



# Digging deeper

These slides have ideas for maths talk, activities and questions to encourage deeper thinking and a greater depth of skill and knowledge in F2 but could be used for other year groups.

# Number and place value

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- Can you tell me how many in a set without recounting?
- How many cubes are in the bag? How do you know? Is it more/fewer than..?
- How many ways can you make a number using different objects?
- Can you count back from a number?
- Can you spot the error?
- Is there more than 1 way to...?
- Can you explain why?

# Number and place value

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- How many different shapes can you make with 5 blocks?
- How many ways can you make 5?
- Dropping pebbles into a bucket - how many sounds did you hear? What would 1 more/ 1 fewer be?
- Use dot plates to make part whole models/sequence numbers/ how many spots altogether
- Rolling dice - What numbers can you get to score more than me/fewer than me? My number is 3. Extend to 2 dice. My number is 9.
- Create a maths story about the number.
- Make different representations of the number.

# Number and place value

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- Estimating - how many do you think there are?
- Spot the mistake in the amounts matched to numerals. Why is it a mistake?
- Use different equipment - part whole model, bead string, number line, objects
- What number goes between 16 and 18. How do you know?
- Describe the number when playing missing number eg I know it is 17 because it comes after 16 and before 18. It is 1 greater than 16 and 1 less than 18.
- What comes before/ after?

# Addition and subtraction

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- What stories can you make using part whole model?
- What number is missing in the part whole model? How can you find out what the missing number is?
- How many cubes do I have in my hand?
- Use cubes in a bag - There were 10 cubes in the bag but I have 4 in my hand now. How many are left? How do you know?
- Use 2 buckets and stones - number bonds to 10. If there are 4 in this bucket then how many will be in this bucket?
- Dice magic - if I add the top and bottom number together on the dice each time I roll it what happens?

# Addition and subtraction

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- Use spots on plates - can you find plates that make a total of 10?
- Counting on - how many do I have? Eg I have 5 and count on 2 - 5-6-7
- Give children the total. What might the question be? Eg The answer is equal to 5 so the question could be “What is 3 apples add 2 apples?”.
- Find all the possible ways of making 5.
- Rephrase questions to the inverse relationship eg First there were 6 sheep in the field. Some escaped. Now we have 2 left. How many escaped?
- Use number lines/bead strings/objects to support counting on and counting back.

# Multiplication and division - odd and even, double and half

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- Half of \_\_\_ is equal to \_\_\_. Double \_\_\_ is equal to \_\_\_.
- If 8 is half. What is my whole? If double my number is 4. What is my number?
- Collect an odd number of cubes. How do you know this amount is odd? Get 1 more cube. What happens?
- Explore quantities that you can halve exactly. If you had 6 objects could you give both teddies the same number? What if it was 5? Is this number odd or even?
- Make equal groups. Explore what numbers you need to start with.

# Multiplication and division

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- Explain equal number eg Put 9 animals in 3 fields. There is an equal number in each field. How many are in each field?
- Count in 2s, 5s, 10s and draw.
- Use the number line/bead string to count in 2s, 5s, 10s.
- Can you share the objects into equal groups? I have 12 objects. Can I share them into 3 equal groups? 4 equal groups? 5 equal groups?
- Create representations of the groups eg sets of circles
- Can you correct my answer. I haven't shared the whole amount equally. What do I need to do?



# Time

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- Use a timer to record how long things take.
- How many can you do in ....?
- What do we do first/next/then/after/finally? Children to use the words.
- Talk about the times within the day -  
now/before/soon/after/next/earlier/later
- Use day/ night/weekend/morning/afternoon
- Use the days of the week - today is Monday. Yesterday was Sunday and tomorrow will be Tuesday. Do the same with months.
- Look at a calendar can you see the pattern of days. How many Tuesdays are there in the month?

# Shape

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- Use positional language in a treasure hunt.
- Sort shapes - What is my rule? Can you explain it to me. Children think of their own rule.
- What do you notice about all of these shapes?
- Why does this shape not belong?
- Can you find an item in this room that could join my shapes?
- Which shape is the odd one out?
- What shapes can you see in buildings?
- Sort using overlapping circles.

# Patterns

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- Investigate patterns that will fit into a set number of shapes.
- Which patterns fit exactly and why? Why didn't that pattern fit? How many more spaces do you need to complete your pattern? Explain.
- Line up pattern pieces in a different order. What could my pattern be now?
- What would come before the first object in my pattern?
- Can you spot my mistake? Can you correct my pattern?

# Measuring

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- Explore a range of containers. How can we find which object holds the most?
- How can we find out which object is the closest/ furthest away?
- Order different objects by size and explain why they are in that order.
- Compare weights of objects. Estimate how many counters/objects are needed to balance/ weigh the same as another object/

# Money

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- Which coin has the highest value?
- Order 3 coins by their value.
- Use coins to count in 2s, 5's, 10's.
- What is 10p equal to?
- Make amounts up to the value of 10p/20p in different ways.
- In role play make amounts, add amounts, give change. Children to draw what they do and explain their calculations.

# Sorting

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- Guess my rule - begin with a large pile of objects such as buttons and the adult starts to sort.
- Odd one out - make a set of objects. Which one doesn't belong? Why? Make sure the set has several possibilities.
- What is the same/different?
- How have I sorted them?
- Can you think of different ways to sort?
- Play snap - how do you know the cards are the same/different?
- Sort playing cards - how have you sorted them?
- Sort numbers, pictures, objects.