been completed and the data has been analysed.
- Five training sessions (one in each LLC) has successfully taken place on the use of the new BGE tracking toolkit.

Challenges (e.g. slippage, staffing, reporting):

 Ability of schools to release staff for professional learning. A blended approach has been used.



Mid Year Progress Review Report October 2016

Reporting Period	April – September 2016
Local Authority	West Dunbartonshire
Key Contact at Authority	
Attainment Advisor	

Agreed Improvement Plan

1 Transition 1a & 1	b					
2016/17 Allocation	£168, 7	80 Planned Quarterly S		erly Spend	£45,000	
2016/17 Actual Spend	£114, 1	22	Actual Quarterly Spend		£58, 919	
	E	xpenditur	e breakdown			
		This quarter		Total th	Total this financial year	
Staffing:		FTE	Costs	FTE	Costs	
Teachers			£		£	
Education/development o	fficers	0.8	£12,443	0.8	£25,246	
Educational psychologists		1.6	£26,543	1.6	£53,086	
Data analysis officers			£		£	
Family/home link worker		1.45	£13, 025	1.45	£26, 050	
Speech and language the	rapists		£		£	
Early years professionals			£		£	
Other staff, namely: (cover)			£3998		£7996	
Non-staffing please specify type:		Cost	ts this quarter	Total co	sts this fin. year	
Professional Learning		£2910 £58		£5820	£5820	
		£				
		£		£		

Activities: Please comment on progress in implementing your planned activities in the first six months of 2016/17

- Baseline vocabulary and problem solving data collected on pre-school children making transition to P1 in the 2 project primary schools has been collected and analysed.
- Training has been developed and delivered to all staff in the 3 nurseries and 2
 primaries and outreach workers on understanding the impact of poverty and their role
 in closing the gap.
- Working jointly with SLT, areas of focus have been identified to improve language rich environment of early years centres within the project.
- Outreach workers have undertaken a series of activities to encourage parental involvement including for example, Book Bug session, Stay and Play sessions, home visits.
- Data has been gathered from parents of pupils making transition from pre-school to

- primary on the effectiveness of transition arrangements.
- Incredible Years Teacher Classroom Management Programme (IYTCM), a 6 day training programme has been delivered and completed by 15 staff from project early years centres and primaries.
- Incredible Years Parenting Programme has commenced within one of the primary schools with 12 families participating.
- Awareness raising session has been delivered by SLT to P1 teachers and outreach workers on 'communication in primary school'.
- Training on 'Word Aware' by project leads, headteachers and principal teachers to support a more effective provision of learning to improve vocabulary.

Slippage from plans: Please comment on slippage from your original plans for implementing activities in the first six months of 2016/17

Not yet employed or used early years teacher to deliver vocabulary lessons and provide training for staff across the early level.

1	Transition 1a – Early level: evidence on short and medium-term outo	comes
	What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	By when? (estimate)
	Within the project establishments (3 early years centres, 2 primaries and 3 outreach workers):	
	 Increased understanding of teachers, early years workers and outreach workers in understanding the poverty related attainment gap and their individual roles and responsibilities in working to impact on this. 	Aug 16
omes	 Awareness of parents in the project establishments has been raised of the transition project and the importance of the parental role in supporting children's learning. 	June 16
ontc	Increased understanding of the language based vocabulary gap at transition to primary and the impact that his has on learning.	Aug 16
erm	 Increased teachers and early years workers of the meaning of parental involvement and ways to enhance this. 	Aug 16
Short –term outcomes	 Increased awareness of the Incredible Years suite of programmes and the contribution that this approach can make in helping parents to engage with their children's learning. 	June 16
	Are you collecting evidence to measure these outcome(s)? If so, ple specify which type of evidence for which aim (if not, just put 'N/A')	ease
	 Pre and post training questionnaires have been completed which information on 1, 35 above. Feedback from outreach workers on their contact with parents. 	captures
	·	
	What does this evidence show on the extent to which the above out been achieved to date? Please highlight key findings only – both positiv negative. As part of the evaluation, we may request further details on you for particularly interesting findings. If you did not collect evidence for thes	e and Ir evidence

	completed at the end of year report, but if you already like to share finding feel free. If not, just leave blank.	gs, please
È	N/A	
	What medium-term outcome(s) does this initiative aim to achieve? (Medium-term outcomes are often in the form of changed actions, practice, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	By when? (estimate)
•	 In classes where teachers have been trained in IYTCM there will be evidence of the Incredible Years strategies in action. For parents who have participated in IY parenting group they will 	Dec 16
	report more confidence in building positive relationships with their children, notice improvements in behaviour and show greater understanding of impact on learning. 3. In all project establishments there will be evidence of increased	Dec 16
	quality of parental involvement in learning. 4. Improvements in vocabulary of children within the early years	Mar 17
	centres will be in evidence. 5. The early years centre will show progress in their use of	Mar 17
mes	questioning and engaging children in learning conversations. 6. Staff within project establishments will evidence that they have	Mar 17
ontco	considered whether their practice is 'poverty proof'.	Jan 17
Medium –term outcomes	Are you collecting evidence to measure these outcome(s)? If so, pleas specify which type of evidence for which aim (if not, just put 'N/A')	ase
nm –	 Mentoring and coaching sessions with trained staff bringing evider practice to the sessions. 	nce of
Medi	 Questionnaire and focus group data collected from parent participal group. 	ants in IY
	 Schools to report on activities around parental involvement and legarental engagement. 	vel of
	 Pre and post-test measure of vocabulary. Use of VERP methodology. 	
_	6. Questionnaire completed by all staff.	
	What did this evidence show? Please highlight key findings only – both negative. As part of the evaluation, we may request further details on you for particularly interesting findings. If you did not collect evidence for these	r evidence
	outcome(s) or results are not yet available, just put 'N/A'. This part only no completed at the end of year report, but if you already like to share finding feel free. If not, just leave blank.	eeds to be
	N/A	

Reflections on progress to date: Can you share any learning on what has worked well in implementing this initiative?

Developing and delivering training to all staff involved in the project establishments has been very effective in gauging their initial understanding of the poverty related attainment gap and in engaging individual practitioners in the challenge and the impact that they can make.

Using outreach workers to engage with parents is proving to be very helpful particularly their ability to work across early years and primary sectors.

Can you share any learning on what has worked less well or could be improved?

1	Transition 1b – Ea	arly level	Play and	Learning			
2016/	2016/17 Allocation £ Planned Quarterly Spend £				£		
2016/	17 Actual Spend	£		Actual Quarterl	y Spend	£	
		E	xpenditui	e breakdown			
			Т	his quarter	Total th	Total this financial year	
Staffi	ing:		FTE	Costs	FTE	Costs	
Teach	ners			£		£	
Educa	ation/development o	fficers		£		£	
Educational psychologists			£		£		
Data analysis officers				£		£	
Family/home link worker			£		£		
Spee	ch and language the	rapists		£		£	
Early	years professionals			£		£	
Other staff, namely:				£		£	
Non-staffing please specify type:		Cost	ts this quarter	Total co	sts this fin. year		
			£		£		
		£		£			
			£		£		

Activities: Please comment on progress in implementing your planned activities in the first six months of 2016/17

- 1. Attainment in literacy and numeracy
- Literacy progression planner updated to track early literacy attainment i.e. literacy in its widest sense, i.e. emergent writing, syllable structure, environmental print, reciprocal reading skills.
- Literacy data toolkit updated to provide further scope for establishments to interrogate data.
- Work stream to produce guidance on early level literacy and numeracy to reduce the equity gap
- 2. Reciprocal Teaching
- Reciprocal Teaching early level guide completed and distributed.
- Reciprocal Teaching pre and post assessment underway at early years (five children in every pre-five centre).
- 3. Training to improve learner experiences
- Building on the programme of professional learning for early years and P1 practitioners, a new programme of professional development is underway for P2 and P3 staff. This is designed to develop play-based approaches to learning through play. To ensure a continuous provision of child centred learning experiences to support children's cognitive, social and emotional development.
- Principal Teacher Raising Attainment appointed to support to roll out of play based

- learning across Early Learning and Childcare Settings and Early Level Primary teaching staff.
- Improved quality of learner experiences in most early years' settings and P1 reported through HMI, validation reports, and quality visits.
- 4. Curriculum planning
- Learning community improvement plans include developing play-based approaches to learning through play.
- 5. Parental engagement
- Information leaflet for parent Sharing a Book school bag drop and allocation for nurseries, libraries, health centres etc.
- 6. Review of Boxhall Profile as an effective tool to assess, monitor and track individual learners and applicability from 3-18 years.

Slippage from plans: Please comment on slippage from your original plans for implementing activities in the first six months of 2016/17

	What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	By when? (estimate)
nes	 Increased confidence and skills of teachers in early years establishments and P.1 – P.3 teachers in schools using play-based approaches to learning. Increased focus on learning through play and clear links to literacy and numeracy attainment. Learning environments are more exciting and motivating. Leaders are reviewing and adapting curriculum design and their balance. 	
m outco	Are you collecting evidence to measure these outcome(s)? If so, ple specify which type of evidence for which aim (if not, just put 'N/A') 1. Qualitative evidence from training undertaken to support Learning	
Short –term outcomes	Play 2. Literacy and numeracy baselines to measure attainment 3. Reciprocal Teaching reading assessments 4. Qualitative evidence taken after training to measure impact on le environment 5. Teacher Judgement evidence towards P1 achieved level 6. Quality improvement and validation visits 7. Attainment profiles and equity gap	
	What does this evidence show on the extent to which the above our been achieved to date? Please highlight key findings only – both position negative. As part of the evaluation, we may request further details on you for particularly interesting findings. If you did not collect evidence for the outcome(s) or results are not yet available, just put 'N/A'. This part only completed at the end of year report, but if you already like to share finding	ve and ur evidence se needs to be

feel free. If not, just leave blank. 1. Analysis of qualitative data shows the main themes emerging are an increased focus on learning through play and establishments linking play to literacy and numeracy leading to improved attainment. 2. Attainment data for early literacy progression in skills shows that children are making appropriate progress. Two areas show a decreased performance letter sounds and rhyme detection, the remaining literacy skills show an increase or equal score; three areas have the highest score recorded, i.e. book knowledge, nursery rhymes and the alphabet. Attainment data for early numeracy progression in skills shows that children in early years are making appropriate progress: there has been improvement in scores ELCCs in all areas apart from money. Children's attainment in numeracy at P1 shows a large jump in skill level in P1 compared to the ELCC value, especially in money and time. 3. N/A 4. N/A 5. N/A 6. N/A 7. N/A What medium-term outcome(s) does this initiative aim to achieve? By when? (Medium-term outcomes are often in the form of changed actions, (estimate) practice, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?) 1. Improved and effective use of play based approaches to learning by teachers in early years establishments and P1 - P3 2. Adaptation of curriculum model to give a balanced curriculum which has more emphasis on Learning Through Play 3. Curriculum balance and content personalised to the needs of individuals and groups. Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A') 1. Evidence on numbers of teachers using play based learning or Incredible Years approaches and feedback on the effectiveness of these approaches

2. Quality improvement and validation visit

Medium -term outcomes

3. Attainment profiles and equity gaps changes over time

What did this evidence show? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

1. Increased numbers of teachers in early years' and early primary school using and seeing benefits from these approaches

- 2. N/A
- 3. N/A

Reflections on progress to date: Can you share any learning on what has worked well in implementing this initiative?

- Training for all senior leaders, headteachers and staff to ensure a concerted focus on improvement.
- On-line sharing/ learning site for sharing practice.

Can you share any learning on what has worked less well or could be improved?

• Training teachers last year prior to training sessions for headteachers.

2	Transition 2a & 2b)		
2016/	17 Allocation	£591,600	Planned Quarterly Spend	£150,000
2016/	17 Actual Spend	£322,382	Actual Quarterly Spend	£163,181

Expenditure breakdown

_	p				
	This quarter		Total t	his financial year	
Staffing:	FTE	Costs	FTE	Costs	
Teachers	15.8	£151,372	15.8	£298,764	
Education/development officers	0.4	£6735	0.4	£13,470	
Educational psychologists		£		£	
Data analysis officers		£		£	
Family/home link worker		£		£	
Speech and language therapists		£		£	
Early years professionals		£		£	
Other staff, namely (cover)		£5074		£10,148	
Non-staffing please specify type:	oe: Costs this quarter Total costs this fin. year		osts this fin. year		
	£		£		
	£		£		

Activities: Please comment on progress in implementing your planned activities in the first six months of 2016/17

- The pace of the project has been accelerated due to the appointment of 2 Raising attainment officers and the commissioning of a dance development officer.
- Team trained in the analysis and use of data to target interventions

£

- Identification of control group of learners
- Leads developed our cloud page for sharing within team
- Set up of twitter account for outward facing communication and for parents and families #WDCcreatemaths
- Action plan for year 2 finalised with delivery timetables
- implementation plan developed
- Presentation for planning group of Head Teacher's and p5 class teachers delivered.
 A shared understanding of aim of pilot programme and timeline
- Presentation for Curriculum Leader's in STPTA delivered
- S1 transition leaders identified and are to be trained in maths mindset linked to DYW agenda and will achieve accreditation through Saltire award.
- Film maker commissioned for development of the documentary to be associated with

project

- All data for linked schools and control schools collated
- All learners in pilot data collected
- All team now will participate on WDC leadership programme to build their capacity to drive forward project.
- Team days for the cohort developed
- Beyond the bell family sessions produced
- Collaborative planning for all staff involved arranged for this session

Slippage from plans: Please comment on slippage from your original plans for implementing activities in the first six months of 2016/17

• Original timelines have slipped due to the delay in securing the appropriate staffing to support the project.

2	Transition 2a – Primary to secondary: evidence on short and mediur outcomes	n-term				
	What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	By when? (estimate)				
	 Improved use of data to identify young people at risk of missing out and not meeting age and stage milestones. 	August 2016				
	 Staff aware of the agenda to tackle inequity and the value of data analysis to support planning. Awareness of how the identified cohort view themselves as 	September 2016				
S	 learners Production of data profiles for all learners to plan programmes of intervention 	October 2016				
utcome	 Family engagement in the project Confidence of families encouraged to participate in programme. 	October 2016				
erm o	Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')					
Short -term outcomes	Health and well being outcomes – Myself As A Learner questionnaire, i reflections by learners Maths and numeracy attainment – GL assessment data as this has bee identified from the outset as a longitudinal study.					
	What does this evidence show on the extent to which the above outcomes have been achieved to date? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.					
	N/A					

outcomes
term o
ium

What medium-term outcome(s) does this initiative aim to achieve? (Medium-term outcomes are often in the form of changed actions, practice, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	By when? (estimate)
 A shared understanding of aim of pilot programme for children and families. 	October 16
 Increased confidence in parents to support their children's learning at home. 	January 17
 Increased confidence of S1 transition leaders to engage with p5 pilot group. 	March 17
 Enhanced transition developed to include regular 'Beyond the Bell' activities and IDL challenges for the identified cohort. 	November 16
Children's self perception and confidence becoming more	

Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')

Saltire Award progress

positive.

- Increased number of opportunities for family learning
- Qualitative data gathered through video evidence
- Myself as a learner information

What does this evidence show? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

N/A

Reflections on progress to date: Can you share any learning on what has worked well in implementing this initiative?

- Providing leadership training for project team.
- The involvement of the team leading the project being engaged with their own leadership development.
- Providing time and training for staff to analyse and use data to target interventions.
- Spending time on collaborative planning to ensure a clarity of vision.
- Using a cross sectoral team is generating shared expertise to enrich the young people's experiences.

Can you share any learning on what has worked less well or could be improved? $\ensuremath{\mathsf{N/A}}$

2	2 Transition 2b – Primary to secondary					
2016/	2016/17 Allocation £ Planned Quarterly Spend £					
2016/17 Actual Spend £		Α	Actual Quarterly Spend		£	
Expenditure breakdown						
Staffing:		This	quarter	Total this	financial year	
		FTE	Costs	FTE	Costs	

Teachers		£		£
Education/development officers		£		£
Educational psychologists		£		£
Data analysis officers		£		£
Family/home link worker		£		£
Speech and language therapists		£		£
Early years professionals		£		£
Other staff, namely:		£		£
Non-staffing please specify type:	Costs this quarter		Total costs this fin. year	
	£		£	
	£		£	
	£		£	

Activities: Please comment on progress in implementing your planned activities in the first six months of 2016/17

- Training to 3 out of the 5 Local Learning Communities on the National Numeracy and Mathematics Framework.
- A numeracy strategy has been produced (draft) to support HT to implement effective approaches to raise attainment
- Local attainment data was used to identify primary schools whose pupils would benefit from numeracy/maths interventions. 11 Schools were identified. 4 have an extra teacher working on a specific action plan to improve numeracy/maths attainment in upper stages of Primary. The other 7 schools have a raising attainment teacher working with them for two terms.
- **Primary Intervention:** From the GL Data 7 primary schools were identified for the numeracy raising attainment teachers to work with. The team will work with small targeted groups of learners for two terms. The first term focuses on Number Sense and improving learners' confidence and resilience in numeracy and maths. The second term used SEAL approaches (Stages of Early Arithmetic Learning) to identify gaps in learners' knowledge and plan improvements to address the gaps.
- Secondary Intervention: The purpose of this pilot scheme is to foster cross sectorial
 collaboration with primary and secondary teachers in numeracy and mathematics.
 This is a 6 week program which looks at the use and importance of lesson starters
 for S1 pupils.
- Challenge Teachers: One teacher in every primary and secondary school from
 within existing staffing has been identified at a maths challenge teacher. They are
 responsible for attending 4 WDC professional learning sessions; attending 3
 partnership innovation team meetings (PIT); lead and inform improvement of
 numeracy and promotion of the National Numeracy and Maths HUB within in their
 school.
- CLPL Program: 4 CLPL sessions have been developed to inform maths challenge teachers and probationers of the following:- Maths Anxiety, Early Counting, Numeracy Resources and Number Talk.

Slippage from plans: Please comment on slippage from your original plans for implementing activities in the first six months of 2016/17

- Parental engagement in maths/numeracy time to be allocated to this
- Having one less numeracy raising attainment teacher has reduced the amount of schools/pupils that we can target.
- Staff absence has had an impact on the secondary intervention. This has resulted in the secondary project being extended for a further period of time.

2	Transition 2b – Primary to secondary: evidence on short and medium-term outcomes						
	What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	By when? (estimate)					
	 Increased confidence of secondary teachers to collaborate with primary teachers and colleagues from other secondary departments. 						
	Increased focus on numeracy attainment in all schools with a						
	 challenge teacher. Secondary learning environments are more exciting and motivating. 	Oct'16					
nes	 Increased confidence, resilience and emerging improvements in Numeracy of the targeted groups of pupils working with the 	Dec'16					
Short –term outcomes	 raising attainment team. Leaders are clearer about what they are trying to achieve and how challenge teachers can be used to improve numeracy within their school. 	Oct '16					
ort –te	Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')						
Sho	 All challenge teachers have an action plan. This will be monitored closely to review impact on attainment and achievement of focus groups of pupils Attitudinal surveys and assessment data will be collected from pupils working with the raising attainment team. 						
	What does this evidence show on the extent to which the above outcomes have been achieved to date? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.						
Medium –term outcomes	What medium-term outcome(s) does this initiative aim to achieve? (Medium-term outcomes are often in the form of changed actions, practice, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	By when? (estimate)					
	 Improved quality of teacher dialogue. Improved confidence of vulnerable pupils in maths using SEAL. Strategies to improve attainment in maths/numeracy of target groups by headteachers. Process to identify children at risk of missing out on attaining for 						

their age and stage.

Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')

- All challenge teachers will have an action plan for their schools, which will be monitored closely.
- Attitudinal surveys and assessment data will be collected from pupils working with the raising attainment team.
- Professional dialogue
- Scrutiny of GL data.
- Tracking improvement in attainment of focus groups of pupils and schools.

What does this evidence show? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

- Pre intervention 17% of pupils used more than one strategy to complete calculations. Post intervention 84% of pupils used more than one strategy to complete calculations.
- 82% of pupil results showed an increase in attainment on average by 20%.
 Comments from pupils

What have I learned

"It's different from class because we use the materials to help us. Sometimes in class when I only have 10 fingers it is hard to show what I mean"

- " My counting has got better"
- "I can count back from "
- "I can make numbers counting in tens"
- "I can show different ways of making numbers"

Mistakes

"No one will make fun of me here if I make a mistake"

"I get scared in class when I make a mistake but in our group I don't feel scared and I can concentrate."

"In class if I make mistakes I give up, but here I know I can find another way and it helps me"

"Everybody helps to explain when we work in our group"

"Mistakes are important cos it makes you get better"

"When you make a mistake you won't get into trouble cos it's okay making them"

Struggling

"In class I leave hard questions to the end. It's more important to get my work done but here we can talk about it"

"If I find something hard in class I can get annoyed, daydream and lash out and can't focus on my maths. Here it is different, I take time to try different things we have time to talk and explain.

Reflections on progress to date: Can you share any learning on what has worked well in implementing this initiative?

- Time allocated to research to produce a comprehensive framework of support to schools and pupils.
- Provision of key staff to lead initiative to ensure a consistent approach and improved

knowledge of teaching staff.

Can you share any learning on what has worked less well or could be improved?

• It is challenging to change attitudes of particular individuals and groups of teaching staff as to what is effective teaching and learning in maths/numeracy.

3	School improvem	ent Parti	nership				
2016/17 Allocation £350,00		OO Planned Quarterly		erly Spend	£87,000		
2016/17 Actual Spend £68,275		Actual Quarterly Spen		y Spend	£34,138		
		E	xpenditu	re breakdown			
			This quarter		Total th	Total this financial year	
Staffing:		FTE	Costs	FTE	Costs		
Teac	hers - commissioning	l		£			
Educ	ation/development of	ficers	8.0	£9494	0.8	£18,988	
Educ	ational psychologists			£		£	
Data analysis officers			£		£		
Family/home link worker			£		£		
Spee	ch and language the	rapists		£		£	
Early years professionals			£		£		
Other staff, namely:Supply			£19,424				
Non-staffing please specify type:		Costs this quarter		Total costs this fin. year			
CAR Project		£5220		£10,439			
		£		£			
		£		£			

Activities: Please comment on progress in implementing your planned activities in the first six months of 2016/17

Activities completed between January 2016 and June 2016

- 8 of the 9 projects are complete and provided Findings Reports on their intervention
- All 9 projects were supported by 3 more training sessions: "Implementing a Lesson Study", "Effective Professional Dialogue" and "Data Analysis" to support the Lesson Studies and Completion of the Findings Report
- A programme of 5 Training Sessions to support Collaborative Action Research has now been piloted and can be implemented next year independently from Glasgow University support
- The Collaborative Action Research Policy has been written outlining the process and support package in place for CAR Projects. The support package includes:

5 training sessions in the CAR Process offered to all staff involved

All staff in involved are commissioned to attend 4 collaborative meetings throughout the year

All schools involved are downloaded 2 days of supply cover to enable Lesson Studies to be implemented

Support available fromXXX, School Improvement Partnership Development Officer and, XXXX Data Management Officer

- Planning templates are in place to support the 4 CAR collaborative meetings
- Expectations have been shared that all schools will be involved in a CAR Project as part of their Learning Community Improvement Plan and consequently all 5 Learning

Communities have committed to implementing a CAR Project in the 2016-17 session
 Training sessions in "Introduction to Collaborative Action Research" and "Qualitative and Quantitative Data" have either taken place or are planned for all Learning Communities

Slippage from plans: Please comment on slippage from your original plans for implementing activities in the first six months of 2016/17

One group did not complete their final report 2 primary schools out of the 33 primaries have not yet engaged in Learning Community CAR Projects 2016-17

3	School improvement partnership: evidence on short and medium-te outcomes	rm
	What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	By when? (estimate)
Short –term outcomes	Project 1 (Clydebank LLC) Increased motivation and skills amongst teachers in the effective use of the methodology of Cognitively Guided Instruction Stage still to be agreed	December 2016
	Project 2 (VOLA LLC) Increased motivation and skills amongst teachers in the effective use of the methodology of Cognitively Guided Instruction. Scaling up by the P1, P6 and P7 teachers involved across 4 schools in 2015-16 by modelling and buddying to P4, P5, P2 and ELCC as well as further involvement of S1. Modelling and buddying opportunities to occur across all VOLA Primary Schools	All groups set up and functioning
	Project 3 (VOLA LLC) Increased motivation and skills amongst teachers in the effective use of the methodology of Problem Based Learning through the Single Steps. Primary Schools and ELCCs involved across the LLC measuring the impact on one cohort per each establishment	
	Project 4 (OLSP LLC) Increased motivation and skills amongst teachers in the effective use of the methodology of Active Mental Maths Early, First and Second Level Groups created to implement interventions across the LCC including ELCC, Primary and Secondary staff	
	Project 5 (SPTA LLC) Increased motivation and skills amongst teachers in the effective use of the methodology of Reciprocal Reading Early Years/First Level practitioners to measure the impact of the intervention	
	Project 6 (Dumbarton LLC) Increased motivation and skills amongst teachers in developing positive Growth Mindsets to raise attainment in Numeracy and/or Literacy (writing)	
	Project 7 (WDC/Renfrewshire) Increased motivation and skills amongst teachers in the effective development of Metacognition through Reciprocal Reading. P5 and P6 teachers across XXXX.	

Support also being offered to:

Secondary Maths Collaborative Group

STARS – Secondary Raising Attainment Teachers

June 17

Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')

Each project group will identify teacher-generated qualitative and quantitative assessments/questionnaires/focus groups to measure the impact of their intervention with a focus on children in SIMD 1 and 2

We are also asking, where appropriate, the following standardised assessments should be implemented to measure attainment:

GL Numeracy GL Reading Myself as a Learner Literacy Baseline Numeracy Baseline

A tracking grid has been produced for each project to record their quantitative data on to. A comparison of data from standardised assessments and teacher generated assessments will be conducted.

We are comparing results based on the standardised scores for GL and Myself as a Learner and are developing Benchmarks for the Baselines with a particular focus on children in SIMD 1 and 2

What does this evidence show on the extent to which the above outcomes have been achieved to date? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

 Data from small scale action research projects involving sets of trio partnerships. August 2015 to June 2016.

Findings:

- Mental Maths:
 Increase in attainment
 Carleith Primary School 21.9%
 Goldenhill Primary School 10.9%
 Clydemuir Primary School 18.9%
- St Peter the Apostle Learning Community Mental Maths:
 97.5% of pupils improved accuracy in oral mental agility
 53.2% of pupils improved speed in oral mental agility
 94.9% of pupils improved scores in written papers
- Vale of Leven Learning Community Scientific enquiry project:
 31% increase in the number of science enquiry questions asked.
 8 out of 9 pupils demonstrated an increase in the number of science enquiry

questions asked. 50% increase in the number of analytical questions asked. Vale of Leven Learning Community Problem Based Learning: Increase in average attainment score 11%. Significantly the levels of confidence recorded by the young people (targeted learning group) increased by 55%. By when? What medium-term outcome(s) does this initiative aim to achieve? (estimate) (Medium-term outcomes are often in the form of changed actions, practice, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?) 1. To close the gap to raise attainment by ensuring that learners June 2017 are improving through making small tests for change 2. To increase opportunities for practitioner to collaborate across 3. To increase opportunities for practitioners to take a leadership 4. To increase practitioners confidence and competence in using data effectively to inform improvement Medium -term outcomes 5. To increase and deepen partnerships across schools to improve outcomes for learners Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A') Numbers of practitioners involved in CAR Projects Google Questionnaire to all practitioners to measure changing attitudes Analysis of agreed standardised assessments (GL, MAL, Baseline) across all projects to measure impact in comparison to different cohorts with a particular focus on SIMD 1 and 2 Number of schools that continue partnerships in 2017-18 What does this evidence show? Please highlight key findings only - both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these

and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

N/A

Reflections on progress to date: Can you share any learning on what has worked well in implementing this initiative?

- The CAR Process as outlined in the WDC CAR Policy practically supports crossschool collaboration leading to more opportunities for professional development to introduce methodologies such as CGI, Problem Based Learning.
- The process has also been successful in engaging practitioners with data and using data to inform change

Can you share any learning on what has worked less well or could be improved?

 It is very evident that there will be a positive impact on the pace and quality of a project when a manager is driving forward the project from within each establishment.

4	STEM			
2016/17 Allocation		£104,240	Planned Quarterly Spend	£50,000
2016/17 Actual Spend		£61,878	Actual Quarterly Spend	£31,063

Expenditure breakdown

	This quarter		Total this financial year	
Staffing:	FTE	Costs	FTE	Costs
Teachers	1.2	£12,858	1.2	£12,858
Education/development officers	0.5	£6305	0.5	£25220
Educational psychologists		£		£
Data analysis officers		£		£
Family/home link worker		£		£
Speech and language therapists		£		£
Early years professionals		£		£
Other staff, namely:		£		£
Non-staffing please specify type:	Costs this quarter		Total costs this fin. year	
EDT PreSTEM	£7,900		£15,800	
BBC Micro:bits (plus training)	£1500		£3000	
Littlebitz	£2500		£5000	

Activities: Please comment on progress in implementing your planned activities in the first six months of 2016/17

Staff Professional Learning

STEM activities have been included in Learning Community and School / Centre Improvement Plans. STEM has increased in profile across the authority and colleagues have been supported in their Professional Learning. Pedagogical approaches such as Inspire & Challenge, Problem Based Learning and SSERC scientific enquiry have been supported as Professional Learning opportunities and are in the process of being cascaded to other staff and other Learning Communities.

Promoted Staff

Principal Teachers appointed in each of the STEM Hub schools to plan interventions, gather data, model good practice and to quality assure learning experiences.

Intervention in Functional Writing in STEM

Functional writing was identified as a focal area for the first intervention. Learners were assessed on a cold piece of writing and were supported through logging the recordings of findings from various STEM challenges in STEM log books. Their writing was then assessed at the end of the intervention and data was compared.

Pupil Interviews, Attitudinal Surveys

A number of pupil interviews and attitudinal surveys took place where the views of learners, staff, PTs and HTs were collated. This was used to gauge staff confidence levels, pupil awareness, etc

Development of Learning Environments

The three original STEM Hubs have been used as models of good practice to exemplify the design and use of flexible learning spaces. Through collaboration with Glasgow Science

Centre, one of these hubs has been further developed to become a state-of-the-art facility designed to inspire and challenge learners in their STEM studies. A number of workshops have taken place where staff have been supported in and given the opportunity to consider how existing spaces could be better used to support modern, flexible STEM learning. As a result of all of this, a number of schools have now been supported with structural adaptations to their buildings in order to develop their own STEM Hubs and enhance STEM learning.

Resources

A number of resources have been purchased for schools including BBC Micro:bit controllers, LittleBitz electronics hardware and Chromebooks in order to support STEM learning.

PreSTEM

All P7 learners in West Dunbartonshire are participating in a STEM transition programme in conjunction with the Engineering Development Trust entitled Energy and Your School. Pre and post intervention surveys are being taken to assess its effectiveness across West Dunbartonshire and its impact on learners.

Slippage from plans: Please comment on slippage from your original plans for implementing activities in the first six months of 2016/17

SSERC Twilights

The planned cascading of SSERC training of teachers by our own mentors did not happen as planned. This will move into this session's plan

4	STEM: evidence on short and medium-term outcomes						
	What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)	By when? (estimate)					
Short –term outcomes	 Increased learner motivation and engagement in P2, P3 and P6 in the three STEM Hub schools Development of learner skills is independent scientific enquiry in P2, P3 and P6 in the three STEM Hub schools Increased learner collaborative skills in P2, P3 and P6 in the three STEM Hub schools Increased staff confidence in delivery of STEM in the three STEM Hub schools Increased staff focus on Equity and Excellence, resulting in a higher quality of experience for all learners in the three STEM Hub schools Increased attainment and closing of the attainment gap in Functional Writing. 						
	Are you collecting evidence to measure these outcome(s)? If so, ple specify which type of evidence for which aim (if not, just put 'N/A')						
	Outcomes 1, 2 and 3 has been measured through learner interviews, pre and post intervention attitudinal surveys and teacher observations. Outcome 4 has been measured through pre and post intervention attitudinal surveys.						
	Outcome 5 has been measured through learner interviews and Head Te Principal Teacher observations.	acner /					

Medium -term outcomes

Outcome 6 has been measured through the assessment of a cold piece of writing prior to intervention and the assessment of a STEM log book post intervention - using a consistent criteria to ensure rigour in the assessment evidence.

What does this evidence show on the extent to which the above outcomes have been achieved to date? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

- 1. The evidence has shown that learners participating in practical STEM challenges has increased motivation and engagement. The challenges have provided opportunities for independent and collaborative work, developing learner confidence.
- 2. Staff awareness has been raised on the increased focus on Literacy and Numeracy outcomes through STEM and they report being more confident in the delivery of STEM.
- 3. Attainment in Functional Writing has increased in most target groups. In some cases, the attainment gap was closed.

What medium-term outcome(s) does this initiative aim to achieve? (Medium-term outcomes are often in the form of changed actions, practice, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?) 1. Improvement in attainment in literacy & numeracy in P2, P3 & P6. 2. Closing of the attainment gap in literacy & numeracy as a result of increased engagement in learning within the STEM Hubs. 3. 10% increased attainment in reading ages on the targeted cohort

of learners.
4. 10% increased attainment in numeracy on the targeted cohort of

learners.

Are you collecting evidence to measure these outcome(s)? If so, please

All outcomes measured by quantitative pre and post assessment data.

specify which type of evidence for which aim (if not, just put 'N/A')

What does this evidence show? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

Quantitative data from the pre and post assessments from the first functional writing intervention shows that:

- Attainment in literacy has increased in all schools (all data is based on rubric scores);
- In XX, pupils in SIMD deciles 1 3 raised attainment by 0.3, where pupils in SIMD deciles 4 – 10 raised attainment by 0.1 – resulting in a reduction in the attainment gap of 0.2;
- In XX, pupils in SIMD deciles 1 3 raised attainment by 0.03, where pupils in SIMD deciles 4 – 10 remained consistent – resulting in a reduction in the attainment gap of 0.03;
- In XX, pupils in SIMD deciles 1 3 raised attainment by 0.25, where pupils

- in SIMD deciles 4 10 raised attainment by 0.31 -resulting in an increase in the attainment gap of 0.06;
- The most marked improvement in attainment was at P2 in XX where learners increased in attainment from Early Level 0.47 to First Level 0.2 an increase in attainment of 0.73. All learners in this class are in SIMD decile 1 3, meaning that no depravation comparison can be made.
- P2 in XXX also made a marked improvement, where pupils in SIMD deciles 1 3 raised attainment by 0.78 and pupils in SIMD deciles 4 10 raised attainment by 0.38 resulting in a reduction in the attainment gap of 0.4.

Reflections on progress to date: Can you share any learning on what has worked well in implementing this initiative?

- The initiative has assisted in raising the profile of STEM not just in the three targeted schools, but also across the whole of West Dunbartonshire and in particular, it has highlighted the need to ensure that any STEM learning also supports learning in literacy and numeracy.
- Principal Teachers are more familiar with the importance and analysing of data and are developing in their leadership roles.
- Staff confidence in the delivery of STEM is improving as are learner experiences.
- Surveys, interviews and observations have confirmed that by employing a more
 practical, hands-on approach to skills development, we are able to engage more
 learners in the educational process in particular those in SIMD 1 & 2. This
 intervention will aim to use this increase in engagement as a vehicle to reinforce
 learning in literacy and numeracy.

Can you share any learning on what has worked less well or could be improved?

- Last session, sample groups were assessed, instead of the whole targeted group. It was felt that this didn't provide enough rigour to the data.
- This session, every learner in the target groups will be assessed and the data analysed to provide a more robust attainment profile.
- It was also felt that, by linking traditional classroom learning to STEM Hub challenges, a better opportunity would be provided by supporting learners to see the connections and relevance in their learning. The planning this session will follow this strategy.

5	Programme						
2016/17 Allocation £107,830		30	Planned Quart	£29,000			
2016/	17 Actual Spend	£59,173	3	Actual Quarter	ly Spend	£29,159	
		E	xpenditu	re breakdown			
			This quarter		Total t	Total this financial year	
Staffi	Staffing:		FTE	Costs	FTE	Costs	
Teachers			£		£		
Education/development officers		2	£29,159	2	£59,173		
Educational psychologists			£		£		
Data analysis officers			£		£		
Family/home link worker			£		£		
Speech and language therapists			£		£		

Early years professionals	£	£
Other staff, namely:	£	£
Non-staffing please specify type:	Costs this quarter	Total costs this fin. year
	£	£
	£	£
	£	£

Activities: Please comment on progress in implementing your planned activities in the first six months of 2016/17

- Identification of individual schools for Attainment Visit supported by our Attainment Advisor, Senior Education Officer and Education Officers.
- Process for managing improvement for individual groups produced.
- Refreshed Quality Assurance Model to provide a more proportionate model of support and challenge to schools.
- Leaders' conference on 'Delivering Excellence and Equity'.
- Framework produced for improving quality of planning to tackle inequity.
- Analysis of data to produce attainment and equity profile of all establishments, learning communities and LA.
- Review of curriculum rationale and balance by all leaders to ensure appropriate to their context and expectation of Delivering Excellence and Equity, NIF, HGIOS4.

Slippage from plans: Please comment on slippage from your original plans for implementing activities in the first six months of 2016/17

5	Programme: evidence on short and medium-term outcomes								
	What short-term outcome(s) does this initiative aim to achieve? (Short-term outcomes are often in the form of changed awareness, skills, motivation, etc. Please be specific in the target group: does it involve all teachers, parents or pupils, or a particular sub-set?)								
Short –term outcomes	es 2. Im ga 3. In	lanning to reduce equity gap, high profile priority for all stablishments. nproved process to support/challenge schools to reduce equity ap. Iformed school leaders and teachers about how to raise ttainment.	June – October 2016						
short -	_	collecting evidence to measure these outcome(s)? If so, ple which type of evidence for which aim (if not, just put 'N/A')	ase						
Outcomes identified in action plans provided by 'target' schools to attainment levels for individuals and groups underachieving. Data of attainment progress on monitoring and tracking toolkit. School improvement plans and quality of curriculum models/ balar modified to reflect learner need.									

What does this evidence show on the extent to which the above outcomes have been achieved to date? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

What medium-term outcome(s) does this initiative aim to achieve? (Medium-term outcomes are often in the form of changed actions, practice, etc. Please be specific in the target group: does it involve all

teachers, parents or pupils, or a particular sub-set?)

By when? (estimate)

1. Reduction in attainment gap in schools under performing when compared to schools with similar SIMD profiles.

June 2017

Are you collecting evidence to measure these outcome(s)? If so, please specify which type of evidence for which aim (if not, just put 'N/A')

- 1. Standardised data on literacy, numeracy early years baseline data.
- 2. Attainment and equity profiles for individual pupils, schools, local learning communities.
- 3. Attendance and latecoming data using risk matrix to identify factors affecting attainment levels. Identification of appropriate intervention applied to improve.

What does this evidence show? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just put 'N/A'. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

Please see attached report.

Medium -term outcomes

Reflections on progress to date: Can you share any learning on what has worked well in implementing this initiative?

- Production of an authority wide process for quality improvement to identify schools requiring a targeted model of support using the Supported School Improvement Model
- Producing a tracking tool for BGE.
- Using data to identify areas for school improvement linked to the NIF Drivers.
 Recorded on a risk matrix. Planning support and challenge visits to schools to action improvements.

Can you share any learning on what has worked less well or could be improved?

OVERALL PROGRESS AND REFLECTIONS

6 Overall progress towards long-term outcomes and reflections

The long-term outcomes of the Attainment Scotland Fund are to:

- a. Improve literacy and numeracy attainment
- b. Improve health and wellbeing
- c. Close the attainment gap between pupils from the most and least deprived areas. Are you collecting any evidence to measure these long-term outcomes in your authority? If so, please specify the type of evidence you are collecting (if not, just put 'N/A')
 - Please see attached report.

What did this evidence show so far? Please highlight key findings only – both positive and negative. As part of the evaluation, we may request further details on your evidence for particularly interesting findings. If you did not collect evidence for these outcome(s) or results are not yet available, just leave blank. This part only needs to be completed at the end of year report, but if you already like to share findings, please feel free. If not, just leave blank.

Please see attached report.

Can you share any learning on what has worked well in your overall strategy to achieve impact?

- Clear and regular direction to schools about national and local expectations.
- Commitment to collaborative approaches to school improvement.
- Sharing attainment and equity profile with all leaders.
- Producing frameworks for guidance support planning to tackle inequity.
- Cohesion across the 4 attainment projects and link to strategic priorities and national directions.
- Data and research officer to conduct collation and analysis.
- Supported School Improvement Model.
- Regular project boards to review progress.

Can you share any learning on what has worked less well or could be improved?

Is there anything else you'd like to share or give feedback on?

- Making an impact on standardised attainment data can take time. A broad range of evidence should be used to evaluate positive impact.
- Evidence from the Collaborative Action Research (CAR) projects highlights that
 interventions do make a positive impact on specific aspects. However to make a
 positive impact on the wider range of learning outcomes as is evident in the
 standardised reading and maths assessments requires time to ensure core elements
 are catered for in the learning programme for children and families.





Appendix 8. Numeracy Literature Search

Scottish Attainment Challenge Year End Progress Review

North Lanarkshire Council

Numeracy Literature Search

Purpose: Research and Development Officers from Psychological Service undertook a comprehensive literature search on the topic of effective methods of numeracy teaching and evidence-based numeracy interventions. The purpose of this literature search was to provide a context from which the most effective numeracy teaching strategies and interventions could be derived. Additionally, these findings were used to inform the National Action Enquiry research project. The initials findings from this search are presented below.

Developmental Progression & Links to Deprivation

Munn, P., & Reason, R. (2007) Arithmetical Difficulties: Developmental & Instructional Perspectives, *Educational & Child Psychology*

- Outlines a clear progression in number concepts relating to mathematical activity taken from Steffe's research.
- Holds that progression has a 'step' function which requires cognitive restructuring to move from one stage to the next rather than gradual acquisition of knowledge (Steffe et al, 1983).
- Children pass through the following stages roughly between the ages of 3 and 7.
- 5 broad stages of understanding arithmetical operations:
 - Emergent number stage: children are beginning to understand the concept of counting and are developing one-to-one correspondence in counting
 - o Perceptual number stage: can deal with adding together visible quantities
 - o Figurative number stage: children can deal with screened addition, using 'number sequence' logic. Can't operate with cardinal numbers.
 - Initial number stage: acquired an adult-like understanding of numbers and can understand number symbols & operations like addition and subtraction.
 Need to reach this stage before they can understand elements such as written number symbols & number operations
 - Facile number stage: children developing higher order number concepts and can understand the relationships between numbers, and the relationship between operations. Children need to have grasped this stage before they can move onto more advanced curriculum including fractions, ratios etc.
- Several years progression through the stages
- Until children have reached Initial Number stage they cannot grasp understanding of things such as addition or subtraction.

Banerjee, P.A. (2016), A systematic review of factors linked to poor academic performance of disadvantaged students in science and maths in schools, *Cogent Education*

- Review reports on 771 studies from 2005 2014 and aims to gather understanding of factors linked to underachievement.
- Results suggest main factors can be categorised into lack of positive environment and lack of support.
- Lack of positive attitudes towards school & learning:
 - Associations between negative emotionality and cognitive performance of children living in poverty
 - 1. Neighbourhood effects:
 - US Study lack of positive role models
 - Teaching workforce and learning resources in high poverty areas not as rigorous as low poverty areas
 - High risk behaviours (i.e. drug taking, alcohol consumption etc) linker to lower socioeconomic status
 - Experiencing and exhibiting aggression and violence associated with lower socioeconomic status
 - o Disruptive classroom behaviour viewed as a significant barrier to learning

2. Familial factors:

- a. High poverty, high unemployment families employ fewer educationoriented practices with their child – impact of these parental practices on children's maths achievements encouraging
- b. Authoritative parenting a significant predictor of self-efficacy and resilience and positively correlates with academic achievement
- 3. Futility culture (temporary immigrant status):
 - a. Demands of cultural and social adjustment
 - b. Importance placed on education within these families may be lessened in relation to basic survival for these families
- Less supportive schools & teachers:
 - 1. Teachers expectations
 - Discipline gaps, achievement gaps and attendance all strongly correlated
 - Strambler & Weinstein (2010) a lower regard for academics predicts poorer maths test scores
 - 2. School contextual factors
 - Transition periods are key
 - 3. Perceived discrimination
 - Positive connection to ethnic/racial group emerged as resilience factor for academic motivation (Borsato, 2008)
- Other factors:
 - Neuropsychological variables (particularly executive functions) accounts for 30% variance in participant scores in maths (Waber et al, 2006)
- Recommendations for improvement:
 - Positive self-perceptions about academic abilities (Burrichter, 2006), high education aspirations, empathic understanding, internal locus of control and hope for the future deemed as protective factors contributing to academic resilience.
 - Other categories include:
 - Self-concept, equality and academic achievement
 - Motivation
 - Teacher effect
 - Encouraging parental involvement
 - Early intervention
 - Co-ordinated school health & breakfast programmes
 - De-tracking and implementation of focussed research based instruction materials
 - Checking, aggression and violence in schools
 - Group counselling approach
 - Extracurricular activities

Information from Lecture Slides

Practice Guidelines: Numeracy, University of Strathclyde, MSc Educational Psychology, October 2012

- 23% of adults may lack basic competence in mathematics (OECD, International Literacy Survey, 2000).
- Importance of play in early years.
- Piaget (1952): cannot learn by people telling you must involve active participation.
 Importance of class inclusion & conservation and of reversibility.
- Carraher et al (1985): problems with written representations of problems.
 - o Shouldn't rush the child
 - Children are not ready to write down problems & solutions until they can express them orally
 - Symbols shouldn't be introduced until they have been represented orally and pictorially
- Particular problems when maths difficulties are co-morbid with reading difficulties.
- Practice guidelines reflect research:
 - Importance of pre-school experience
 - o Increased emphasis on problem solving
 - Use of variety of contexts
 - Use of games and puzzles
 - Variety of teaching approaches
 - o Effectiveness of parental involvement
 - Calculator skills
 - Use of varying mental methods
 - Use of small group work
- How to evaluate a maths scheme? (D, Lumb, 1987)
 - Determine school variables likely to affect use of material
 - o Consider details of the scheme
 - Use of scheme with children
 - Language/readability issues

Number Skills and Interventions in the Primary School, University of Dundee, MSc Educational Psychology, May 2015

- Sir Peter Williams (2007): early learning of numbers & shapes should be rooted in play. Parental engagement key.
- Williams (2008): strong recommendation for early intervention and benefits of one-toone intensive intervention.
- Arithmetical ability not unitary made up of many components and interventions should focus on specific elements (Dowker, 2004)
- Dowker (2009):
 - Success of an intervention depends significantly on effective management and training
 - The use of suitable assessments is important
 - Structured approaches and multisensory teaching effective, especially where language difficulties are present
- Dowker (2014) review which explored interventions in depth found that;
 - Quality of teaching assistants' interventions for pupils is positively impacted by training;
 - Peer tuition and group collaboration approaches (e.g. older pupils teaching younger pupils; more able classmates teaching less able classmates;

- collaborative learning between pupils of similar abilities) can be effective, but are unlikely to be a complete substitute for adult intervention, particularly for those with more severe needs:
- Training in formal operations (the manipulation of symbols and abstractions) can positively impact on the mathematical development of older children and adolescents;
- Training in metacognitive skills has been shown to be effective in some cases, but more research is needed on exactly which aspects of metacognition are important;
- In many cases, interventions do not need to be very time-consuming or intensive to be effective:
- Pupils' arithmetical difficulties are highly susceptible to intervention; It is desirable that interventions should take place at an early stage to reduce the likelihood of pupils developing 'mathematics anxiety'. Anxiety about mathematics can be distressing in itself and inhibit further progress; and,
- Low attainers in mathematics benefit from detailed assessment of their learning needs, and interventions work best when they are targeted on an individual pupil's weakness.
- Interventions may include:
 - o Early intervention
 - Class based support
 - Individualised input
 - Peer tuition & group collaboration
 - Parental involvement
- Power of 2 and Plus 1:
 - Individualised maths programme designed to support pupils with significant difficulties
 - o 3 consecutive ticks needed no tick given if help/coaching is given
- · Paired Maths:
 - Cognitive benefits: attention, time on task and engagement, positive practice, modelling, prompting and immediacy, planning & rehearsal, feedback, reinforcement & self-assessment
 - Affective benefits: variety & interest, activity and inter-activity, ownership of learning process, self-confidence, self-belief & self-efficacy
- Mathematics Recovery Programme:
 - Australian programme which involves teachers providing individualised intervention to low attaining 6 & 7 year olds
 - o 30 minutes one-to-one instruction per day for 12-14 weeks
 - Children assessed before and after introduction of intervention and positive improvements observed
- Catch Up Numeracy:
 - Interventions from trained teachers or teaching assistants delivered for 15 minutes twice a week
 - Each session includes; review and introduction, numeracy activity, linked recording activity.

Effective Teaching

Dowker (2009), What Works for Children with Mathematical Difficulties

- At least 15-20% of the population have difficulties with an aspect of arithmetic.
- Components of arithmetical ability:
 - Counting
 - Memory for arithmetical facts
 - Understanding of concepts
 - Ability to follow procedures
- Although different components correlate, weaknesses can occur independently.
- 3 prominent difficulties:
 - Difficulty in retrieving arithmetic facts which results in excessive reliance on counting strategies
 - Word problem solving
 - o Multi-step arithmetic
- Difficulties are often, but not always correlated with language difficulties, spatial difficulties and/or difficulties with aspects of memory
- Three Waves of Support:
 - Quality of First Teaching
 - 2. Wave 1, plus additional, time limited, tailored intervention support programmes
 - 3. Wave 1 plus increasingly individualised programmes
 - Materials piloted by 27 Local Authorities in 2003
 - o Assessment tools to determine conceptual and procedural difficulties
 - Developed to correct errors and misconceptions
 - o Multi-sensory and multi-context learning incorporated
 - Typically 1 20 minute individual session followed by 5 minute 'spotlight' sessions the rest of the week
 - National evaluations suggest more positive attitudes, greater self-esteem and greater willingness to take part in maths activities
 - Number of different materials used to allow children to build up verbal, visual and abstract representations of problems
- Williams (2008):
 - Early intervention key
 - Children with serious difficulties should have one-to-one intensive interventions with a teacher, or in some instances a small group intervention may be appropriate
 - Less severe difficulties may require less intensive interventions which may be delivered by teaching assistants and could be delivered in a small group
 - Typically should have a 12 week duration
- Conclusions & recommendations from report:
 - Interventions are increasingly widely used
 - Interventions are widely used but can be categorised into a few broad categories:
 - Existing PNS Wave 3 materials
 - Based on detailed diagnostic assessments
 - Primarily involve the use of multisensory apparatus

- Interventions are viewed positively by teachers and local authorities
- o Test scores indicate positive effects on performance
- Success of intervention depends significantly on effective management & training

please see additional document which includes a table containing details of evaluations of interventions carried out by local authorities

Anthony, G. & Walshaw, M. (2009), Characteristics of Effective Teaching of Mathematics: A View from the West, *Journal of Mathematics Education*

- Paper explored the characteristics of effective pedagogy in the west.
- Understanding that teachers foster positive learning outcomes so that students have access to mathematics curriculum and appreciate application of it in everyday life.
- Also holds that all students can develop positive maths identities and can optimize a range of desirable outcomes.
- Paper explored principles from research which demonstrate ten effective areas of pedagogy in relation to teaching mathematics.
- 1. An Ethic of Care
 - Teachers facilitate learning by caring about their student's engagement
 - High yet realistic expectations should be set for all pupils
 - Importance of a 'togetherness' environment
 - Teachers should allow children to think for themselves, ask questions and take academic risks
 - Classroom routine important

2. Arranging for Learning

- Working arrangements should be responsive to the needs of the child
- Individual task work and group/partner work are both important. Group work in particular is useful for enhancing engagement and exchanging/testing ideas and generating a higher level of thinking (Ding, Li, Piccolo & Kulm, 2007)
- Clarity of expectations for participation necessary and clear roles should be established (Hunter, 2005)
- Whole class discussion an integral part of overall strategy for teaching and learning

3. Building on Student's Thinking

- Students current knowledge and interests should be at the centre of instructional decision making
- Teachers adjust instruction based on ongoing assessment of students competencies
- Emphasis should be placed on building on existing skills
- Taking account of current learning position allows teachers to introduce appropriate levels of challenge for their students

4. Mathematical Communication

- Students need to be taught how to articulate explanations and how to justify their solutions
- Teachers should encourage the use of oral, written and concrete representations from pupils

- Can also use revoicing, repeating, rephrasing or expanding on answers as techniques
- Teachers should actively encourage discussion, both within groups and as a whole class
- A shift in thinking from following procedural rules & preoccupation with finding answers to focussing on thinking that leads to finding answers is important for pupils

5. Mathematical Language

- Teachers should foster use, as well as understanding of mathematical terms
- Explicit instruction needs to take into account students informal understanding of the language, i.e 'less than', 'more', 'half'

6. Assessment for Learning

- A wide range of formal and informal assessments should be used to monitor learning progress
- Information informs how best to meet learning needs
- Asking children appropriate questions allows teachers insight into the pupil's mathematical thinking and reasoning
- Involves providing feedback to students and gives students opportunities to evaluate and assess their own work

7. Worthwhile Tasks

- · Tasks given should convey exactly what maths is about
- They should have an appropriate level of challenge, which allows children to learn the value of maths across contexts and across disciplines
- Open ended and modelling tasks allow children to engage in problem solving activities
- Real life contexts allow children to see that maths is more than just producing the right answers

8. Making Connections

- Need to develop an understanding of how a concept/skill is linked to other ideas and this could be done by providing opportunities to engage in complex tasks
- Making connections across mathematical topics is important to develop a conceptual understanding
- Linking concepts to real life experiences makes them more relevant and interesting

9. Tools & Representations

- Theses may include the number system, graphs, diagrams, images, stories etc
- Important to make sure children make sense of methods in the correct way
- Tools are useful when communicating ideas that are otherwise difficult to demonstrate
- Technological tools such as whiteboards, digital & mobile technologies, internet etc may also be useful

10. Teacher Knowledge

 Sound content knowledge allows teachers to present maths in a coherent way (Ball & Bass, 2000)

- Use knowledge to make key decisions concerning resources, tasks, talk & actions
- Enables listening and questioning, more focussed & connected planning and evaluation of student responses
- Professional development initiatives key in this area

Churches, R., & Allan, F. (2013), Raising maths attainment through enhanced pedagogy and communication, *CfBT Education Trust*

- Large scale randomised control trial over a 6 month period looking at adult learning.
- 3 groups:
 - Teachers trained in approaches to hypnotic language and body language (in line with Neuro-linguistic programming) combined with innovative maths pedagogy
 - 2. Teachers who received maths CPD
 - 3. Baseline control condition
- The addition of NLP produced a significant improvement in maths attainment increase in mean difference 3 times that of the control group and 1 & ½ times that of 'maths training only' group.
- Teachers communication amplifies the effectiveness of pedagogy, and teachers who
 received training in communication strategies that aimed to create a stable emotional
 climate seen significant advances in attainment.
- Most evidence in support of NLP suggests benefits in relation to effective communication, engagement, questioning and classroom climate.
- Teachers suggested a number of benefits after receiving NLP training including:
 - Improvements in affective side of learning
 - Positive changes in attitude
 - Improved self-concept
 - Pupils being more active in their learning
- Anxiety may weaken memory, logical thinking and ability to work methodically (Ashcraft, 2002) – so relationship between teacher & pupil very important in combatting anxieties.
- Pedagogy:
 - Engagement and meaningful activities are important (Safford, 2000; Baker, 2005)
 - 'Bad practice' is applying procedures without understanding (Swain, 2005)
 - High levels of effective questioning, collaboration and engagement found to be effective (Swain & Swan, 2007)
- This study suggests that without effective communication, good subject knowledge may not be enough
- Thought this paper maybe would be good in terms of linking maths teaching to VERP?

Interventions

Mononen, R., Aunio, P., Koponen, T., & Aro, M (2014), A Review of Early Numeracy Interventions for Children at Risk in Mathematics, *Early Numeracy Interventions*

- Reviewing interventions which enhance numeracy skills of children aged 4-7
- Counting, basic arithmetical skills etc measured before formal schooling good predictors of later maths learning
 - Numeracy instruction prior to formal schooling should prepare children adequately to follow instructions
- Core instruction should include:
 - 1. Explicit & systematic instruction
 - 2. Use of visual representations
- Supplementary instruction should include:
 - o Increased level of targeted instruction in addition to core instruction
 - o Instruction in small group setting or individually
 - Frequent monitoring of progress
- Importance of evidence based programmes being introduced as early as possible.
- Small group/individualised instruction beneficial for focussing on individualised learning needs.

Targeted mathematics interventions

Pirate Math

• See other sheet for full details (available on request)

Maths Flash

• A free app that helps children practice their times tables by customizing the number and difficulty level of each question

Fluency and Automaticity through Systematic Teaching with Technology (FASTT Math)

- A learning tool for children that is considered 'fun and effective'
- It begins with an initial ten minute assessment that identifies both the students strengths and weaknesses by measuring the speed of the students response and the accuracy of his or her answers.
- Areas that the student is fluent in appear in a Fact Grid in blue, whilst areas where the student answered slowly and/or incorrectly are represented in white.
- As the student improves the grid adapts and reflects new achievements
- Both the student and teacher have dashboards that allow them to monitor the student's progress. Each tutoring session is 10 minutes, and unlike typical classroom teaching, the sessions are tailored to individual student competency at present
- The lessons are audible and visual which helps with engagement, and provides immeadiate feedback to keep the student positive and interested. It is therefore considered to not only improve fluency, but also minimises defeatism as well
- In addition to the lessons, students are able to access numerous games to help reinforce what was learned in the lessons, with varying intensity and complexity. This helps with math fact memorization and retention. Each game ends with positive reinforcement and trophies so each student feels like a success
- Additionally there are six new "Stretch-to-Go" games that are more in-depth, pushing students to meet Common Core grade level standards while keeping the students entertained and engaged. While these games are more geared towards older students, they do help those students meet fluency goals faster and, like the other games, adapt to the fluency level of the student.
- Improving scores are reinforced by "unlocking" content that aligns with student interest.

Number Worlds

- A highly engaging, evidence based, teacher led math intervention to bring mathematically challenged students up to grade level with real world applications
- It helps struggling learners achieve math success by intensively targeting the most important standards
- See attached sheet for evidence base of its efficacy

The Number Race

 A fun computer games that lets you play with numbers, while training in basic concepts of number and arithmetic

- This includes: number formats, counting, addition and subtraction
- Primarily designed for children aged 4-8
- Older children can use the programme to build on their fluency and in mapping numbers to quantities
- It is particularly designed to address mathematical learning disabilities by strengthening the brain circuits for representing and manipulating numbers
- See attached paper on efficacy of intervention





Appendix 9. Numeracy Developmental Pathway of Primary School Pupils

Scottish Attainment Challenge Year End Progress Review

North Lanarkshire Council

Numeracy Developmental Pathway of Primary School Pupils

Purpose: A pathway of numeracy development of primary school pupils has been devised. This compares the expectations and outcomes in numeracy from the Scottish Curriculum for Excellence and the expectations in number, operation and computation of children devised by the National Council of Teachers of Mathematics. These are in turn connected to the Number Talks intervention programme which is being introduced to the schools within the Numeracy Layer of the Attainment Challenge. The purpose of this comparison was to examine how well expectations match the developmental capabilities of children and tailor the scope of numerical assessments to the areas of the curriculum covered by the intervention.

North Lanarkshire Council are implementing the Number Talks programme as part of an intervention for the numeracy strand of the Scottish Attainment Challenge. The British Association for Early Childhood Education have produced a developmental checklist for children's numeracy development from birth to 60+ months. It states that each child develops at their own rate and the following development statements, and their order, should not be taken as necessary steps but rather they should be considered a checklist of development. The age bands overlap because these are not fixed age boundaries but rather they suggest a typical range of development (The British Association for Early Childhood Education, 2012). The National Council of Teachers of Mathematics' (NCTM) principles and standards for school mathematics have been connected to children's learning within the Number Talks programme (Parrish, 2014). The Curriculum for Excellence outlines experiences and outcomes for numeracy across learning to promote and support effective learning and teaching methodologies which will appeal to the interest of children and young people in promoting creativity and ingenuity.

The Curriculum for Excellence, the principles and standards of the NCTM and the British Association for Early Childhood Education developmental checklist have been compared chronologically in the following table in order to determine whether the curricular and local authority expectations match the developmental milestones of children at each stage of development. In order for the Number Talks intervention, and the Scottish curriculum, to be successful it is required that children are sufficiently developed so as meet the attainment standards expected of them. Further to this, the comparison allows for the scope of assessing numerical attainment to be tailored to the areas of the curriculum covered by the intervention.

In the below table (Numeracy Developmental Pathway of Primary School Pupils), it can be seen that a child's numerical development starts from birth and continues until the age of seven. The earliest stages of the Curriculum for Excellence and the expectations of the NCTM begin at the age of three and continue until the end of mainstream schooling at age 18. The table below is limited to the end of primary school, age 11, due to the focus of the intervention within primary schools. The experience and outcomes have been tagged next to the NCTM expectations. The NCTM expectations which the Number Talks programme has been designed to aid in the teaching of does not cover all of the numeracy curricular areas, excluding areas such as time, measurement and money. Only the curricular areas and their associated experiences and outcomes which are covered by the NCTM expectations Number Talks has been tailored to are included and have been tagged next to the in the 'Expectations for Number, Operation and Computation' column (for example: 'Develop understanding of the relative position and magnitude of whole numbers and of ordinal and cardinal numbers and their connections.' Has been tagged next to MTH 1-13b). Tags were determined by looking through the curricular experience and outcomes and finding corresponding expectations the NCTM scheme match with tags.

References

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https://www.educationscotland.gov.uk/Images/numeracy_mathematics_experiences_outcomes_tc m4-539878.pdf

The British Association for Early Childhood Education		National Council of Teachers of Mathematics		Curriculum for Excellence	
Age	Developmental Checklist	Age	Expectations for Number, Operation and Computation	Age	Experiences and Outcomes
0-11 months	Notices changes in number of objects/images or sounds in group of up to 3.				
8-20 months	Develops an awareness of number names through their enjoyment of action rhymes and songs that relate to their experience of numbers. Has some understanding that things exist, even when out of sight.				
16-26 months	Knows that things exist, even when out of sight. Beginning to organise and categorise objects, e.g. putting all the teddy bears together or teddies and cars in separate piles. Says some counting words randomly.				
22-36 months	Says some counting words randomly. Selects a small number of objects from a group when asked, for example, 'please give me one', 'please give me two'. Recites some number names in sequence. Creates and experiments				

	ideas of number. Begins to make comparisons between quantities. Uses some language of quantities, such as 'more' and 'a lot'. Knows that a group of things changes in quantity when something is added or taken away.				
30-50 months	Uses some number names and number language spontaneously. Uses some number names accurately in play. Recites numbers in order to 10. Knows that numbers identify how many objects are in a set. Beginning to represent numbers using fingers, marks on paper or pictures. Sometimes matches numeral and quantity correctly. Shows curiosity about numbers by offering comments or asking questions.	Pre-K- Grade 2	Number Count with understanding and recognize "how many" in sets of objects. MNU 0-01a Use multiple models to develop initial understandings of place value and the base-ten number system. Develop understanding of the relative position and magnitude of whole numbers and of ordinal and cardinal numbers and their connections. MTH 1-13b, MNU 0-02a Develop a sense of whole numbers and represent and use them in flexible ways, including relating, composing, and decomposing numbers.	Early	Estimation and rounding: I am developing a sense of size and amount by observing, exploring, using and communicating with others about things in the world around me. MNU 0-01a Number and number processes including addition, subtraction, multiplication, division and negative numbers: I have explored numbers, understanding that they represent quantities, and I can use them to count, create sequences and describe order. MNU 0-02a I use practical materials and can 'count on and back' to help me to understand addition and subtraction, recording my ideas and solutions in

				Luce (Babyy C C C
	Compares two groups of objects,	Connect number words and numerals		different ways. MNU 0-03a
	saying when they have the same	to the quantities they represent, using		
	number.	various physical models and		Fractions, decimal fractions and
		representations. MNU 0-03a, MNU 1-		percentages including ratio and
	Shows an interest in number	03a, MTH 1-15b		proportion:
	problems.	,		I can share out a group of items by
	production of	Understand and represent commonly		making smaller groups and can split
	Separates a group of three or four	used fractions, such as 1/4, 1/3, and		a whole object into smaller parts.
	objects in different ways, beginning to	1/2. MNU 0-07a		MNU 0-07a
	recognise that the total is still the	1/2. WING 0-0/4		Wilto 0-074
	_	Operation		
	same.	Operation		
		Understand various meanings of		
	Shows an interest in numerals in the	addition and subtraction of whole		
	environment.	numbers and the relationship		
		between the two operations. MNU 0-		
	Shows an interest in representing	03a		
	numbers.	000		
		Understand the effects of adding and		
	Realises not only objects, but anything	Understand the effects of adding and		
	can be counted, including steps, claps	subtracting whole numbers.		
	or jumps.			
		Understand situations that entail		
		multiplication and division, such as		
		equal groupings of objects and		
		sharing equally. MNU 2-03a		
		Computation		
40-60+	Recognise some numerals of personal	Develop and use strategies for whole-	First	Estimation and rounding:
months	significance.	number computations, with a focus	1 1130	I can share ideas with others to
inonins	Significance.	on addition and subtraction.		develop ways of estimating the
	Pagagings numerals 1 to 5	on addition and subtraction.		answer to a calculation or problem,
	Recognises numerals 1 to 5.	Dovolon fluonov with basis number		· · · · · · · · · · · · · · · · · · ·
	Counts up to these or form objects by	Develop fluency with basic number		work out the actual answer, then
	Counts up to three or four objects by	combinations for addition and		check my solution by comparing it

saying one number name for each item.

Counts actions or objects which cannot be moved.

Counts objects to 10, and beginning to count beyond 10.

Counts out up to six objects from a larger group.

Selects the correct numeral to represent 1 to 5, then 1 to 10 objects.

Counts an irregular arrangement of up to ten objects.

Estimates how many objects they can see and checks by counting them.

Uses the language of 'more' and 'fewer' to compare two sets of objects.

Finds the total number of items in two groups by counting all of them.

Says the number that is one more than a given number.

Finds one more or one less from a group of up to five objects, then ten objects.

subtraction.

Use a variety of methods and tools to compute, including objects, mental computation, estimation, paper and pencil, and calculators. MNU 0-01a, MNU 1-01a, MNU 0-02a

with the estimate. MNU 1-01a

Number and number processes including addition, subtraction, multiplication, division and negative numbers:

I have investigated how whole numbers are constructed, can understand the importance of zero within the system and can use my knowledge to explain the link between a digit, its place and its value. **MNU 1-02a**

I can use addition, subtraction, multiplication and division when solving problems, making best use of the mental strategies and written skills I have developed. MNU 1-03a

Fractions, decimal fractions and percentages including ratio and proportion:

Having explored fractions by taking part in practical activities, I can show my understanding of:

- how a single item can be shared equally
- the notation and vocabulary associated with fractions
- where simple fractions lie on the number line.

MNU 1-07a

In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting. Records, using marks that they can interpret and explain. Begins to identify own mathematical problems based on own interests and fascinations. Early Learning Goal Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.				Through exploring how groups of items can be shared equally, I can find a fraction of an amount by applying my knowledge of division. MNU 1-07b Through taking part in practical activities including use of pictorial representations, I can demonstrate my understanding of simple fractions which are equivalent. MTH 1-07c Through exploring number patterns, I can recognise and continue simple number sequences and can explain the rule I have applied. MTH 1-13b When a picture or symbol is used to replace a number in a number statement, I can find its value using my knowledge of number facts and explain my thinking to others. MTH 1-15b
	Grades 3-5	Number Understand the place-value structure of the base-ten number system and be able to represent and compare whole numbers and decimals. Recognize equivalent representations	Second	Estimation and rounding: I can use my knowledge of rounding to routinely estimate the answer to a problem then, after calculating, decide if my answer is reasonable, sharing my solution with others. MNU 2-01a

for the same number and generate them by decomposing and composing numbers. **MTH 2-05a**

Develop understanding of fractions as parts of unit wholes, as parts of a collection, as locations on number lines, and as divisions of whole numbers. MNU 1-07a, MNU 1-07b

Use models, benchmarks, and equivalent forms to judge the size of fractions.

Recognize and generate equivalent forms of commonly used fractions, decimals, and percents. **MNU 2-03b**

Explore numbers less than 0 by extending the number line and through familiar applications. **MNU 2-04a**

Describe classes of numbers according to characteristics such as the nature of their factors. **MNU 2-02a**

Operation

Understand various meanings of multiplication and division. **MNU 1-03a**

Number and number processes including addition, subtraction, multiplication, division and negative numbers:

I have extended the range of whole numbers I can work with and having explored how decimal fractions are constructed, can explain the link between a digit, its place and its value. **MNU 2-02a**

Having determined which calculations are needed, I can solve problems involving whole numbers using a range of methods, sharing my approaches and solutions with others. MNU 2-03a

I have explored the contexts in which problems involving decimal fractions occur and can solve related problems using a variety of methods. MNU 2-03b

Having explored the need for rules for the order of operations in number calculations, I can apply them correctly when solving simple problems. **MTH 2-03c**

I can show my understanding of how the number line extends to

Understand the effects of multiplying and dividing whole numbers.

Identify and use relationships between operations, such as division as the inverse of multiplication, to solve problems. **MTH 2-05a**

Understand and use properties of operations, such as the distributivity of multiplication over addition. **MTH 2-03c**

Computation

Develop fluency with basic number combinations for multiplication and division and use these combinations to mentally compute related problems, such as 30 × 50.

Develop fluency in adding, subtracting, multiplying, and dividing whole numbers.

Develop and use strategies to estimate the results of whole-number computations and to judge the reasonableness of such results.

Develop and use strategies to estimate computations involving fractions and decimals in situations include numbers less than zero and have investigated how these numbers occur and are used. **MNU 2-04a**

Multiples, factors and primes: Having explored the patterns and relationships in multiplication and division, I can investigate and identify the multiples and factors of numbers. MTH 2-05a

<u>Fractions, decimal fractions and</u> <u>percentages including ratio and</u> <u>proportion:</u>

I have investigated the everyday contexts in which simple fractions, percentages or decimal fractions are used and can carry out the necessary calculations to solve related problems. MNU 2-07a

I can show the equivalent forms of simple fractions, decimal fractions and percentages and can choose my preferred form when solving a problem, explaining my choice of method. **MNU 2-07b**

relevant to students' experience. MTH 2-03c, MNU 2-07a	
Use visual models, benchmarks, and equivalent forms to add and subtract commonly used fractions and decimals. MTH 1-07c	
Select appropriate methods and tools for computing with whole numbers from among mental computation, estimation, calculators, and paper and pencil according to the context and nature of the computation and use the selected method or tools. MNU 2-01a, MNU 2-03a, MNU 2-07b	

Appendix

The British Association for Early Childhood Education

Birth - 11 months -

- Notices changes in number of objects/images or sounds in group of up to 3.

8-20 months -

- Develops an awareness of number names through their enjoyment of action rhymes and songs that relate to their experience of numbers.
- Has some understanding that things exist, even when out of sight.

16-26 months -

- Knows that things exist, even when out of sight.
- Beginning to organise and categorise objects, e.g. putting all the teddy bears together or teddies and cars in separate piles.
- Says some counting words randomly.

22-36 months -

- Selects a small number of objects from a group when asked, for example, 'please give me one', 'please give me two'.
- Recites some number names in sequence. Creates and experiments with symbols and marks representing ideas of number.
- Begins to make comparisons between quantities. Uses some language of quantities, such as 'more' and 'a lot'.
- Knows that a group of things changes in quantity when something is added or taken away.

30-50 months -

- Uses some number names and number language spontaneously.
- Uses some number names accurately in play.
- Recites numbers in order to 10.
- Knows that numbers identify how many objects are in a set.
- Beginning to represent numbers using fingers, marks on paper or pictures.
- Sometimes matches numeral and quantity correctly.
- Shows curiosity about numbers by offering comments or asking questions.
- Compares two groups of objects, saying when they have the same number.

- Shows an interest in number problems.
- Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same.
- Shows an interest in numerals in the environment.
- Shows an interest in representing numbers.
- Realises not only objects, but anything can be counted, including steps, claps or jumps.

40-60 months + -

- Recognise some numerals of personal significance.
- Recognises numerals 1 to 5.
- Counts up to three or four objects by saying one number name for each item.
- Counts actions or objects which cannot be moved.
- Counts objects to 10, and beginning to count beyond 10.
- Counts out up to six objects from a larger group.
- Selects the correct numeral to represent 1 to 5, then 1 to 10 objects.
- Counts an irregular arrangement of up to ten objects.
- Estimates how many objects they can see and checks by counting them.
- Uses the language of 'more' and 'fewer' to compare two sets of objects.
- Finds the total number of items in two groups by counting all of them.
- Says the number that is one more than a given number.
- Finds one more or one less from a group of up to five objects, then ten objects.
- In practical activities and discussion, beginning to use the vocabulary involved in adding and subtracting.
- Records, using marks that they can interpret and explain.
- Begins to identify own mathematical problems based on own interests and fascinations.

Early Learning Goal

Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.

Curriculum for Excellence

The experiences and outcomes which have been matched to areas covered by the NCTM expectations of children which the Number Talks programme has been tailored to are included here.

Early

Estimation and rounding:

I am developing a sense of size and amount by observing, exploring, using and communicating with others about things in the world around me. **MNU 0-01a**Number and number processes including addition, subtraction, multiplication, division and negative numbers:

I have explored numbers, understanding that they represent quantities, and I can use them to count, create sequences and describe order. MNU 0-02a

I use practical materials and can 'count on and back' to help me to understand addition and subtraction, recording my ideas and solutions in different ways.

MNU 0-03a

Fractions, decimal fractions and percentages including ratio and proportion:

I can share out a group of items by making smaller groups and can split a whole object into smaller parts. MNU 0-07a

First

Estimation and rounding:

I can share ideas with others to develop ways of estimating the answer to a calculation or problem, work out the actual answer, then check my solution by comparing it with the estimate. **MNU 1-01a**

Number and number processes including addition, subtraction, multiplication, division and negative numbers:

I have investigated how whole numbers are constructed, can understand the importance of zero within the system and can use my knowledge to explain the link between a digit, its place and its value. **MNU 1-02a**

I can use addition, subtraction, multiplication and division when solving problems, making best use of the mental strategies and written skills I have developed.

MNU 1-03a

Fractions, decimal fractions and percentages including ratio and proportion:

Having explored fractions by taking part in practical activities, I can show my understanding of:

- how a single item can be shared equally
- the notation and vocabulary associated with fractions
- where simple fractions lie on the number line.

MNU 1-07a

Through exploring how groups of items can be shared equally, I can find a fraction of an amount by applying my knowledge of division. MNU 1-07b

Through taking part in practical activities including use of pictorial representations, I can demonstrate my understanding of simple fractions which are equivalent. **MTH 1-07c**

Through exploring number patterns, I can recognise and continue simple number sequences and can explain the rule I have applied. MTH 1-13b

Expressions and equations

When a picture or symbol is used to replace a number in a number statement, I can find its value using my knowledge of number facts and explain my thinking to others. **MTH 1-15b**

Second

Estimation and rounding:

I can use my knowledge of rounding to routinely estimate the answer to a problem then, after calculating, decide if my answer is reasonable, sharing my solution with others. MNU 2-01a

Number and number processes including addition, subtraction, multiplication, division and negative numbers:

I have extended the range of whole numbers I can work with and having explored how decimal fractions are constructed, can explain the link between a digit, its place and its value. MNU 2-02a

Having determined which calculations are needed, I can solve problems involving whole numbers using a range of methods, sharing my approaches and solutions with others. **MNU 2-03a**

I have explored the contexts in which problems involving decimal fractions occur and can solve related problems using a variety of methods. MNU 2-03b

Having explored the need for rules for the order of operations in number calculations, I can apply them correctly when solving simple problems. MTH 2-03c

I can show my understanding of how the number line extends to include numbers less than zero and have investigated how these numbers occur and are used. MNU 2-04a

Multiples, factors and primes:

Having explored the patterns and relationships in multiplication and division, I can investigate and identify the multiples and factors of numbers. MTH 2-05a

Fractions, decimal fractions and percentages including ratio and proportion:

I have investigated the everyday contexts in which simple fractions, percentages or decimal fractions are used and can carry out the necessary calculations to solve related problems. MNU 2-07a

I can show the equivalent forms of simple fractions, decimal fractions and percentages and can choose my preferred form when solving a problem, explaining my choice of method. MNU 2-07b

National Council of Teachers of Mathematics

The NCTM expectation of children by US school grade.

Pre-K-2

Number

- count with understanding and recognize "how many" in sets of objects;
- use multiple models to develop initial understandings of place value and the base-ten number system;
- develop understanding of the relative position and magnitude of whole numbers and of ordinal and cardinal numbers and their connections;
- develop a sense of whole numbers and represent and use them in flexible ways, including relating, composing, and decomposing numbers;
- connect number words and numerals to the quantities they represent, using various physical models and representations;

• understand and represent commonly used fractions, such as 1/4, 1/3, and 1/2.

Operation

- understand various meanings of addition and subtraction of whole numbers and the relationship between the two operations;
- understand the effects of adding and subtracting whole numbers;
- understand situations that entail multiplication and division, such as equal groupings of objects and sharing equally.

Computation

- develop and use strategies for whole-number computations, with a focus on addition and subtraction;
- develop fluency with basic number combinations for addition and subtraction;
- use a variety of methods and tools to compute, including objects, mental computation, estimation, paper and pencil, and calculators.

Grades 3-5

Number

- understand the place-value structure of the base-ten number system and be able to represent and compare whole numbers and decimals;
- recognize equivalent representations for the same number and generate them by decomposing and composing numbers;
- develop understanding of fractions as parts of unit wholes, as parts of a collection, as locations on number lines, and as divisions of whole numbers;
- use models, benchmarks, and equivalent forms to judge the size of fractions;
- recognize and generate equivalent forms of commonly used fractions, decimals, and percents;
- explore numbers less than 0 by extending the number line and through familiar applications;
- describe classes of numbers according to characteristics such as the nature of their factors.

Operation

- · understand various meanings of multiplication and division;
- understand the effects of multiplying and dividing whole numbers;
- identify and use relationships between operations, such as division as the inverse of multiplication, to solve problems;
- understand and use properties of operations, such as the distributivity of multiplication over addition.

Computation

- develop fluency with basic number combinations for multiplication and division and use these combinations to mentally compute related problems, such as 30 × 50:
- develop fluency in adding, subtracting, multiplying, and dividing whole numbers;
- develop and use strategies to estimate the results of whole-number computations and to judge the reasonableness of such results;
- develop and use strategies to estimate computations involving fractions and decimals in situations relevant to students' experience;
- use visual models, benchmarks, and equivalent forms to add and subtract commonly used fractions and decimals;
- select appropriate methods and tools for computing with whole numbers from among mental computation, estimation, calculators, and paper and pencil according to the context and nature of the computation and use the selected method or tools.







Scottish Attainment Challenge Year End Progress Review

North Lanarkshire Council

	<u>Pre-Measures</u>	<u>Post-Measures</u>		
	Standardised Numeracy Assessment (October 2016)	Standardised Numeracy Assessment (March 2017)		
Child Measures	Attitudes towards maths questions	Attitudes towards maths questions (March 2017)		
	(October 2016)	Focus group with children about Number Talks		
	Teacher Judgement Questionnaire (October 2016)	Teacher Judgement Questionnaire (March 2017)		
Teacher	Attitudes towards maths questions (10 th October 2016 – given out at Number Talks training	Attitudes towards maths questions (March 2017)		
Measures	day)	Focus group with staff about implementation of number talks		
	Teacher audit (SmartSurvey)	February 2017 (Gillian having meeting with staff on this)		
	(22	HT views on implementation at strategic level		

North Lanarkshire Council

Participants

• 6 children from each class piloting the mental agility to be chosen by RDOs.

Head teachers to bring along (4th of October) class list for number talks class with annotations of the different maths level groups that each child is in. RDOs will pick two children from each level at random.

At number talks training day (10th October) RDOs will give teachers list of children chosen – so that parent information & consent forms can be handed out.

Measures

Standardised Assessment

Using either GL assessment or Number Talks assessment

Proposed time: 26th October-2nd November

Attitudes Questionnaire

Child – to be filled out by children when doing standardised assessment. This questionnaire should be made after speaking to the three P3 girls at Cleland Primary who used number talks – can provide information on the areas they benefited most in.

Teacher – to be filled out by teachers on first day of training (10th October). This questionnaire should encompass teacher feelings/confidence in delivering numeracy lessons to gather baseline data.

• Teacher Judgement Questionnaire

This should encompass the benchmarks. To be given to teachers on 10th October for them to take away and complete for each of the 6 children involved in evaluation. Will be gathered when visiting school for standardised assessments.

Timeframe of Evaluation

- Number talks should be steadily integrated into the school.
- It is hoped that it will be in at least 3 classes by March and in all classes in the school by Easter.
- Post-testing has been scheduled for March.