Raising Attainment, Improving Learning
Presentation of data on the local context

West Dunbartonshire is the 2nd smallest Local Authority in terms of land area. The Council aspires to improve life chances for children and young people.

WDC life expectancy rates are statistically significantly worse than the Scottish average. WDC has the second lowest life expectancy at birth of all Scottish Local Authorities. The life expectancy at birth for males and females in West Dunbartonshire is 74.1 years and 78.7 years respectively. Poverty leads to lower life expectancy as seen when comparing life expectancy rates in the least and most deprived areas of West Dunbartonshire.

A boy living in the most deprived area of West Dunbartonshire can expect to live six and a half years less than a boy in the least deprived area. 2% of couples and 8% of lone parents cannot afford two pairs of shoes for each child. 12% of lone parents cannot afford celebrations with presents at special occasions, 26% of children in West Dunbartonshire are growing up in poverty. In all wards 20% of children are growing up in poverty. Around 2000 (14%) of children in West Dunbartonshire live in severe poverty, 12,300 children live in households dependent on out of work benefits or Child Tax Credits at more than the family element. At the age of 16 there is a 16% gap in attainment levels between the poorest pupils and their classmates and 10% of the poorest young people become unemployed immediately after leaving school. 66.8% of the working age population are in employment (i.e. 39 300). The level of unemployment at January 2014 the most recent figure, was 10.8% compared to 7.7% for Scotland.

The overall index of crime shows that West Dunbartonshire scores 130 against a figure for Scotland of 100 – WDC has just under one third more crimes and offences than the Scottish average.

In 2012 38.3% of households are occupied by single people, with this number expected to rise to 49% over next 25 years. social housing accounts for 39% of the total housing stock and homeless applications have continued to fall but those aged 25 and under account for 35% of all homeless presentations.

SIMD distribution of pupils at WDC secondary schools at census 2013/14 showed 22.5% in SIMD decile 1 and 80.3% in SIMD deciles 1-5. Pupil / teacher ratio in 2014 13.6 compared to 13.7 across Scotland. In 2014, gender ratio in primary school teachers was 420:38 in favour of women, gender ratio in secondary school teachers was 296:160 in favour of women and slightly more teachers with main subject taught as English (48) than Maths (46) in WDC secondary schools. School rolls in West Dunbartonshire secondary schools continue to decline. There was an increase in the primary pupil roll compared to the previous year. In 2014, 29.6% primary pupils and 23.7% of secondary pupils were registered for FSM.

Insight Data on Literacy and Numeracy (2014 Leavers)

The percentage of WDC leavers achieving both a Level 4 Literacy & Numeracy Award is comparable with the National average (WDC 80.73%, Nat 81.28%). Similarly, WDC leavers achieving both Level 5 Literacy & Numeracy is also comparable to the National average (WDC 55.26%, Nat 55.68%).

There are however, significant differences in the number of leavers achieving a Literacy Award compared to Numeracy. 95.79% of 2014 leavers had achieved a Level 4 Literacy Award but only 81.51% had achieved Level 4 Numeracy. At Level 5 Literacy 70.32% of leavers had achieved this but only 59.03% of leavers had achieved Level 5 Numeracy.
Analysis

As reported to West Dunbartonshire Council Educational Services Committee on 3rd September 2014.

As part of Educational Services’ Raising Attainment Strategy pupils are being tested using baseline assessments and standardised tests in literacy and numeracy at nursery, P1, P3, P5, P7 and S2. The department has been tracking performance at P3, P7 and S2 using literacy and numeracy Standardised Tests since 2012. P5 was added in 2013.

In 2014, as part of the Early Years Collaborative initiative, attainment data at Early Years centres was also gathered using literacy and numeracy baseline assessments. In 2014, West Dunbartonshire’s Validated Self Evaluation report identified that the department should further develop approaches for analysing and using data to effect improvement.

A further strategy to build an authority wide picture of progress was introduced in May 2012. This included a series of standard assessments at P3, P7 and S2. In March 2013 P5 pupils were also included. During 2013 and 2014 literacy baseline assessment was carried out in all Early Years establishments. During 2014 early reading skills (literacy baseline assessment) was used to assess progress for all P1 pupils. During 2014, baseline assessment in numeracy was carried out in all Early Years establishments and in literacy in a sample of establishments.

The high level messages emerging from the baseline assessments and standardised tests indicate the following:

Reading
Performance in all eight test areas in the Early Years Literacy Baseline Assessment improved on results assessed during session 2012-13.

In 2014 at P3, P5 and P7, West Dunbartonshire performed higher than the benchmark; at S2 performance was just below the benchmark. At all stages performance was within the average band.

P3, P5 and P7 all improved on the results from the same age groups in the previous year. However, S2 scored slightly lower than in the previous year. However the children tested in 2014 were different from the children tested in 2013.

Mathematics
In the Early Years Numeracy Baseline Assessment there were ten curricular areas tested. The WDC average fell within the amber range of values for all curricular areas, except “Money” where it fell within the red range. However, this is consistent with national data from the Scottish Survey of Literacy and Numeracy (SSLN). In the curricular area of “Estimation and Rounding”, two thirds of WDC children scored the highest possible value.

In 2014 at P3, P5, P7 and S2, West Dunbartonshire performed below the benchmark. At all stages performance was within the average band.

P3, P5 and P7 all scored higher than the same year group in the previous year. S2 scored slightly lower than in the previous year.
The chart above shows the performance of West Dunbartonshire pupils from the sampled establishments in the various curricular areas assessed in the Early Years Literacy Baseline Assessment.
The chart above shows the performance of West Dunbartonshire pupils in the various curricular areas assessed in the Early Years Numeracy Baseline Assessment.
The chart above shows the performance of West Dunbartonshire pupils by Mean Standard Age Scores for each tested stage in both Reading and Mathematics tests between 2012 and 2014 compared to the national benchmark for the same tests.
Attainment in Literacy and Numeracy

All data combined
- Attainment is more variable in reading than maths, although there is a clear drop in attainment in maths from P5 to P7 and S2 (approx 5%)
- Reading attainment for boys is lower than the average value, while reading attainment for girls is therefore above the average value. Reading attainment for girls is always above the national benchmark.
- In general, maths attainment is lower for boys and girls. Maths attainment is below the national benchmark on all occasions, except P3 girls. The differences due to gender are less noticeable at all stages and there is little/no difference in P5, P7 and S2.
- There is a reduction in attainment in maths as you progress through the year groups.

Learning Community
- OLSP values higher at all stages, except P3 maths when it is highest with DA LC (Figure 2).
- CHS values lower at all stages, except P5 maths when SPTA LC is slightly lower.
- All VoLA primary children are 2-3% above national benchmark in reading but are ~1% below national average by S2. A similar pattern exists for DA pupils although it is not as marked.
- Maths values are similar for P3 and P5, however, there is a noticeable drop for three LCs in P7, i.e. DA, OLSP and SPTA drop by ~5%, while and VoLA drops by ~3% and CHS drops by ~1%. S2 values are similar to those in P7.

Family group
- As you would expect there is a clear pattern of reduction in attainment as you go through the FGs, except for P7 FG 4 in maths which is higher than FG 3 and P7 reading FG 3 which is higher than FG 2.

Looked after status
- Children who are not looked after have the highest attainment.
- There is a clear drop in attainment for children looked after away from home by the time they reach S2.
- P3 pupils looked after at home had lower attainment than those who are looked after away from home in both reading and maths.
- NOTE that the numbers of children involved are low, even at LA level and the validity of any interpretation could be called into question.
- The figures over the 3 years for categories other than not looked after are very small (~30)

SIMD status
- Interpretation of SIMD 10 values must be interpreted with caution because the numbers of pupils are very small.
- As expected, SIMD 1 is the lowest at all stages, followed by SIMD 2 except at maths P5.
- In general, there is a rise in attainment with SIMD but it is not as clear cut as expected.
- Exceptions include, SIMD 8 is often better than expected while the following are lower than expected: Reading P5 SIMD 6 and 7; Reading S2 SIMD 6, 7 and 8; Maths P3 SIMD 5 and 9; Maths P5 SIMD 4 and 6; and Maths S2 SIMD 6 and 8.
- Differences in SIMD, and often related SI numbers, are likely to affect attainment results and could lead to large variations between year groups.
## PROPOSED INTERVENTIONS

<table>
<thead>
<tr>
<th>Project theme</th>
<th>Proposal:</th>
<th>To target Improvements in:</th>
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<tbody>
<tr>
<td>Transitions</td>
<td>1. Nursery/primary – Multi agency Family Support campus - Focus on early level Develop learning through play at early level 2. Primary/secondary – development of Enriched transition programme – into S1</td>
<td>Literacy, numeracy, Health and well being</td>
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</tbody>
</table>
| SIPP          | Collaboration  
• within and across schools 
• with partners 
• between high and low performing schools                                                                                       | Numeracy & Literacy                          |
| STEM          | Develop existing STEM hubs into Centres of excellence                                                                                   | Literacy and Numeracy                        |
Proposed Intervention - Transitions 1

Approximate costings - £ 106,880

- Baseline/systematic monitoring/data gathering systems set up
- Identification of geographical-establishment which will be focus for improvement
- Recruitment of staff
- Communication strategy – parental and community engagement
- Identify professional learning needs of all stakeholders
- Put in place appropriate training
- Identify children and parents
- Clarify roles and remits of team

- Nurse
- Social worker
- Educational Psychologist
- Early Learning practitioner
- Based in Family support campus proportion of the week
- Working with identified groups of children
- Working with identified groups of parents
- Develop learning through play pedagogies at early level – multi-agency approach - bespoke programme

- Collaborative planning across early level – progression
- Targeted approach to intervention
- Multi-agency approach to support
- Provision of accessible early intervention and prevention

- Raised attainment and achievement in identified measures
### RAISING ATTAINMENT, IMPROVING LEARNING: TRANSITION – EARLY LEVEL

#### PROPOSED INTERVENTION

**Proposals to address identified issues**

- Establish a 'Family Support Campus' to provide a multi-agency model of education and care – focus on early level
- Develop approaches to learning through play
- Enriched transition programme to S1
- Develop and implement key approaches and initiatives: nurture; reciprocal teaching; Rights Based Learning
- Curricular approaches that support families; financial education; employability; career; PATHS
- Further develop and implement the assessment and planning process in line with the risk matrix for both individuals and families
- The GIRFEC multi-agency collaborative assessment, planning, early identification, intervention and prevention through establishing a community multi-agency support group (MSG)
- Parenting supports, systems, approaches and strategies
- Named Person Liaison between health and education
- Transition procedures from NP to NP

#### Rationale and evidence behind proposals

- GIRFEC; Children and Young People Act 2014 (Scotland) Early Learning and Childcare; Curriculum for Excellence

#### Sets out aim and expected impact of plan

- Establish a 'Family Support Campus' to provide a multi-agency model of education and care that focus on the importance of interactions and other experiences which support learning and development in a caring and nurturing setting.
- The development of parenting supports
- The development of Named Person liaison between health and Education and the further development of transition procedures from NP to NP

#### Initial assessment of funding requirement

- Appoint multi – agency team (0.5 FTE) per post (nurse £15,500), (social worker £22,320), educational psychologist £27,900), (early years practitioner £11,160), (professional learning bespoke course £30,000)

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#### DATA & ANALYSIS

**Identification of target populations**

Initial focus on upper Bonhill. This area will have both a 0-3 hub and a nursery class.

**Rationale behind proposals**

Family Learning in West Dunbartonshire: A Local Authority Case Study
## IMPACT MEASUREMENT PLAN

Sets out proposals for measuring impact

### Control Group Model
- Small test of change model (EYC)

### Risk Matrix Model
- Devised to record, review and monitor levels of need (risk factors)

### Bespoke model of intervention for young people and families at early stages to improve:
  - Attendance/lateness
  - Social and emotional health (build resilience)
  - Supports for mental health issues
  - Parenting/behaviour management skills
  - Early linguistic and cognitive development

### Data, both existing and new, which will be required

- SIMD data
- Early Years Baseline Data (Literacy, Numeracy)
- Raising Attainment Committee Report August 2014
- Additional support needs data by factor (including LAC)
- Additional support needs data by stage of intervention
- Additional support needs aligned to baseline results
- Number of child’s plans
- Number of CSPs
- MARAC and MATAC referrals
- Children Protection and Supervision Order Data
- Exclusions, Latecoming and Attendance Data
- Violent incidents data
- 27-30 month review
- Progress towards EY Collaborative stretch aims

### Plans for how data will be collected and reported

- Policy and Improvement Officers (researcher and data analyst) to devise and conduct both qualitative and quantitative research process:
  - Interviews and surveys of target groups of parents and families
  - Interviews and surveys of other stakeholder groups involved in the ‘Family Hub’ projects
  - Surveys to gather attitudinal data about parent and child social, emotional and mental well being
  - Observation of interactions between parents and children
  - Analysis of standardised test scores for early literacy and numeracy development
- Analysis and comparison of the target group families against their social and economic profile
- Conduct literature reviews to: inform plans for intervention; evaluate and compare findings
  - Appoint local authority co-ordinator
  - Establish Learning Community Partnership Innovation Teams (PIT’s) to co-ordinate work across sectors
  - Partnership working with Glasgow University and Education Scotland
  - Termly updates and reports from each (PIT)
  - Termly updates and impact reports submitted to local Impact Review Group
  - Case Studies individual pupils and families

### LOCAL MANAGE & GOVERNANCE

#### Proposals for how work will be managed locally
Service Manager for Early Years and Childcare to manage project

Raising Attainment/ impact review Group (Led by Head of Service) Termly progress reports produced and included in Educational Services Committee Reports.

Lead Officer appointed: responsible for managing Multi Agency Family Support Team (Health professional, social worker, educational psychologist, Early level lead; welfare officer)

#### Plans for local governance and reporting i.e: through existing or new mechanisms
Termly progress reports produced and included in Educational Services Committee Reports and shared at LLC Meetings

Impact Review Group
**Additional information requested by Scottish Government**

<table>
<thead>
<tr>
<th>Project Theme</th>
<th>Transitions 1</th>
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**Range of data provided and analysis undertaken. Further explanation/contextual information on the rationale behind the approach to identification of the schools and communities to be involved. Where this is universal across all primary schools how this fits with targeted approaches to interventions in deprived communities**

The identified area of upper Bonhill Target area includes schools who have a significant percentage of pupils from SIMD deciles 1 – 3 and an average attendance for 2014/15 below the authority average of 95.21. We have drawn on GL and Baseline assessments which indicate that there are differences in attainment across the establishments. Additional support needs data also provides a varied picture, all despite a similar catchment area. Attendance for all schools lies below the authority average for 2014/15.

**Further information on the rationale for choice of location for health & wellbeing intervention – why is it this particular community and is your proposal to extend this to other communities in future years. Is this sustainable beyond the life of the fund?**

**Rationale**

This is an area of significant deprivation and also an area about to go through several changes. In August 2015 St Ronan’s primary will relocate to an upgraded building while Ladyton and Highdykes primaries will amalgamate and also relocate to an upgraded building. The creation of early learning and childcare provision in the newly amalgamated school will follow in 2016/17. The existing early learning and childcare centre will become a 0-3 Hub offering increased places for 2 year olds in line with the Children and Young People Act 2014. The changes have already engaged the community and provide a basis for building enhanced supports for parents and children. Thus for this area there will be a focus on transitions and the further development of early level curricular experiences. The work done in this community in terms of transitions and early level will be relevant and applicable to the development of early learning and childcare provision across the authority over the next 3-4 years.

This is also a relatively confined geographical area yet displays differences which one might not expect in terms of identified ASN rates and GL results. Work to investigate ways of positively impacting on these differences will also have applicability across the authority.

**Key aims of the project will be to develop and trial through the Early Years Collaborative methodologies, the interventions and supports that have the greatest impact on the factors which lead to increased attainment and closing the attainment gap.**

**Funding requirement in years 1-4**

- **Year 1**
  - Health Professional 0.5 FTE – £15,000
  - Social Worker 0.5 FTE – £22,320
  - Educational Psychologist 0.5FTE – £27,900
- ELCC Practitioner 0.5 FTE – £11,160
- Professional Learning Materials and Training £30,000
Total 2015/16 = £106,880

Year 2
- As year 1 – 106,880
- Teacher support to roll out play based learning and the Incredible Years suite of approaches across Early Learning and Childcare and Early Level Primary teaching staff - £34,000
- Additional Education Psychology time for further training and development support - £27,900
- Involvement of Senior Phase/ OHA team to develop employment pathways (3-18) – 0.5 FTE – 22,320
Total = 168,780

Year 3
As year 2 – 168,780

Year 4
- Fulltime Educational Psychologist to support roll out of good practice and relevant training across WDC - £55,800
- Fulltime Class Teachers x 2 to support roll out of good practice and relevant training across - £68,000
Total = 123,800

Overarching aim and expected impact (and how you will measure it) for the attainment challenge in West Dunbartonshire.

Overarching aims
- Improved attendance
- Reduced exclusions
- Reduced violent incidents
- Reduction requirement for targeted support over time
- Reduction requirement for specialist placements over time
- Improved attainment
- Improved learning and community engagement
- Children/ pupils at risk identifies earlier and more effectively
- More empowered community providing self-sustaining peer support
- Increased confidence of parents in their own abilities
- Increase the % and range of positive destinations more over time
Proposed Intervention - Transitions 2

Approximate costings - £ 643,600

- Baseline/systematic monitoring/data gathering systems set up
- Recruitment of staff
- Liaison with training providers to develop bespoke course following needs identification process
- Explore possibility of accreditation for teachers
- Identify clear roles and remits for all stakeholders

- Raised attainment and achievement in identified measures

Proposed Intervention - Transitions 2

- Up skill group of identified maths specialists from our primaries
- Develop professional learning package to build capacity of these staff to deliver high quality engaging learning experiences in maths and numeracy – LLC model
- Possible accreditation of this through eg SCEL
- Planned programme of enriched transition in partnership with secondary specialists – numeracy in a context
- Develop summer school – numeracy focus
- Develop opportunities for parents to engage in home learning – numeracy focus

- More skilled workforce – sustainability
- Opportunities for collaborative planning and delivery with colleagues across and within sectors – sharing the standard
- Learners have enriched transition experience
- Learners have opportunity to apply and deepen their learning
- Increased number of parents engaged with numeracy
# RAISING ATTAINMENT, IMPROVING LEARNING: TRANSITION – BGE

## Proposed Intervention

**Proposals to address identified issues**

- Maths specialists in primary
- Professional learning programme
- Summer numeracy school
- Cross sector moderation
- Detailed analysis of GL assessment in learning communities
- Pilot enquiry project applying Cognitive Guided Instruction

## Rationale and Evidence behind proposals

**Sets out aim and expected impact of plan**

- Improved attainment in numeracy and maths
- Transformative model for delivering BGE
- Professional collaboration across sectors to share standards to provide consistent, progressive, personalised learning for all
- Consistency of practice – using toolkits (WDC)
- Teachers better equipped and skilled to teach maths
- Improve pedagogy – provide lesson structures.
- Balanced approach to teaching learners to pass exams and teaching learners to think mathematically
- Parental interventions/engagement?
- Teacher/Learner/Parent confidence in Numeracy and Mathematics improves

## Initial assessment of funding requirement

- Appoint specialist maths teachers, backfill posts ( £505,600)
- Facilitation costs ( £120,000)
- 12 teachers course ( £18,000)

## Data & Analysis

**Identification of target populations**

- Learners at Early Level/P1, P3, P5, P7/S1
- Practitioners at Early Level, P1, P3, P5, P7 and secondary
- Target populations identified based on
  - current standardised assessment stages
  - key transition points between establishments
  - transition points between CfE levels.

Rationale behind proposals
- Having analysed the data and areas of need within WDC, Numeracy is a clear area for improvement.
- Skills and confidence of both learners and staff require improvement.

IMPACT MEASUREMENT PLAN
Sets out proposals for measuring impact
- Control Group Model
- Pre/Post Intervention Assessment (measuring quantitative and qualitative data)
- Data collation templates produced by WDC for consistent collection and analysis
- Improvements in GL performance

Data, both existing and new, which will be required
- Early Years Baseline Data (Literacy, Numeracy)
- GL Assessment Reports
- Scottish Survey of Achievement Reports (2012, 2014)
- ‘Myself as a Learner’ Reports
- Cognitive Assessment (CGI) Maths / Numeracy
- Local areas of focus: Fractions, Decimal Fractions & Percentages; Measurement; Money
- Interventions focused on Early Level/P1; P3; P5; P7/S1
- Rationale: At all stages/levels learner performance in Numeracy is significantly poorer than performance in Literacy

Plans for how data will be collected and reported
- Termly updates and impact reports submitted to local Impact Review Group
- Policy and Improvement Officers (researcher and data analyst) to devise and conduct both qualitative and quantitative research process:
  - Interviews and surveys of target groups of pupils and staff
  - Surveys to gather attitudinal data about child social, emotional and mental well being
  - Learning Visits, Instructional Rounds
- Analysis of standardised test scores for numeracy
  - Conduct literature reviews to: inform plans for intervention; evaluate and compare findings
- Appoint local authority co-ordinator
- Establish Learning Community Partnership Innovation Teams (PIT’s) to co-ordinate work across sectors
- Partnership working with Glasgow University and Education Scotland
- Termly updates and reports from each (PIT)

Termly updates and impact reports submitted to local Impact Review Group

**LOCAL MANAGE & GOVERNANCE**
**Proposals for how work will be managed locally**
- Numeracy Steering Group (Led by Service Manager/QIO)
- Support from LA Numeracy Hub Champion
- Termly progress reports produced and included in Educational Services Committee Reports and shared at LLC Meetings
- Support from secondary school Mathematics Departments and STAR Teachers
- Impact Review Group

**Plans for local governance and reporting i.e: through existing or new mechanisms**
Service Managers for Education Development, Policy and Improvement

Raising Attainment/ impact review Group (Led by Head of Service)

Termly progress reports produced and included in Educational Services Committee Reports.

Reports to Impact Review Group
Additional information requested by Scottish Government

Project Theme

Transitions 2

Range of data provided and analysis undertaken. Further explanation/contextual information on the rationale behind the approach to identification of the schools and communities to be involved. Where this is universal across all primary schools how this fits with targeted approaches to interventions in deprived communities

Our data on maths and numeracy broken down by SIMD etc.

In West Dunbartonshire we use GL Assessment Standard Tests in Reading and Mathematics to check progress of our pupils in stages P3, P5, P7 and S2. Pupil results are presented as Standard Age Scores (SAS). GL Assessment sets its National Benchmark SAS at 100. This is the score they expect the most average pupil to achieve in their tests.
In the Reading test, the average SAS at each band is close to or above the National Benchmark. However, in Mathematics at every tested stage, the average SAS is below the National Benchmark.

The average SAS in SIMD 2012 deciles 1 to 3 for the four tested stages is always below GL's National Benchmark of 100.
By P7 and S2 a clear trend is apparent when looking at the data with the lowest SIMD deciles getting the lowest average SAS and the highest deciles getting the highest average SAS.

Data from SSLN 2013 shows a similar picture. The paragraph and chart below are taken directly from the SSLN 2013 Publication at http://www.gov.scot/Publications/2014/04/5692/1

Pupils living in areas of least deprivation were more likely to be performing well or very well than pupils living in areas of most deprivation, across all stages. The disparity was largest at S2, where the proportion of pupils performing well or very well from the least deprived areas was 28 percentage points higher than pupils from the most deprived areas.
This reflects the Joseph Rowntree Foundation’s (JRF) summary that our national trend in numeracy is for the attainment gap between disadvantaged and advantaged begins in P4 and continues to widen until S2:

“The attainment gap in numeracy between children from the most and least deprived background was evident at all levels. It starts at P4 and widens by the time children get to S2. At S2, pupils living in areas of low deprivation were more than twice as likely to be assessed as performing well, or very well, than those in areas of high deprivation.”

**Our rationale for a focus on maths/numeracy**

Employment opportunities and life chances are frequently limited by poor qualifications in numerate areas. From the JRF again:

“The observed gap in attainment is linked to the subsequent destinations of children and young people after school, and has repercussions for future job market success.”

Specifically with reference to mathematics/numeracy and life-chances, the OECD have been tracking attainment internationally through PISA and other linked
studies. Andreas Schleicher, their Director for Education and Skills has concluded:

“Good numeracy is the best protection against unemployment, low wages and poor health.”

The UK Charity National Numeracy, lists the following basic statistics focusing specifically on the links between life-chances and literacy:

**Employment:** People with poor numeracy skills are more than twice as likely to be unemployed

**Wages:** Recent data by the OECD show a direct relationship between wage distribution and numeracy skills

**Health:** In OECD and UK basic skills reports, the correlation between poor numeracy and poor health is clear; data from the British Cohort Studies have shown that there is also a link between depression and poor numeracy

**School exclusions:** Pupils beginning secondary school with very low numeracy skills but good literacy skills have an exclusion rate twice that of pupils starting secondary school with good numeracy skills

**Truancy:** 14-year-olds who have poor maths skills at 11 are more than twice as likely to play truant

**Crime:** A quarter of young people in custody have a numeracy level below that expected of a 7-year-old, and 65% of adult prisoners have numeracy skills at or below the level expected of an 11-year-old.

**Approaches and sustainability for maths/numeracy**

Sustainability of the approaches we intend to develop will be in the form of a staff skills legacy as well as a legacy of numeracy/mathematical practice. We will have an established professional learning programme explicitly built on evidence about approaches that have worked or show promise as identified by authoritative studies such as the JRF’s “Closing the attainment gap” report and the Sutton Trust’s “What makes great teaching”. Key studies in approaches specific to maths teaching will also underpin the programme, e.g. “Effective Teachers of Numeracy in Primary Schools: Teachers' Beliefs, Practices and Pupils' Learning”. (Kings College University of London). Research will be a key driver for all staff involved in this numeracy programme in the long term.

Our summer school programme builds on the experiences of many summer schools such as "Summer @ Strathclyde" which was able to evidence improvement in engagement with both school and further/higher education in partnership with participating local authorities. These are based on the well observed fact that a long summer recess negatively affects all learners, but most strongly those learners who are not benefiting from the enriching summer activities that better-off families often access. A well planned summer school has been central to many success stories. The KIPP schools (Charter Schools) in the US have evidenced strong attainment gains in children from impoverished areas using this as a central strategy. In England the University of the First Age charity, set up by Tim Brighouse, later the driver of the London Challenge built the majority of their work with 27 local authorities around summer school
activities, most at least including peer-led approaches.

Our enhanced transition model will address another central challenge for learning maths and numeracy. The enhanced transition will have as a key outcome the development and skills, particularly in the lowest performing 20% of pupils to enhance their capacity to achieve to the best of their ability in the secondary content. Pupils will be given the opportunity to spend extended periods of time in the secondary school during their P7 year, and be offered small group tutorials to develop skills. The use of maths in context helps learners to develop an understanding framework in the way that David Perkins, (Teaching for Understanding Project), has described. There is a loose analogy from the comments currently reported by Graham Donaldson from senior Welsh Educators who are emerging from a period of intensive basics in school literacy. This programme has not had the desired effect and the reported comment was “we are teaching them how to write but giving them nothing to write about”. Our maths enhancements will explore maths in context, and develop linked work in computational/algorithmic thinking to develop our wider STEM agenda.

Our desire to develop opportunities for parental engagement in home learning with a numeracy focus reflects one of the JRF’s suggested actions:

“effective parental involvement programmes that focus on helping parents to use appropriate strategies to support their children’s learning at home rather than simply seeking to raise aspirations for their children’s education”

Funding requirement in years 1-4

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<thead>
<tr>
<th>Year 1</th>
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<tr>
<td><strong>Facility Costs</strong></td>
<td></td>
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<tr>
<td>• Appoint 12 x CT posts = £505, 600</td>
<td></td>
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<tr>
<td>• Produce course materials = £18, 000</td>
<td></td>
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<tr>
<td>• Pupil exchange programme = £20,000</td>
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<tr>
<td>• Learning technology resources (computerised kits, programmable toys, computer games) = £17,000</td>
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<tr>
<td>• Technologies hardware (chromebook devices for individualised learning) = £34,000</td>
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<tr>
<td>• Parental workshops = £10,000</td>
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<tr>
<td>• Supported study programme = £17,000</td>
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<tr>
<td>• Summer School = £22,000</td>
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<tr>
<td><strong>Total</strong> = £643,600</td>
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<tr>
<th>Year 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Facility Costs</strong></td>
<td></td>
</tr>
<tr>
<td>• Pupil exchange programme = £20,000</td>
<td></td>
</tr>
</tbody>
</table>
- Learning technology resources (computerised kits, programmable toys, computer games) = £17,000
- Parental workshops = £10,000
- Supported study programme = £17,000
- Summer School = £22,000
**Total = £591,600**

**Year 3**
- Appoint 10 x CT posts = £421,330

**Facility Costs**
- Parental workshops = £10,000
- Supported study programme = £17,000
- Summer School = £22,000
**Total = £470,330**

**Year 4**
- Appoint 8 x CT posts = £367,064

**Facility Costs**
- Summer School = £22,000
**Total = £389,064**

---

**Overarching aim and expected impact (and how you will measure it) for the attainment challenge in West Dunbartonshire.**

- Raised attainment in GL and other measures
- Increased confidence in numeracy for learners
- Increased enjoyment of maths and numeracy for learners and teachers
- Increased understanding of research-influenced practice in numeracy/maths development. (possible professional recognition for successful teachers of maths/numeracy)
Proposed Intervention - SIPP

- Identify projects
- Plan action research projects
- Plan data gathering (baseline)
- Identify schools and staff
- Explore possible accreditation / professional recognition of staff

- Collaborative planning of interventions to raise attainment
- Joint training
- Learning observations
- Data analysis to evaluate impact
- Share across schools, with partners locally and nationally
- Standardised attitudinal test

- Raised attainment and achievement in identified measures

- Local authority model for action research
- Consistent approaches to delivery of numeracy and maths
- Cross sector working with focus at transition points
- Improved experiences for learners
RAISING ATTAINMENT, IMPROVING LEARNING: SCHOOL IMPROVEMENT PARTNERSHIP

<table>
<thead>
<tr>
<th>PROPOSED INTERVENTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposals to address identified issues</td>
</tr>
<tr>
<td>- Collaborative action research</td>
</tr>
<tr>
<td>- Lesson study</td>
</tr>
<tr>
<td>- Instructional rounds</td>
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</table>

<table>
<thead>
<tr>
<th>Rationale and evidence behind proposals</th>
</tr>
</thead>
<tbody>
<tr>
<td>A ‘solution-focused approach’ to Scotland’s attainment issues with an emphasis on supporting innovation and promoting sustainable collaboration across classroom, school and local authority boundaries to tackle educational inequality</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sets out aim and expected impact of plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Raised attainment in literacy and numeracy</td>
</tr>
<tr>
<td>- Increased levels of consistency in approaches to learning and teaching</td>
</tr>
<tr>
<td>- Understanding successful modes of learning to raise attainment</td>
</tr>
<tr>
<td>- Increased expectation of raising attainment being the responsibility of all</td>
</tr>
<tr>
<td>- Skilled workforce</td>
</tr>
<tr>
<td>- School-to-school collaboration with locally initiated bottom-up enquiry.</td>
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<table>
<thead>
<tr>
<th>Initial assessment of funding requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Teacher cover costs (0.2) for 2 teachers in 16 schools</td>
</tr>
<tr>
<td>- £350,000</td>
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</table>

<table>
<thead>
<tr>
<th>DATA &amp; ANALYSIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification of target populations</td>
</tr>
<tr>
<td>- Interventions focused on Early Level/P1; P3; P5; P7/S1</td>
</tr>
</tbody>
</table>
**Rationale behind proposals**

Since 2013 the eight primary schools with highest FME have been part of the national SIPP project.

There is emerging evidence that the projects are making a positive impact on raised attainment in literacy and numeracy at the P4/5 stage.

In the maths / numeracy project it is evident that pupils have improved confidence, self-esteem and perseverance with maths problems. Seventy percent of the sample group of pupils have improved their ability to interpret problem type questions. The number of 'non attempts' at questions reduced significantly. The number of minor and major calculation errors has decreased. Pupils who find maths challenging are more engaged and able to participate in maths problem solving.

In the literacy project a structured and consistent approach is evident in all classes using the four reciprocal teaching strategies. Parents are more informed about strategies used within the school to teach reading. Parents are more able to support their children at home with reading through using strategies to support their child's comprehensions skills rather than simply engaging their child in reading aloud.

All projects report that collaborative teaching (Learning Visits) focussed review and professional dialogue on the learning and learner impact. The professional learning afforded by the project has improved teacher practice. The use of an enquiry based research model has improved the range of methods used to assess learning and measure impact by class teachers and headteachers.

As part of our strategy to raise attainment in numeracy the SIPP project is being expanded to include more schools in our local authority. In April 2015 the 6 primary schools in the Dumbarton area, 4 link Early Years Centres, Dumbarton Academy and OLSP will engage in a small scale raising attainment project in numeracy.

### IMPACT MEASUREMENT PLAN

**Sets out proposals for measuring impact**

- Comparative study. Pre and post interventions using:
- Attainment data (GL, reciprocal teaching assessments, WDC CGI Assessment Profiles)
- Attitudinal Data pre and post intervention (‘Myself as a Learner’)
- Evaluations of learning experiences (criterion referenced)

**Data, both existing and new, which will be required**

- Literacy / Numeracy Strategy report (reciprocal teaching)
- GL Data Analysis
- Parental Surveys (SIPP Phase 1)
- Attainment Surveys (SIPP Phase 1)
- WDC CGI Assessment Profiles
- ‘Myself as A Learner’
• Evaluations of quality of learning experiences / teacher skill

**Plans for how data will be collected and reported**

• Policy and Improvement Officers (researcher and data analyst) to devise and conduct both qualitative and quantitative research process:
  - Interviews and surveys of pupils, teachers, headteachers
  - Surveys to gather attitudinal data about child’s perception of themselves as learners
  - Learning visits to observation quality of learning experience
  - Analysis of standardised test scores literacy and numeracy
  - Analysis and comparison of the sample/target groups against their social and economic profile
  - Conduct literature reviews to: inform plans for intervention; evaluate and compare findings

• Establish Learning Community Partnership Innovation Teams (PIT’s) to co-ordinate data collection, analysis and evaluation of small scale projects

  • Comparative study. Pre and post interventions using:
    - Attainment data (GL, reciprocal teaching assessments, WDC CGI Assessment Profiles)
    - Attitudinal Data pre and post intervention (‘Myself as a Learner’)
    - Evaluations of learning experiences (criterion referenced)

• Termly updates and reports from each (PIT) to Raising Attainment Strategy Group
• Termly updates and impact reports submitted to local Impact Review Group
• Report findings to senior researchers in Glasgow University and Education Scotland

**LOCAL MANAGE & GOVERNANCE**

**Proposals for how work will be managed locally**

• Service Manager Education Development
• Appoint local authority co-ordinator
• Establish Learning Community Partnership Innovation Teams (PIT’s) to co-ordinate work across sectors. Appoint lead officer in each Learning Community
• Partnership working with Glasgow University and Education Scotland

**Plans for local governance and reporting i.e: through existing or new mechanisms**

• Termly progress reports produced and included in Educational Services Committee Reports and shared at LLC Meetings
• Impact Review Group
**Project Theme**

<table>
<thead>
<tr>
<th>SIPP</th>
</tr>
</thead>
</table>

**Range of data provided and analysis undertaken. Further explanation/contextual information on the rationale behind the approach to identification of the schools and communities to be involved. Where this is universal across all primary schools how this fits with targeted approaches to interventions in deprived communities**

### Project Phase One

This project has targeted in phase one 8 schools with the highest number of pupils in the lowest SiMD Deciles. There is a clear pattern of reduction in attainment when these 8 schools are compared with schools that have a greater number of pupils in higher deciles. These 8 schools have engaged this session in a targeted approach to raised attainment in literacy and numeracy. Two projects have been implemented to support raised attainment at P4/5: one to raise attainment in literacy and one to raise attainment in maths. There is emerging evidence that the projects are making a positive impact on raised attainment in literacy and numeracy at the P4/5 stage:

In the maths / numeracy project it is evident that pupils have improved confidence, self-esteem and perseverance with maths problems. Seventy percent of the sample group of pupils have improved their ability to interpret problem type questions. There is a 15% increase in the number of problem type questions answered correctly. The number of ‘non attempts’ at questions reduced significantly. The number of minor and major calculation errors has decreased. Pupils who find maths challenging are more engaged and able to participate in maths problem solving. In one pupil case study it was evident that post intervention the child was: more confident when interpreting questions; more able and willing to try difficult problems; persevered longer when challenged; was quicker at finding solutions.

In the literacy project a structured and consistent approach is evident in all classes using the four reciprocal teaching strategies. Parents are more informed about strategies used within the school to teach reading. Parents are more able to support their children at home with reading through using strategies to support their child’s comprehensions skills rather than simply engaging their child in reading aloud. In one of the pilot schools there has been a 40% increase in attainment in reciprocal reading in P4.

As part of our strategy to raise attainment in numeracy the SIPP project is being expanded to include more schools in our local authority. The eight primary schools with highest FME have been part of the project since 2013. In April 2015 the 6 primary schools in the Dumbarton area, 4 link Early Years Centres, Dumbarton Academy and OLSP will engage in a small scale raising attainment project in numeracy based on the model piloted in project phase one. 3 of the primary schools in this cohort are in the low SiMD decile with 3 being in the higher deciles. The purpose of a mixed cohort of schools in this phase will provide a wider evidence base of pupil cohorts to analyse and draw conclusions about interventions that successfully raise attainment.

An additional funding stream would support all primary schools to implement the strategies in phase one. This would ensure equity of provision across all schools. A key purpose of this project is to identify and train lead officers and lead schools to provide a sustainable model with school leaders and staff trained...
and conversant with interventions that raise attainment in literacy and numeracy. The schools identified as lead schools will support the improvement in provision across the authority.

**Funding requirement in years 1-4**

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year 1</td>
<td>Teacher Cover Costs(0.2) for 2 teachers in 16 schools</td>
<td>£350,000</td>
</tr>
<tr>
<td>Year 2</td>
<td>Teacher Cover Costs(0.2) for 2 teachers in 16 schools</td>
<td>£350,000</td>
</tr>
<tr>
<td>Year 3</td>
<td>Teacher Cover Costs(0.2) for 2 teachers in 12 schools</td>
<td>£262,500</td>
</tr>
<tr>
<td>Year 4</td>
<td>Teacher Cover Costs(0.2) for 2 teachers in 10 schools</td>
<td>£218,750</td>
</tr>
</tbody>
</table>

**Overarching aim and expected impact (and how you will measure it) for the attainment challenge in West Dunbartonshire.**

- Raised attainment in literacy and numeracy.
- Increased levels of consistency in approaches to learning and teaching.
- Understanding successful modes of learning to raise attainment.
- Increased expectation of raising attainment being the responsibility of all.
- Skilled workforce.
- School-to-school collaboration with locally initiated bottom-up enquiry.
Proposed Intervention - STEM

- Action plan developed for each STEM hub with a focus on developing pedagogies that support the development of literacy and numeracy within this specialised, stimulating learning environment
- Planned programme of learning experiences to develop literacy and numeracy across the curriculum
- Use of appropriate differentiation to ensure all learners are challenged
- Opportunities for parents to engage with the learning developed
- Engage with business and other partners to ensure a focus on DYW through STEM

Baseline/systematic monitoring/data gathering systems set up
- Recruitment of staff
- Facilitate collaborative planning of ‘hub’ schools to set clear vision and expectations for project

• Raised attainment and achievement in identified measures

Approximate costings - £104,240

• Further development of the leadership culture – staff and learners
• More skilled workforce
• Improved outcomes for learners
## RAISING ATTAINMENT, IMPROVING LEARNING: STEM

### PROPOSED INTERVENTION

#### Proposals to address identified issues

- Plan programme of learning for *entitlement*
- Link Literacy and Numeracy outcomes to core STEM subjects
- Link curricular areas to enhance transferable skills
- Embed Cognitive Guided and reciprocal Learning approaches to STEM delivery with a view to raising attainment in Literacy & Numeracy
- Plan series of STEM enhancement experiences for pupils across all stages in an equitable way
- Investigate the possibility of developing an Outdoor Learning strategy for STEM education
- Build staff capacity and confidence by planning training and other development opportunities
- Produce an action plan for each STEM Hub, with a focus on developing pedagogies that support the development of literacy and numeracy within a specialised, stimulating, collaborative learning environment
- Embed WDC moderation model to build capacity with collaborative planning, delivery, assessment and review
- Engage with businesses, STEM Ambassadors and other STEM providers (Glasgow Science Centre, EDT, Behind the Noise, SSERC, etc) to ensure a focus on Developing the Young Workforce through STEM
- Make use of WD's IDL strategy as a partial method of STEM delivery
- Engage parents more in children's learning
- Make more effective use of Learning Technologies in the delivery of STEM related subjects
- Ensure more effective use of differentiation is used in classroom resources
- Review Senior Phase curriculum to ensure effective utilisation of staff skills and experience, effective use of resources and a progressive suite of STEM related courses leading to positive destinations

#### Rationale and evidence behind proposals

- Inequity in pupil attainment
- Attainment "dip" in Numeracy
- National requirement for higher levels of interest in STEM related careers
- Requirement to bring Digital Technologies to the heart of learning
- Requirement to "build the brand" of STEM related subjects and careers with pupils, parents and staff
- GL Data
- SSLN
- Building Society Report (Education Scotland, 2015)
- Developing the Young Workforce (Education Scotland, 2015)

### Sets out aim and expected impact of plan
- Build staff capacity
- Build staff confidence
- Improve pupil engagement
- Improve pupil attainment in Numeracy & Literacy
- Close attainment gap
- Build STEM related skills in pupils and staff
- Enhance awareness and interest in STEM
- More confident staff in STEM delivery
- Higher level of pupil skills in STEM related subjects
- Deeper pupil understanding and engagement in STEM related subjects
- Improved attainment for all
- Higher level of STEM subject uptake in secondary school
- Higher level of school leavers reaching positive STEM destinations
- Attainment gap reduced

### Initial assessment of funding requirement
- Appoint ESO (1FT - £50,840)
- Appoint 3 x PT posts (raising attainment (0.4 management time) £53,400)
- Local authority Raising Attainment Co-ordinator (QIO Level £65,720)

### DATA & ANALYSIS
#### Identification of target populations
- P1, P3, P5, P7, S1 and S2 pupils
- Parents of P1, P3, P5, P7, S1 and S2 pupils
- Primary school teaching staff
- Local business partners

#### Rationale behind proposals
- Strategy for addressing attainment “dip” in Numeracy from P3 onwards
- Using STEM as a vehicle for greater engagement and attainment in Literacy and Numeracy
- Increasing the interest and engagement of young people in STEM related subjects, increasing opportunities for future employment within that area
- Increasing the use of digital technology - putting it "at the heart of learning"

## IMPACT MEASUREMENT PLAN

Sets out proposals for measuring impact

- Review of trends and individual aspects of GL data (pre and post intervention)
- Review of trends and individual aspects of SSLN data (pre and post intervention)
- Review of secondary STEM subject uptake (pre and post intervention)
- Review of summative and formative assessment data generated throughout the intervention
- Review of the number of school leavers entering STEM related positive destinations (pre and post intervention)
- Review of attitudinal survey of parents (pre and post intervention)
- Review of attitudinal survey of pupils (pre and post intervention)
- Review of attitudinal survey of staff (pre and post intervention)
- Review of attitudinal survey of partner businesses (pre and post intervention)

### Data, both existing and new, which will be required

- GL Data
- SSLN Data
- Assessment data of remaining STEM subjects
- Analysis of STEM subject uptake in Secondary Sector
- Review of number and quality of business partnerships with schools
- Review of the number of school leavers entering STEM related positive destinations
- Attitudinal survey of parents
- Attitudinal survey of pupils
- Attitudinal survey of staff
- Attitudinal survey of partner businesses
- Attitudinal survey of partner STEM providers (SSERC, Glasgow Science Centre, EDT, etc)

### Plans for how data will be collected and reported

- GL and SSLN data collected centrally but interpreted by Head Teachers and focus group staff
- Other assessment data will be collected by class teachers and collated by central staff and focus group staff
- Number and quality of business partnerships collected centrally with the assistance of Head Teachers and focus group staff
- Attitudinal surveys will be collected centrally using an online resource
- Progress on all measures will be completed regularly by focus group staff and by the central STEM coordinator
**LOCAL MANAGE & GOVERNANCE**

**Proposals for how work will be managed locally**

- Appoint a Local Authority STEM Coordinator
- Appoint Local Learning Community STEM Coordinators
- Provide termly progress reports

**Plans for local governance and reporting i.e: through existing or new mechanisms**

- Service Managers Education Development, Performance and Improvement to monitor
- Establish STEM Steering Group - reporting to Raising Attainment Steering Group
- Embed effective Quality Assurance procedures and processes
- Report to Impact Review Group
Additional information requested by Scottish Government

<table>
<thead>
<tr>
<th>Project Theme</th>
<th>STEM</th>
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</table>

Range of data provided and analysis undertaken. Further explanation/contextual information on the rationale behind the approach to identification of the schools and communities to be involved. Where this is universal across all primary schools how this fits with targeted approaches to interventions in deprived communities

<table>
<thead>
<tr>
<th>The range of data analysed in this area includes data from the primary and secondary sectors. Both sectors were analysed due to the “dip” in pupil performance in Mathematics from mid-primary school onwards.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our analysis of local authority attainment data highlights poor performance in Mathematics (GL and SSLN) – particularly in relation to problem solving. These problem solving skills are necessary for success in Scientific, Technological and Engineering education.</td>
</tr>
<tr>
<td>In the Senior Phase, Insight data shows that, in the Sciences, pupils in West Dunbartonshire have performed below national average in the majority of data sets available. In some cases, the Local Authority has performed with a “triple starred negative”, showing performance significantly below the national average.</td>
</tr>
<tr>
<td>Inequity is evident in the use of STEM ambassadors in our authority. Our local data shows children in schools with lower SiMd are disadvantaged through less parents being in employment and able to volunteer as a STEM ambassadors. Schools in higher SiMd deciles have a higher number of partnerships with businesses through more parents being in employment and who volunteer as STEM ambassadors in their child’s school or can forge partnerships between their employers and their child’s school. We need to provide equity of experience of STEM subjects to support our most disadvantaged young people to aspire to have the skillsets for future careers.</td>
</tr>
<tr>
<td>The development of STEM hubs in three primary schools (2 in lowest SiMD deciles) – will enable a personalised STEM curriculum to be developed in open-plan learning environments, allowing collaborative planning, delivery and assessment of experiences. It is worth noting that the STEM hubs will deliver on all aspects of the STEM related subjects, including Health &amp; Food Technology. This important area of the STEM curriculum will also be used to support learning in Health &amp; Wellbeing – particularly in relation to Physical Health through Nutrition. Indeed, all of our primary schools are already embarking on the Science on the Menu programme, linking Science with important aspects of our HWB agenda.</td>
</tr>
<tr>
<td>Our experience through our School Improvement Partnership Programme has shown that the collaborative delivery of lessons builds capacity in staff. In addition, it also raises pupil engagement and attainment through a higher quality of pedagogy and builds skills in pupil problem solving through a Cognitive Guided Instruction approach. This technique is transferrable to the other aspects of STEM education.</td>
</tr>
<tr>
<td>As a result of our research, we have found that a significant area of pupil challenge in problem solving is a lack of comprehension of the original problem. In effect, this is more of a literacy issue than of a numeracy one. We are currently researching – through a small scale pilot project - an amalgam of the Cognitive</td>
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</table>
Guided Instruction and Reciprocal Teaching strategies with a view to raising attainment in numeracy. By using these strategies, it is envisaged that pupil comprehension skills will also increase – as will their ability to apply problem solving strategies.

The creation of STEM hubs will improve standards in the teaching of STEM subjects. It will expose our most disadvantaged young people to high quality and personalised learning of the skills for life, learning and work. This model of good practice will be used to support improvement in all establishments. It will build the capacity of our primary schools, thus allowing them to meet the needs of all pupils. The hub schools will be used as West Dunbartonshire’s centres of learning in STEM education. They will be used to showcase resources and pedagogical techniques identified by our local research as being effective in raising attainment.

In respect of the intervention proposed as part of the STEM strand – clarity on the focus on primary would be helpful eg: not sure review of senior phase curriculum proposals is in line with the primary focus of this fund

On reflection, the bullet point regarding the review of the senior phase curriculum has now been removed.

The focus of our intervention is very much in the primary sector. However, by providing an increased focus in STEM related subjects our ultimate aim is to develop pupil interest, engagement and expertise in this field and ultimately to improve the opportunities for long term prosperity for our young people, reducing levels of deprivation in the Local Authority area.

A pilot of using senior phase pupils to support the delivery of science education has proved successful in one of our Learning Communities. The senior pupils volunteer to deliver and support lessons in primary school. This has developed the skills of the young people, but has also enhanced the delivery of the science curriculum in the primary sector, assisting the learning of primary school pupils and developing the capacity of teachers. It is aimed to roll out this programme of Science Ambassadors to other Learning Communities and for other STEM subjects.

By ensuring that an appropriate senior phase curriculum exists, we will ensure progression, increased pupil uptake of the subjects, increased school leaving opportunities for our pupils and increased engagement in the Ambassador programme. This will support increasing the attainment of our Primary aged pupils.

**Funding requirement in years 1-3**

**Year 1**
- Appoint ESO (1FT - £50,840)
- Appoint 3x PT posts (raising attainment (0.4 management time) £53,400)
- **Total - £104,240**

**Year 2**
- Appoint ESO (1FT - £50,840)
- Appoint 3x PT posts (raising attainment (0.4 management time) £53,400)
- **Total - £104,240**

**Year 3**
• Appoint ESO (1FT - £50,840)
• Appoint 2x PT posts (raising attainment (0.4 management time) £35,600)
• Total - £86,440

Year 4
• Appoint ESO (1FT - £50,840)
• Appoint 1x PT posts (raising attainment (0.4 management time) £17,800)
• Total - £68,640

Overarching aim and expected impact (and how you will measure it) for the attainment challenge in West Dunbartonshire.

• Improve pupil attainment - measured through GL data, SSLN data and Insight data;
• Reduce the attainment gap - measured through GL data, SSLN data and Insight data;
• Increase numbers of learners entering STEM related career pathways - measured through School Leavers Destination Reports;
• Improved engagement in class - measured through attitudinal surveys (Myself As A Learner);
• Improved attendance - measured through school and Local Authority attendance statistics;
• Reduced exclusions - measured through school and Local Authority data
• Decreased numbers of children and young people who require targeted support by specialist staff, outside agencies, etc - measured through school and Local Authority data on pupils on Staged Intervention;
• Increase pupil motivation, self-esteem and resilience - measured through attitudinal surveys (Myself As A Learner);
• Improve independent learning and problem solving skills in pupils - measured through attitudinal surveys (Myself As A Learner), parent and teacher surveys and attainment data;
## Financial Information - Overview

<table>
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<th>Amount</th>
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<td>Transitions 1</td>
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<td>Transitions 2</td>
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<td>SIPP</td>
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<td>Other</td>
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<td>Other</td>
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<td>STEM</td>
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<td>Other</td>
<td>107,830</td>
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<td><strong>Year 4 Total</strong></td>
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