Year 6 Maths Attainment Statements – Examples of Teaching Activities

The following activities provide examples of the types of teaching activities undertaken in school - it is not an exhaustive list and some of these activities would be undertaken with teacher support. A child successful in these activities is demonstrating an excellent understanding of the concept and shows a depth of understanding . Many of these activities can be used at home – please use these as an opportunity to talk together about maths rather than a test of what you child can do or can't.

Maths Aspect: Number and Place Value

- Spot the mistake: -80,-40,10,50 What is wrong with this sequence of numbers?
- True or False? When I count backwards in 50s from 10 I will say -200 True or False? The temperature is -3. It gets 2 degrees warmer. The new temperature is -5?
- Do, then explain - Find out the populations in five countries. Order the populations starting with the largest. Explain how you ordered the countries and their populations.
- Do, then explain - Show the value of the digit 6 in these numbers? 6787555 95467754 Explain how you know.
- Make up an example - Create seven digit numbers where the digit sum is six and the tens of thousands digit is two. Eg 4020000 What is the largest/smallest number?
- Possible answers - Two numbers each with two decimal places round to 23.1 to one decimal place. The total of the numbers is 46.2. What could the numbers be?
- What do you notice? - Give an example of a six digit number which rounds to the same number when rounded to the nearest 10000 and 100000

Maths Aspect: Addition and Subtraction

- True or false? Are these number sentences true or false?6.32 + = 8 = 1.68. Give your reasons.
- Hard and easy questions. Which questions are easy /hard?
  213,323 - 70 =
  512,893 + 37 =
  8193.54 - 5.9 =
  Explain why you think the hard questions are hard?
- Missing symbols - Write the missing signs (+ - x ÷) in this number sentence: 6 _12.3 = 61.9 _11.9
- What else do you know? If you know this: 86.7 + 13.3 = 100 what other facts do you know?
- Convince me- Three four digit numbers total 12435. What could they be? Convince me

Maths Aspect: Measurement

- Top Tips -Put these amounts in order starting with the largest.
  100 cm, 1000000 mm, 1 m. Explain your thinking.
- Undoing - A film lasting 200 minutes finished at 17:45. At what time did it start?
- Other possibilities - (links with geometry, shape and space) A cuboid has a volume between 200 and 250 cm cubed. Each edge is at least 4cm long. List four possibilities for the dimensions of the cuboid.
- Write more statements -Chen, Megan and Sam have parcels. Megan's parcel weighs 1.2kg and Chen's parcel is 1500g and Sam's parcel is half the weight of Megan's parcel. Write down some other statements about the parcels. How much heavier is Megan's parcel than Chen's parcel?
- The answer is …. 24 metres cubed. What is the question?
- What do you notice?
  8 km = 5 miles
  16km =___ miles
  4 km =____ miles Fill in the missing number of miles. Write down some more facts connecting kilometres and miles.

Maths Aspect: Multiplication and Division

- Missing numbers - 2.4 ÷ 0.3 = ___x 1.25 Which number could be written in the box?
- Use a fact - 12 x 1.1 = 13.2 Use this fact to work out 15.4 ÷ 1.1 =, 27.5 ÷ 1.1 =
- Making links - 0.7 x 8 = 5.6 How can you use this fact to solve these calculations? 0.7 x 0.08 =, 0.56 ÷ 8 =
- What goes on the line?
  18 ___4 ÷ 12 = 157
  38___ 5 ÷ 18 = 212.5
  33___ 2 ÷ 8 = 421.5
  38___ x .7 = 178.6
- Can you find? Can you find the smallest number that can be added to or subtracted from 87.6 to make it exactly divisible by 8/7/18?
- Always, sometimes, never?
  Is it always, sometimes or never true that dividing a whole number by a half makes the answer twice as big.
  Is it always, sometimes or never true that when you square an even number, the result is divisible by 4
  Is it always, sometimes or never true that multiples of 7 are 1 more or 1 less than prime numbers.
- Which is correct? Which of these number sentences is correct?
  3 + 6 x 2 =15
  6 x 5 – 7 x 4 = 92
  8 x 20 ÷ 4 x 3 = 37
- Use the inverse - Use the inverse to check if the following calculations are correct:
  2346 x 46 = 332796
  27.74 ÷ 19 = 1.46
- Size of an answer- The product of a single digit number and a number with two decimal places is 21.34.What could the numbers be?

Maths Aspect: Fractions (including Percentages and Decimals)

- What do you notice?- One thousandth of my money is 31p. How much do I have?
- True or false?- 25% of 23km is longer than 0.2 of 20km. Convince me.
- Give an example of a fraction that is greater than 1.1 and less than 1.5. Now another example that no one will think of. Explain how you know.
- Sam put these fractions in order starting with the smallest. Are they in the correct order?
  Thirty three fifths, Twenty three thirds, Forty five sevenths. How do you know?
- True or false?-In all of the numbers below, the digit 6 is worth more than 6 hundredths.
  3.6 3.063 3.006
  6.23 7.761
  3.076
  Is this true or false? Change some numbers so that it is true.
- What needs to be added to 6.543 to give 7? What needs to be added to 3.582 to give 5?
- Circle the two decimals which are closest in value to each other. 0.9 0.09 0.99 0.1 0.01
- Do, then explain- Write the answer of each calculation rounded to the nearest whole number
  75.7 × 59
  7734 ÷ 60
  772.4 × 9.7
  20.34 × (7.9 – 5.4)
- What's the same, what's different? … when you round numbers to one decimal place and two decimal places?
- Odd one out.- Which is the odd one out in each of these collections of 4 fractions-
  ¾ 9/12 26/36 18/24
  4/20 1/5 6/25 6/30 Why?
- What do you notice?
  8/5 of 25 = 40
  5/4 of 16 = 20
  7/6 of 36 = 42 Can you write similar statements?
- Another and another- Write down two fractions which have a difference of 1/2… and another, …and another, …

- Another and another - Write down 2 fractions with a total of 3 4/5…. and another, … and another, …
- Continue the pattern
  1/3 ÷ 2 = 1/6
  1/6 ÷ 2 = 1/12
  1/12 ÷ 2 = 1/24
- Undoing- I multiply a number with three decimal places by a multiple of 10. The answer is approximately 3.21.What was my number and what did I multiply buy?

When I divide a number by 1000 the resulting number has the digit 6 in the units and tenths and the other digits are 3 and 2 in the tens and hundreds columns. What could my number have been?

Maths Aspect: Geometry

- What's the same, what's different? - What is the same and what is different about the nets of a triangular prism and a square based pyramid?
- Visualising- Jess has 24 cubes which she builds to make a cuboid. Write the dimensions of cuboids that she could make. List all the possibilities.
- Other possibilities- If one angle of an isosceles triangle is 36 degrees. What could the triangle look like – draw it. Are there other possibilities . Draw a net for a cuboid that has a volume of 24cm3.
- Always, sometimes, never - Is it always, sometimes or never true that, in a polyhedron, the number of vertices plus the number of faces equals the number of edges.

- Working backwards- Two triangles have the following co-ordinates:

Triangle A: (3, 5) (7, 5) (4, 7)
Triangle B: (3, 1) (7, 1) (4, 3) Describe the translation of triangle A to B.

Maths Aspect: Statistics

- True or false? - (Looking at a pie chart) "More than twice the number of people say their favourite type of T.V. programme is soaps than any other" Is this true or false? Convince me. Make up your own 'true/false' statement about the pie chart.
- Create a questions Make up a set of five numbers with a mean of 2.7
- Missing information The mean score in six test papers in a spelling test of 20 questions is 15.Five of the scores were 13 12 17 18 16 What was the missing score?