

Talking Points

Introduction

- Tasks are not arranged in any specific order and can be completed at any time to suit, say, curriculum coverage within your class.
- Provide a context for tasks where possible. Some tasks are likely to be more successful when given a purpose, reason or final outcome. Linking to other areas of the curriculum is particularly effective.
- Prior discussion, or in some cases class/group preparation activities, will maximise the potential of the task and enable each child to work independently and to the best of his/her ability.
- Follow-up work will enable the teacher to assess understanding, clarify misconceptions and challenge each child's ability to explain and apply what they have learned. It will also provide children with an opportunity to show-case their learning and ask questions about anything they have not fully understood.
- Checking the children's understanding of all key vocabulary when setting the task will avoid confusion or difficulties when the children are completing the homework independently.
- When introducing the homework it may be appropriate to help children to set out their working page so that they learn how to present their work clearly.
- Providing concrete materials such as coins or counters might support children who would otherwise have difficulty with some tasks.
- Some tasks are more/less challenging than others. It may be necessary to differentiate by offering more support or additional information to some groups of children or by extending with an additional challenge for the more able members of the class.

Talking Points				
T	Thinking about	Introduction and Prior Discussion	Organisation and Follow-up	Vocabulary
1	observation numerical awareness pictorial representation recall of number facts calculating	<ul style="list-style-type: none"> •What do we mean when we say 'group of ten'? •How can you use your hands to explore pairs of numbers that make ten? •How might you set out your page for this the task? 	<ul style="list-style-type: none"> •Appropriate for use early in the year: •Where did you find examples for the number ten? •What do you notice about this calculation: $15 - 5 = 10$? 	group of ten signs
2	observation inverse numerical awareness pictorial representation relationship between addition and subtraction recall of number facts	<ul style="list-style-type: none"> •Can you use a number line to identify and count in multiples of 10? •If I am on 24 how many jumps will take me to 30? How many jumps will take me back to 20? How many jumps would take me from 20 to 30? •Why is the task called Big jump, little jump? Will the jumps ever be the same size? 	<ul style="list-style-type: none"> •Did you notice any patterns? •Can you explain what is happening? •If $27 + 3 = 30$ then what is $30 - 3$? 	digit multiple of ten number sentence list

Mathematics 2 Thinking Tasks: Talking Points



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T	Thinking about	Introduction and Prior Discussion	Organisation and Follow-up	Vocabulary
3	problem solving decision making investigating pictorial representation multiplication and division	<ul style="list-style-type: none"> •What do you know about even numbers between 1 and 24? •How do we know when a number is even? •Why are the seeds being put into the pots and what do you think will happen to them? •How might you set out your drawings of pots? 	<ul style="list-style-type: none"> •Possible link task to practical science work on plants. Children could plant out seeds in all the possible arrangements to see which might be best. •Alternative link to use of role play focused on running a garden centre. •Which is more practical, 8 seeds in a pot or 2? Why? 	the same different even number
4	problem solving decision making pictorial representation numerical awareness recall of number facts multiplication repeated addition	<ul style="list-style-type: none"> •How many wheels might a vehicle have? Do they all have the same number of wheels? •Would the unicycle be a good vehicle to choose to make the number 54? •What might you think about when choosing vehicles for your calculations? 	<ul style="list-style-type: none"> •How could you use multiplication to record your answers? •What is the least/most number of vehicles which could be used for each number? •Are any numbers easier or more difficult to make than others? 	make
5	problem solving decision making investigating combinations of coins shopping using money	<ul style="list-style-type: none"> •What is meant by 'silver coins'? Which coins can/cannot be used? •Which prices could not be used on the stall if people are paying only in silver coins and you only have silver coins for change? 	<ul style="list-style-type: none"> •Possible link to charity/fundraising events at the school. •Can you find a pattern/relationship between the prices that can or cannot be used on the stall? 	cost investigate different the least the greatest
6	numerical awareness calculating odd and even numbers	<ul style="list-style-type: none"> •What is an odd/even number? •How many ways can you partition 14 using three even numbers? •How could you use drawings to help you? (ref L3) 	<ul style="list-style-type: none"> •Can you use a hundred square to demonstrate how your calculations work? •What do you notice about the pattern of odd and even numbers of the hundred square? 	odd number even number partition different adding between

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7	numerical awareness pictorial representation exploring observation	<ul style="list-style-type: none"> •What is meant by numbers in lines, shapes, grids etc.? •Where might you look to find numbers presented in different ways? •How can you use the squared writing page to present and layout your work clearly? 	<ul style="list-style-type: none"> •Where is the largest/smallest number within the line/ grid? •Did you find any number sequences? •Did you find any patterns? 	shapes lines grids
8	numerical awareness ordering relationships	<ul style="list-style-type: none"> •What information do these words give us? •What does the information tell us about you? •Is it important to be first at everything? •When is the order in which things happen important? 	<ul style="list-style-type: none"> •Possible link to PSHE. What are you good at? What is important to you? •Why do we put things in order? 	first second third
9	estimation counting observation	<ul style="list-style-type: none"> •What is the difference between estimating and guessing? •What information might you use to make an accurate estimate? •What might help you to make a better estimate? 	<ul style="list-style-type: none"> •When might it be useful to make an accurate estimate? 	many few estimate check
10	numerical awareness decision making combinations of coins shopping using money	<ul style="list-style-type: none"> •How many different coins do we use? What are they? •How might you know that you have used the least possible number of coins? 	<ul style="list-style-type: none"> •Some children might use actual coins for support. •Which amounts were easiest to make? 	amount least
11	problem solving decision making calculating pictorial representation coin combinations	<ul style="list-style-type: none"> •What do you know about the coins we use? •• What is happening to the piggy bank between March and August? •How might save money for your holiday? •How might you spend the money? 	<ul style="list-style-type: none"> •Some children might use actual coins for support. •What was the most difficult part of this task? Why? 	spend save altogether the rest left
12	passage of time measuring time dial and display reading observation	<ul style="list-style-type: none"> •Where could you look to find time displayed? •What is the smallest/largest unit of time you might find? •Could you order the things you find from largest to smallest? 	<ul style="list-style-type: none"> •Refer to L16 to clarify relative size of units. •Which units of time do you use most often? 	measured second minute hour day

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13	planning ordering decision making pictorial representation	<ul style="list-style-type: none"> •What does it mean when we say 'looking forward'? •What sort of events might you look forward to? 	<ul style="list-style-type: none"> •Why is a calendar useful? 	event calendar
14	estimation comparison observation linear measures	<ul style="list-style-type: none"> •What is the difference between estimating and guessing? •What information might you use to make an accurate estimate? •How long is your ruler? How many ruler lengths would fit into 1 metre? 	<ul style="list-style-type: none"> •When might it be useful to make an accurate estimate? •Which length was easiest to estimate? •Did you get better at estimating? 	estimate length measurement longer than ... shorter than ... about the same as ...
15	drawing pictorial representation estimation comparison observation linear measures	<ul style="list-style-type: none"> •Can you name the different parts of your hand? •How would you use a ruler to measure parts of your hand? •How might knowing the size of your hand help you to estimate the size of an adult's hand? 	<ul style="list-style-type: none"> •Two coloured writing pages will be needed for this task. It would be preferable to use two facing pages. •What have you learned about your hand? 	measure label width length estimate palm
16	numerical awareness recall of number facts problem solving exploring numbers	<ul style="list-style-type: none"> •What is the largest/smallest number you could make using any 2 cards? •How do you know when you have the largest/smallest possible number? 	<ul style="list-style-type: none"> •Appropriate for use early in the year as reinforcement and revision of number bonds. •What is the largest/smallest number you could make using any 3 or 4 cards? If you lose the number 1 card, which numbers up to 20, will you not be able to make using any of the other cards? 	adding numerals different total in order largest smallest
17	organising comparing ordering decision making drawing supermarket measures	<ul style="list-style-type: none"> •How might you complete this task if an adult cannot take you to the supermarket? •How will you find out the weight of each item? •How might you choose the three items to put in the bag at the end of the task? 	<ul style="list-style-type: none"> •What was the heaviest/lightest item you found at the supermarket? •What have you learned about the weight of objects? 	heavy light weight heavier lighter sort

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18	observing decision making designing creating drawing patterns and shapes	<ul style="list-style-type: none"> • Where could you look to find ideas for your pictures? • Why might you choose certain shapes for a particular purpose? • What is it about a rectangle that makes it ideal for the shape of a house? 	<ul style="list-style-type: none"> • What did you need to think about when choosing shapes for your picture? • Were there any shapes you could not use? Why? • Which shapes did you use most? Why? 	shape square triangle rectangle circle
19	liquid measures estimating ordering comparing drawing	<ul style="list-style-type: none"> • What is the difference between an estimating and guessing? • How might you estimate the number of times you could fill the smallest container from the largest container? 	<ul style="list-style-type: none"> • Introduce the task by looking at a range of containers with varying dimensions to include some that are very tall but thin and others that are shorter but much wider. • Does the container that looks larger always hold more? 	order container holds more estimate smallest largest
20	safety planning observing exploring shape, pattern and structure drawing comparing design	<ul style="list-style-type: none"> • What is the difference between 'the same' and 'similar'? • What do we mean by 'differences between'? • What makes a good wheel trim? Why are they designed to look as they do? • How will you make sure you stay safe while completing this task? 	<ul style="list-style-type: none"> • The results of the children's research could be combined to create a class tally chart or graph so that they could identify the 'most popular' design using more data. This could provide an introduction to T21. • Why is it useful to put all the results together and have more data? 	compare different the same similar
21	observing exploring designs shape data collection comparing drawing	<ul style="list-style-type: none"> • Where might you find different shaped windows? (houses, cars, shops, school etc.) • What shapes do you expect to find? Why? • How will you make sure you stay safe while completing this task? 	<ul style="list-style-type: none"> • If children sketch examples of window shapes on a separate sheet before drawing up their tally chart, they can then select five of their observed designs to use on the tally chart before drawing their favourite in detail 	tally chart most popular least popular
22	observation shape and symmetry designing and drawing	<ul style="list-style-type: none"> • How do we know when a shape is/is not symmetrical? 	<ul style="list-style-type: none"> • Although children are only required to identify symmetry in a vertical line some may identify horizontal symmetry. • What sorts of objects are not symmetrical? 	symmetrical not symmetrical

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23	asking questions collecting information answering questions	<ul style="list-style-type: none"> • Why is it helpful to write the answers down in a table? • Why is it important to know what makes people laugh or feel frightened? How might this information be helpful to you? 	<ul style="list-style-type: none"> • Possible link to PSHE. What makes you laugh/feel frightened? Possible link to T21 in Second English Workbook. • Collating class results to make pictograms/graphs would suggest common trends. What do these graphs tell us about how to make people laugh or what to include in a scary story? 	survey table results
24	imagining and creating designing and drawing ordering pictorial representation shape, pattern and colour repeating patterns	<ul style="list-style-type: none"> • When might you use decorations like this? • Which other shapes could be used for the pennant? • Which do you think might be the best shape to use and why? 	<ul style="list-style-type: none"> • Possible link to Art or DT. • A useful task to be combined with party planning, possibly at the end of the year or Christmas. Once they have designed the decoration children could be challenged to make the pennants using a range of different materials. 	design pattern repeating pattern