Year 2 Summer 2 Week 5 – Sorting

Main Learning

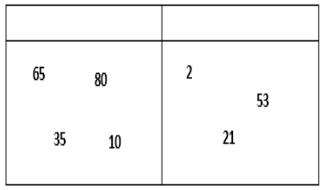
- Compare and sort common 2-D and 3-D shapes and everyday objects.
- Compare and sort numbers according to their properties.

Success Criteria

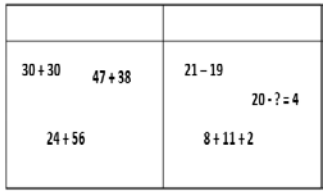
Practice and Consolidation

The thinking processes for sorting can be carried out in many different contexts, however it is a good opportunity to consolidate number, shape and measures work.
Playing odd one out is a good starting point for sorting as it encourages children to identify common properties and properties that aren't common.

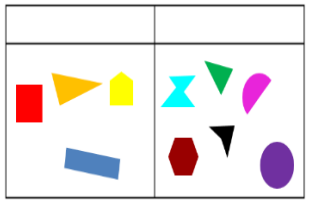
Sort It Out - Numbers



Sort It Out - Calculations



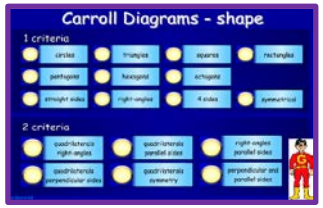
Sort It Out – 2-D Shapes

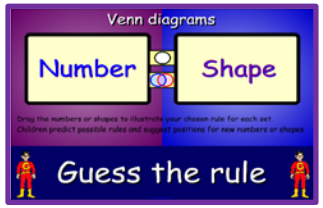


When sorting 3-D shapes, children should use the physical shapes, rather than images of them. This approach can also be used when sorting measuring equipment.

ICT

Number Grid Instructions





Vocabulary

sort, group, set, same, different, table, diagram, numbers, odd, even, multiple, greater than, less than, between, digit, ones, tens, shapes, properties, symmetrical, sides, vertices, faces, edges, flat, curved, surface

Modelling

This final teaching week of the year is an opportunity to recap properties of numbers, calculations, measurements and shapes in the context of sorting.

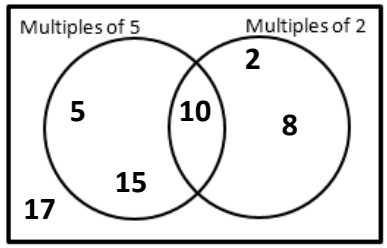
It is important that children understand the structure of different sorting tables and diagrams before being asked to apply other areas of maths into them. This is preparation for Year Three.

Both of these sorting tools seem to do the same thing but they work slightly differently. Recognising where the following numbers should be placed is an effective way of realising the differences.

2, 5, 8, 10, 15, 17

The numbers 2, 5, 8 and 15 are simple to position in both. The number 10 needs to be placed twice in the table on the left but only once in the Venn diagram. The number 17 cannot be placed in the table but can be placed in the Venn diagram outside the circles.

Multiples of 5	Multiples of 2
5, 15, 10	2, 10, 8



Children should sort:
Numbers – odd, even, multiples of 2, 5 and 10, greater than…, less than…, one-digit, two-digit
Calculations – addition, subtraction, multiplication, division, calculation methods, calculations involving exchange, answers that fit the number criteria listed above
Measurements – units and equipment for measuring, length, mass, volume/capacity, temperature
Shape – 2-D, 3-D, numbers of sides, faces, curved surfaces, edges, vertices, shapes of faces, symmetry, pyramids, prisms

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Using and Applying

Sharon says

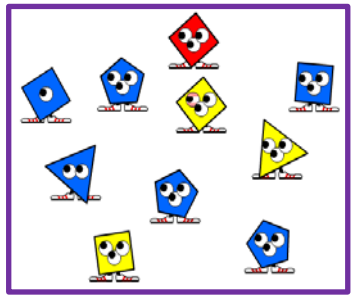
> The even multiples of 5 are multiples of 10.

Sharon is correct.
Give some examples and then explain why this is the case.

Think of all the different ways in which this group of Furbles could be sorted.

Draw the tables or diagrams for each way of sorting.

Are there any that use two criteria at the same time?



Click on the image for the interactive program

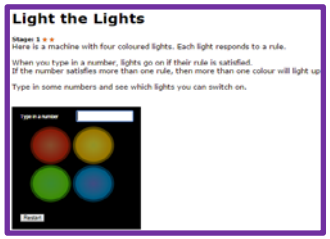
Test this statement to see if it is true or false:
When you add two consecutive numbers, the answer is odd.

numbers that round up to the nearest 10	numbers that round down to the nearest 10
65 88 19 37 58	2 73 94 21 53

What do you notice about the numbers that round up to the nearest ten and the numbers that round down to the nearest ten?

Where would these numbers go in this table?
99 123 428 629 902 777

Light the Lights
Nrich



Contextual Learning

Sorting can link with many areas of the maths curriculum as detailed above, but also including money:
money – how are coins sorted according to colour and shape?

Other subjects rely on children to be able to sort, such as science – sorting: materials, living and non-living, plants and animals and also design and technology sorting materials that can be used for a particular purpose when designing a product.

Assessment

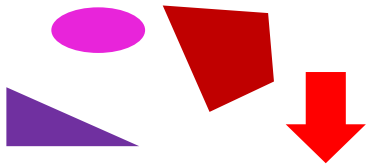
Make each of these numbers the odd one out:

13 **25** **50**

Put a ring around the odd numbers in this group:

14 15 16 17 18 19 20

Find all the mistakes in the way these shapes have been sorted. There are three mistakes.

symmetrical	not symmetrical
	

What would come next in these patterns of calculations?

34 + 10 = 44	56 - 5 = 51	3 x 3 = 9	8 ÷ 2 = 4
34 + 20 = 54	51 - 5 = 46	4 x 3 = 12	10 ÷ 2 = 5
34 + 30 = 64	46 - 5 = 41	5 x 3 = 15	12 ÷ 2 = 6
?? + ?? = ??	?? - ? = ??	? x ? = ??	? ÷ ? = ??
?? + ?? = ??	?? - ? = ??	? x ? = ??	? ÷ ? = ??