Overview year 1- maths

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| **Outcomes/Coverage** | **Steps to achieve ARE (Mastery)****With support being able to meet the objectives outlines in the National Curriculum.**  | **Steps to achieve Mastery -GD****Obtaining a greater level of understanding and being able to apply learning in different contexts**  |
| **To have a good knowledge of number and place value** **Week 1/2** | * **count to and across 100,forwards and backwards, beginning with 0 or 1, or from any given number**
* **count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens**
* **given a number, identify one more and one less**
* **identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least**
* **read and write numbers from 1 to 20 in numerals and words.**
 | * **To reason about numbers and identify and explain patterns in relation to numbers, e.g missing number, sequences/patterns.**
* **Solve and explain problems and answer questions by counting in twos, fives and tens, within different context.**
* **Solve and explain number problems by identifying one more and one less by checking, proving or disproving answers. E.g. \_6\_, why can’t my answer be 5 and 8?**
* **Justify, explain and prove answers in relation to representing numbers as an amount.**
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| **To be able to add and subtract accurately to solve problems** **Week 3/4** | * **read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs**
* **represent and use number bonds and related subtraction facts within 20**
* **add and subtract one-digit and two-digit numbers to 20, including zero and missing number problems such as 7 = – 9**
 | * **Reasoning about addition and subtraction problems.**
* **Solve, explain and prove answers to different contextualised mathematical problems.**
* **Use number bonds and related subtraction facts to answer, prove and explain other associated facts. e.g. 13+7=20: 20-7=? and what.**
* **Write all addition and subtraction sentences for a given number.**
* **To solve more complex missing number problems through a formulated methods, which can be explained and proven by using inverse operation. (14+?=21; 21-14= 7)**
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| **To understand the operations of multiplication and division and solve related problems.****Week 5/6** | * **solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.**
 | * **Solve multiplication problems by proving or disproving answers. For example if I count in twos will I land on 17.**
* **Understand the relationship between repeated addition and subtraction by solving problems using and explain operations used.**
* **solve more complex problems within different contexts and represent these in different ways e.g. arrays, repeated addition. (25p in a purse I can only use 5p and 10p coins, what coins could I use- link to multiplication.**
* **Begin to formulate and explain formal methods to solving multiplication and division problems and the link between the two operations.**
* **Solve and explain everyday problems e.g. Lollies cost 5p each. A pack of 3 lollies costs 13p. How much money do you save when you buy a pack of 3 lollies instead of 3 single lollies?**
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| **To understand fractions as being part of a whole shape or number and be able to identify and compare these.****Week 7/8** | * **recognise, find and name a half as one of two equal parts of an object, shape or quantity**
* **recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.**
 | * **Can you find what fraction of a shape is shaded and explain reasoning.**
* **Explain, prove and disprove a fraction of a given shaded shape.**
* **Find a fraction of a whole amount e.g. I have 12 sweets Sammy say 7 will be half, true or false. Explain your reasoning.**
* **What is half /quarter of an amount using money.**
* **Formulate methods and jotting to solve, explain and answers problems. E.g. Four children share 2 pizzas equally. Draw a diagram to show how much pizza**

**each child gets. What fraction of the pizzas does each child eat?** |
| **To understand, describe, and use units of measure to solve and record problems relating, length, mass, capacity and time** **Week 9/10** | * **compare, describe and solve practical problems for:**
* **lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]**
* **mass/weight [for example, heavy/light, heavier than, lighter than]**
* **capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]**
* **time [for example, quicker ,slower, earlier, later]**
* **measure and begin to record the following:**
* **lengths and heights**
* **mass/weight**
* **capacity and volume**
* **time (hours, minutes, seconds)**
* **recognise and know the value of different denominations of coins and notes**
* **sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]**
 | * **To solve and explain problems by reading scales.**
* **Solve more complex problems linked to capacity e.g. Dave has a 1 litre and a 2 litre bottle. He pours the water from the small bottle into the large bottle .Mark where the water comes to on the large bottle and explain your reason.**
* **Match the time to the time on the clock and read times from o’clcock, quarter past and half past.**
* **Read the time and make the hand on a clock face correctly.**
* **Solve and explain everyday problems linked to time, days of the week and months. E.g. Sam leaves for school at 8 o’clock. Jay leaves half an hour later than Sam., circle the clock which shows when Jay leaves for school., Explain your reasoning.**
* **Looking at clock faces with the minute hand missing and only the hour hand there can the correct time be worked out (see mastery book for examples)**
* **Solve and give reasoning to everyday problems linked to sequencing events.**
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| **To understand, describe and compare shapes** **Week 10/11** | * **recognise and name common 2-D and 3-D shapes, including:**
* **2-D shapes [for example, rectangles (including squares), circles and triangles]**
* **3-D shapes [for example, cuboids (including cubes), pyramids and spheres].**
 | * **Can describe similarities and differences of shape properties (e.g. different 2d shapes that only have I line of symmetry; what is the same and different about different shapes.**
* **Can solve and explain problems linked to which shapes may be the odd one out. E.g. by comparing and contrasting 2D+3D properties.**
* **Can recognise shapes in different orientations.**
* **Draw out shapes based on properties clues.**
* **Can give reason to answering true or false question. Based on 2D+3D shapes.**
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| **To be able to describe position and direction.** **Week 12/13** | * **Describe position, direction and movement, including whole, half, quarter and three-quarter turns.**
 | * **Identify and find items based on positional clues.**
* **Explain, solve problems and give reasoning to where a might be.**
* **Prove- it and disprove- it questions linked to positional language and direction.**
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