

## SCHEME OF WORK

# Family Learning



<b>Name of Programme:</b> We Can Do Maths		<b>Level:</b> E3/L1	<b>Course Code:</b>
<b>Venue:</b>	<b>Total learning hours:</b>  10 + 2	<b>Number of sessions:</b>  5 + 1	<b>Learning Aim Code:</b>
<b>Tutor:</b>	<b>Programme area:</b>  14		<b>Start Date:</b>
<b>Course Aims:</b>			
<ul style="list-style-type: none"> <li>• To gain confidence in everyday maths whilst using LEGO</li> </ul>			
<b>Learning objectives (Main skills and knowledge to be learned):</b>			
<b>All learners will:</b>			
<ul style="list-style-type: none"> <li>• Use Lego to complete maths challenges at entry 3 and level 1</li> <li>• Use social media for collaborative learning</li> <li>• Consider Internet Safety and how to keep our families safe online</li> </ul>			
<b>Some learners will also:</b>			
<ul style="list-style-type: none"> <li>• Extend maths learning to everyday situations</li> </ul>			
<b>Programme delivery methods (Please tick one or more):</b>			
Whole group x	Mixed whole group/Individual work x	Small group work x	Workshop Method x

<b>Opportunities for:</b>	
Equality and Diversity:	sharing experiences to solve a given task with specific regard to maths to support family learning
Use of Technology:	using laptops and smart technology inc iPads and smartphones to access learning
English:	reading and following instructions
Maths:	logical thinking and problem solving techniques to complete a task

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<p><b>Initial assessment session</b></p>	<ul style="list-style-type: none"> <li>• In conjunction with project partner learners/clients are invited to attend an informal session to undertake a BKSB initial assessment. Learners/clients at L1 and E3 to be invited to attend the course.</li> <li>• Learners/clients at other levels to be signposted to courses appropriate to their needs</li> </ul> <p>Complete enrolment paperwork.</p> <p><b>Initial Assessment</b> Learners complete BKSB Maths initial assessment.</p> <p><a href="http://bit.ly/ourbksb">bit.ly/ourbksb</a></p> <p>Using the above link learners log in to the Red Tape BKSB website. Each learner will need their prearranged login in the format below</p> <p><b>Username:</b> your first name and year you were born(no spaces) <b>Password:</b> password or one you changed it to when you completed the Initial Assessment</p> <p>Certificates to indicate the learner/client maths level to be distributed on completion of the BKSB IA</p> <p><b>NB:</b> Drinks and cakes to be available during the session.</p>	<p><b>All will:</b></p> <ul style="list-style-type: none"> <li>• Complete the BKSB Numeracy Initial assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Workshop enrolments</li> <li>• iPads/Laptops</li> <li>• MiFi Hub (if needed)</li> <li>• username BKSB cards</li> <li>• BKSB handouts</li> <li>• BKSB IA Certificates</li> <li>• Cake/drinks</li> <li>• Pens</li> <li>• Pencils</li> <li>• Notepads</li> <li>• A variety of FL programmes</li> <li>• Progression information appropriate to area of delivery</li> </ul>	
<p><b>Week 1 Introduction and Enrolment</b></p>	<ul style="list-style-type: none"> <li>• Refreshments</li> <li>• Settling children into the crèche – if required</li> <li>• Housekeeping</li> <li>• Ice breaker</li> </ul> <p>• Enrolment paperwork inc <b>learner register</b></p> <p>• Learners complete a BKSB Maths diagnostic at their level as determined by the BKSB IA completed in the previous session. The results of the diagnostic will be used to tailor</p>	<p><b>All will:</b></p> <ul style="list-style-type: none"> <li>• Be aware of what the course entails</li> <li>• Have enrolled if the course is suitable</li> <li>• Have got to know others</li> <li>• Be prepared for the course</li> </ul>	<ul style="list-style-type: none"> <li>• Course programme</li> <li>• Enrolment paperwork</li> <li>• Pen/pencil</li> <li>• Notebook</li> <li>• School Bag</li> <li>• Flip chart paper and pens</li> <li>• iPads/Laptops for BKSB</li> <li>• MiFi Hub (if</li> </ul>	<p><b>SLd/L1.1</b> Follow and contribute to discussions on a range of straightforward topics</p>

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	<p>the projects to suit the learner's mathematical needs.</p> <ul style="list-style-type: none"> <li>• Introduction to Padlet (or alternative social bulletin board for learner/tutor engagement) have ago at posting comments to the padlet page e.g. – What have I learned today? What would I like to learn on the course?</li> <li>• Complete <b>ILP's</b> and identify learning for this session</li> <li>• Invite the learners to next session</li> </ul>		<p>needed)</p> <ul style="list-style-type: none"> <li>• username BKSB cards</li> <li>• BKSB handouts</li> <li>• invitations/details of course dates and times</li> <li>• Lego (demonstration box)</li> <li>• ILP</li> </ul>	
<p><b><u>Week 2</u></b> <b>Grand Design</b></p>	<p>Welcome, introduction to session &amp; mark register. Remind learners to complete their learner register to reflect the activities they have done at home.</p> <p><b>Starter Activity</b> – using the boxes of Lego build a house or model of their choice. Explain that they should use as many bricks as they can and also use a variety of different colours. Allow 15 minutes for the activity.</p> <p><b>QR codes</b> Introduce the learners to QR codes. Explain what they are and how we will use them. Take the opportunity to cover the 'Keep Safe' aspect of using and scanning unknown codes. Use QR scanner to use QR code on 'Grand Design' card to access Padlet page.</p> <p><b>Models</b> Take photos using iPad of the models that the learners have built. Upload the photos to the Padlet page add <b>name</b> and <b>comment</b> to accompany the photo.</p> <p><b>Grand Design Project</b> Introduce the Learners to the idea of project based learning. Give each learner a task within the Grand design project that relates to the 'area of calculation need' as determined by their BKSB maths diagnostic. Make sure that the learner understands the term 'number sentence' also revise methods</p>	<p><b>All will:</b></p> <ul style="list-style-type: none"> <li>• Build a model using Lego</li> <li>• Take a photo and share on padlet</li> <li>• Counted and sorted our Lego</li> </ul> <p><b>Some may also:</b></p> <ul style="list-style-type: none"> <li>• Created a variety of number sentences</li> <li>• Solved some simple equations</li> </ul> <p><b><u>Additional maths opportunities in project</u></b> Data handling</p>	<ul style="list-style-type: none"> <li>• Register</li> <li>• Handouts – Grand Design card</li> <li>• Lego (1 box per learner)</li> <li>• iPads (at least 1 between 2)</li> <li>• MiFi Hub (if needed)</li> <li>• ILP</li> </ul>	<p><u>N1/E3.1</u> <u>N1/E3.2</u> <u>N1/E3.3</u> <u>N1/E3.4</u> <u>N1/E3.5</u> <u>N1/E3.6</u> <u>N2/E3.5</u> <u>HD1/E3.2</u> <u>HD1/E3.3</u> <u>HD1/E3.4</u></p> <p><u>N1/L1.1</u> <u>N1/L1.3</u> <u>N1/L1.4</u> <u>N1/L1.5</u> <u>N1/L1.6</u> <u>N2/L1.5</u> <u>N2/L1.6</u></p> <p>- See notes for details</p>

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	<p>of calculation and where possible compare this to the modern methods used in primary learning.</p> <p>Examples of learner tasks include:-</p> <ol style="list-style-type: none"> <li>1. List the Lego pieces by colour or type</li> <li>2. From the collected data create as many number sentences as possible.</li> <li>3. Solve the number sentence equations.</li> <li>4. How many Lego pieces have they used altogether?</li> </ol> <p>Complete ILP's and learning record for this session</p> <p><b>NB. Remind the learners to bring their box of Lego each week. It will be theirs to keep at the end of the course.</b></p> <p><b>Extension activity:</b> Using the collected data draw a graph to represent the number of pieces by colour/type of brick.</p> <p><b>Home activity:</b></p> <ul style="list-style-type: none"> <li>• Encourage the learners to continue with this activity at home with their children and post pictures to padlet</li> <li>• Continue with BKS learning</li> </ul>			
<p><b><u>Week 3</u></b> <b>Build it Up</b></p>	<p>Welcome, introduction to session &amp; mark register. Remind learners to complete their learner register to reflect the activities they have done at home.</p> <p><b>Starter Activity</b> – using the boxes of Lego build a Tower. Again they should use as many bricks as they can and also use a variety of different colours. Allow 15 minutes for the activity.</p> <p><b>How did you get on at home...</b> Give the learners the opportunity to share how they got on at home with their learning. Make sure that there is no pressure on the learners who weren't able to carry out any home activities while at the same time encouraging those who did</p>	<p><b>All will:</b></p> <ul style="list-style-type: none"> <li>• Build a model</li> <li>• Measure the dimensions of the model</li> </ul> <p><b>Some may also:</b></p> <ul style="list-style-type: none"> <li>• Practise estimation</li> </ul> <p><b><u>Additional maths opportunities in project</u></b></p>	<ul style="list-style-type: none"> <li>• Register</li> <li>• Handouts – Build it Up card</li> <li>• Handouts – Bridge the gap card</li> <li>• Tutor Lego</li> <li>• iPads (at least 1 between 2)</li> <li>• MiFi Hub (if needed)</li> <li>• ILP</li> </ul>	<p><u>N1/E3.8</u> <u>N1/E3.9</u> <u>N1/E3.10</u> <u>N2/E3.2</u> <u>N2/E3.4</u> <u>MSS1/E3.5</u> <u>MSS1/E3.6</u> <u>MSS1/E3.7</u> <u>MSS2/E3.2</u></p> <p><u>N1/L1.9</u> <u>N1/L1.10</u> <u>N2/L1.2</u> <u>N2/L1.3</u></p>

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	<p>to share their successes/challenges.</p> <p><b>Keep Safe</b> Explain that we will be using social media again in our learning and introduce the topic of Cyberbullying. Facilitate a discussion to bring out what the learners understand by Cyberbullying and how this differs from the general concept of bullying. Have the learners any experience of this? Finish by showing a video on this topic.</p> <p><b>Build it up project</b> Using the model from the starter activity complete the 'Build it up project'.  <ol style="list-style-type: none"> <li>1. Access the project page on padlet using the 'Build it up' project card</li> <li>2. Post a photo of their tower to Padlet adding their name and a brief description of their tower.</li> <li>3. View the challenge hand-out on their smart device (iPad, iPhone or tablet) and carry out their choice of task as directed by the tutor. (<b>Note to Tutor:</b> be directed by the result of the BKSB diagnostic. Example tasks include in original project sheet).</li> </ol> </p> <p><b>Next week's session</b> Explain to the group that next week's session will be held without the Tutor. The Learning Champion will be there to facilitate the activity, but they may wish to carry this out at home instead. <b>NB.</b> Encourage them to attend as they may benefit from group interaction. Handout the activity card to those who will carry out their task at home.</p> <p>Complete ILP's and learning record for this session</p> <p><b>Extension activity:</b> As a result of 1-2-1 discussion with learner tailor extension activity to suit their learning requirements.</p> <p><b>Home activity:</b>  <ul style="list-style-type: none"> <li>• Encourage the learners to continue with this at home.</li> </ul> </p>	<p>Data handling Simple fractions and percentages Averages</p>		<p><u>N2/L1.6</u> <u>N2/L1.8</u> <u>N2/L1.10</u> <u>N2/L1.11</u> <u>N2/L1.12</u></p> <p><u>MSS1/L1.4</u> <u>MSS1/L1.8</u> <u>MSS1/L1.9</u> <u>MSS1/L1.10</u></p> <p>- See notes for details</p>

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<p><b>Week 4</b> <b>Distance Learning – Bridge the Gap</b></p>	<p>Welcome, introduction to session &amp; mark register. Remind learners to complete their learner register to reflect the activities they have done at home.</p> <p><b>Bridge the Gap</b> The Learning Champion introduces the ‘Bridge the Gap’ project as appropriate to each learner...</p> <ol style="list-style-type: none"> <li>Learners access the project page on padlet using the ‘Bridge the Gap’ project card</li> <li>Post a photo of their bridge to Padlet adding their name and a brief description of their bridge with measurements.</li> <li>View the challenge hand-out on their smart device (iPad, iPhone or tablet) and carry out their choice of task as directed by the tutor. <b>(Note to Tutor:</b> Make that appropriate tasks are available for each learner as directed by the result of the BKSB diagnostic. Example tasks include in original project sheet).</li> </ol> <p>Complete ILP’s and learning record for this session</p> <p><b>Extension activity:</b> As a result of 1-2-1 discussion with learner tailor extension activity to suit their learning requirements.</p> <p><b>Home activity:</b></p> <ul style="list-style-type: none"> <li>Encourage the learners to continue with this at home.</li> </ul>	<p><b>All will:</b></p> <ul style="list-style-type: none"> <li>Build a model</li> <li>Use problem solving to complete a task</li> <li>Read a table to cost out a project</li> </ul> <p><b>Some may also:</b></p> <ul style="list-style-type: none"> <li>Complete a task within a set budget</li> </ul> <p><b>Additional maths opportunities in project</b> Data handling decimals</p>	<ul style="list-style-type: none"> <li>Register</li> <li>Handouts – Bridge the Gap card</li> <li>Tutor Lego</li> <li>Trading Lego</li> <li>iPads (at least 1 between 2)</li> <li>MiFi Hub (if needed)</li> <li>ILP</li> </ul>	<p><a href="#">MSS1/E3.1</a> <a href="#">MSS1/E3.2</a> <a href="#">HD1/E3.1</a></p> <p><a href="#">N1/L1.11</a> <a href="#">MSS1/L1.1</a> <a href="#">MSS1/L1.5</a> <a href="#">MSS1/L1.6</a> <a href="#">MSS1/L1.7</a> <a href="#">HD1/L1.1</a> <a href="#">HD1/L1.2</a> <a href="#">HD1/L1.3</a> <a href="#">HD1/L1.4</a></p> <p>- See notes for details</p>
<p><b>Week 5</b> <b>1-2-1 Tutorial Bridge the Gap cont...</b></p>	<p>Welcome, introduction to session &amp; mark register. Remind learners to complete their learner register to reflect the activities they have done at home.</p> <p><b>How did you get on at home...</b> Give the learners the opportunity to share how they got on at home with their learning. Make sure that there is no pressure on the learners who weren’t able to carry out any home activities while at the same time encouraging those who did to share their successes/challenges.</p>	<p><b>All will:</b></p> <ul style="list-style-type: none"> <li>Have an opportunity to speak 1-2-1 with the tutor</li> <li>Experience learning within an online educational game</li> </ul> <p><b>Some may also:</b></p> <ul style="list-style-type: none"> <li>Carry out additional extension activities relating to our projects</li> </ul>	<ul style="list-style-type: none"> <li>Register</li> <li>Tutor Lego</li> <li>Extension activities for projects – learner specific</li> <li>iPads (1 per learner)</li> <li>MiFi Hub (if needed)</li> <li>ILP</li> </ul>	<p>As above</p>

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	<p><b>Sumdog</b> Introduce to learners to the <b>Sumdog</b> app on the iPad (also available for Android tablets) – explain that it is a series of games that make learning fun that is matched to the National Curriculum and they can use it to learn too (but also with their children). It is also FREE. Hand out iPads and learner logins (enrolled prior to session).</p> <p><b>Keep Safe</b> Whilst using <b>sumdog</b> the learners are pitched against others who they don't know – this may be a concept new to them, but is one that their children may be familiar with. Show the video <b>Jigsaw</b> to highlight this– Do they know really know who are they talking to? Facilitate further discussion as required.</p> <p><b>1-2-1s</b> Set the learners off using <b>Sumdog</b>. Also have a variety of extension worksheets connected to the projects that we have been working on in the previous weeks.</p> <p>Spend time with each learner discussing their concerns and going over any difficulties they may be experiencing with their maths.</p> <p>Complete ILP's and learning record for this session</p> <p><b>Extension activity:</b> As a result of 1-2-1 discussion with learner tailor extension activity to suit their learning requirements.</p> <p><b>Home activity:</b></p> <ul style="list-style-type: none"> <li>•Encourage the learners to continue their learning at home.</li> </ul>			
<p><b>Week 6 Evaluation &amp; Celebration</b></p>	<p>Welcome, introduction to session &amp; mark register. Remind learners to complete their learner register to reflect the activities they have done at home.</p> <p><b>Padlet</b> Take a look at padlet and review our photos and the learning that has taken place during the last 6 weeks. Discuss /share</p>	<p><b>All will:</b></p> <ul style="list-style-type: none"> <li>•Be aware of adult learning progression opportunities appropriate to their needs</li> </ul> <p><b>Some may also:</b></p> <ul style="list-style-type: none"> <li>•Revisit their BKSB</li> </ul>	<ul style="list-style-type: none"> <li>•Register</li> <li>•Tutor Lego</li> <li>•Extension activities for projects – learner specific</li> <li>•iPads (1 per learner)</li> </ul>	

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	<p>the successes of the group/individual. Also give an opportunity to share any difficulties and bring out of the associated discussion that often it is through these difficulties that a lot of our learning takes place.</p> <p><b>Keep Safe</b> Revisit the importance of keeping safe whilst using the internet and in particular all forms of Social Media. Answer any questions that arise from this.</p> <p><b>BKSB Diagnostic</b> Give the learners the opportunity to revisit the BKSB diagnostic that they have done earlier in the course. How have they done? Compare the results of their <b>Topics I am good at, Topics I need to take care in and Topics I need to practise</b> – has there been a shift from week 1?</p> <p><b>Look to the future</b> – signpost learners to further maths opportunities so they can progress further. Emphasise that this course has been the start of new opportunities</p> <p>Optional: Group celebration – the learners may organise a celebration if they wish and if the venue is in agreement</p> <p>Complete <b>ILP, end of course paperwork</b></p> <ul style="list-style-type: none"> <li>• Reflect on session</li> <li>• Review learning goals</li> <li>• Reflect on the course</li> <li>• Completion learner questionnaires</li> </ul> <p><b>Extension activity:</b> Create a learner action plan</p>	<p>Diagnostic assessment and compare results</p>	<ul style="list-style-type: none"> <li>• MiFi Hub (if needed)</li> <li>• ILP</li> <li>• End of course paperwork</li> </ul>	



<p>•Reference Materials:</p>	<p>Adult Literacy &amp; Numeracy Core Curriculum  CEOP: Child Exploitation &amp; Online Protection Centre – internet safety <a href="http://www.ceop.police.uk">www.ceop.police.uk</a>  Thinkuknow: useful internet safety information for all ages - <a href="http://www.thinkuknow.co.uk">www.thinkuknow.co.uk</a>  Padlet: described as an online sheet of paper to share information from any device - <a href="http://padlet.com">padlet.com</a></p>
<p>•Notes:</p>	<p><b>Potential areas of the Adult Numeracy Core Curriculum covered within this program are:</b></p> <p><b>Entry 3</b>  <u>N1/E3.1</u> Count up to 1000 in multiples of 10 and 100  <u>N1/E3.1</u> Read, write, order and compare numbers up to 1000  <u>N1/E3.2</u> Add and subtract three-digit whole numbers  <u>N1/E3.3</u> Recall addition and subtraction facts to 20  <u>N1/E3.4</u> Multiply two-digit whole numbers by single-digit whole numbers  <u>N1/E3.5</u> Tables (2, 3, 4, 5,10)  <u>N1/E3.6</u> Divide two digits by one digit and interpret remainders  <u>N1/E3.8</u> Use estimation in solving problems  <u>N1/E3.9</u> Interpret + , - , × , ÷ , = in practical situations  <u>N1/E3.9</u> Use the standard order of operations in practical situations to solve multi-step calculations, e.g. <i>cost of 2 teas and 3 coffees</i>  <u>N1/E3.10</u> Solve two-step word problems  <u>N2/E3.2</u> Recognise and use common percentages (e.g. 25%, 50%); and recognise and use common fraction/decimal/ percentage equivalences (e.g. <i>for 1/2 and 1/4</i>)  <u>N2/E3.2</u> Recognise and use equivalent fractions, e.g. <math>5/10 = 1/2</math>  <u>N2/E3.4</u> Solve problems involving whole numbers and decimals  <u>N2/E3.5</u> Add and subtract decimals up to two places in a practical context, e.g. money  <u>N2/E3.6</u> Find 1/2, 1/3, 1/4, 1/5 and 1/10 of appropriate multiples, e.g. <i>1/2 of 32, 1/3 of 21</i>  <u>MSS1/E3.1</u> Add and subtract sums of money using decimal notation  <u>MSS1/E3.2</u> Round sums of money to nearest £ and 10p  <u>MSS1/E3.5, MSS1/E3.6 and MSS1/E3.7</u> Read, estimate, measure and compare length, weight and capacity using common and standard units  <u>MSS2/E3.2</u> Identify perimeter of simple shapes (rectangle, triangle)  <u>HD1/E3.1</u> Extract information from lists, tables, diagrams, bar and tally charts  <u>HD1/E3.2</u> Make numerical comparisons from bar charts and pictograms  <u>HD1/E3.3</u> Make observations and record numerical information using a tally  <u>HD1/E3.4</u> Organise and represent information in different ways so it makes sense to others</p> <p><b>Level 1</b>  <u>N1/L1.1</u> Read, write, order and compare any size positive numbers  <u>N1/L1.3</u> Add and subtract using efficient written and mental methods  <u>N1/L1.3</u> Divide using efficient written and mental methods representing remainders as whole numbers, fractions or decimals as appropriate for the situation  <u>N1/L1.3</u> Multiply using efficient written and mental methods</p>

N1/L1.4 and N2/L1.6 Divide whole numbers and decimals by 10, 100 and 1000  
N1/L1.4 and N2/L1.6 Multiply whole numbers and decimals by 10, 100 and 1000  
N1/L1.5 Tables to  $10 \times 10$   
N1/L1.6 Identify multiples and square numbers  
N1/L1.9 Use estimation in finding solutions to problems  
N1/L1.10 Solve problems involving positive numbers, using the standard order of operations to solve multi-step calculations  
N1/L1.11 Translate simple word problems into symbols (+, -,  $\times$ ,  $\div$ ) and numbers  
N2/L1.2 Find parts of whole number quantities or measurements, e.g.  $\frac{2}{3}$  or  $\frac{3}{4}$   
N2/L1.3 Recognise common fraction, percentage and decimal equivalents and use these to find part or whole-number quantities  
N2/L1.5 Add and subtract decimals up to two places  
N2/L1.5 Multiply decimals up to two decimal places  
N2/L1.8 Understand simple percentage increase and decrease  
N2/L1.10 Find simple percentage increase and decrease  
N2/L1.11 Solve problems involving whole numbers, fractions, decimals and percentages  
N2/L1.12 Express one number as a fraction of another number, e.g. *What is 10 as a fraction of 30?*  
MSS1/L1.1 Add, subtract, multiply, divide sums of money and record  
MSS1/L1.4 and MSS1/L1.5 Read, estimate, measure and compare distance, length, weight, capacity and temperature  
MSS1/L1.6 Add and subtract common units of measure within the same system  
MSS1/L1.7 Convert units of measure in the same system  
MSS1/L1.8 Work out perimeter of simple shapes (rectangle, equilateral triangle)  
MSS1/L1.9 Work out area of rectangles  
MSS1/L1.10 Work out volume, e.g. cuboids  
HD1/L1.1 Extract and interpret information, e.g. tables, diagrams, charts, simple line graphs  
HD1/L1.2 Collect, organise and represent discrete data, e.g. tables, diagrams, charts, line graphs  
HD1/L1.3 Find the mean for a set of data  
HD1/L1.4 Find the range for a set of data