

## At-Home Investigation

**Find 3 large containers.** How could you find the capacity of each container?

**Make your plan:**

**What instruments could I use to measure with?**

Find any that you have at home and draw the one you are choosing to use for measurement.

Explain why you chose that one.



**How will I make sure that I am measuring accurately?**

**Carry out your plan:**

Measure your three containers. **How much does each one hold?** Write the measurements in both millilitres and in litres. Show your calculations.

**Apply your learning:**

Compare the containers. Put them in order by how much they hold. Explain how you did it.

## E6. Measure and estimate volumes

Sometimes we need to guess the volume of a container so that we know if our measurement is about right. Answer these questions using L and mL.

### For measuring the volume of a glass of milk:

1. What instruments could you use to measure it?
2. Would you measure it in litres or millilitres or both? Why?
3. Have a guess: what do you think the volume will be? Why?
4. Choose an instrument and measure it. What did you get?
5. How good was your guess?

### For measuring the volume of water needed to fill up a bucket:

1. What instruments could you use to measure it?
2. Would you measure it in millilitres or litres or both? Why?
3. Have a guess: what do you think the volume will be? Why?
4. Choose an instrument and measure it. What did you get?
5. How good was your guess?



### For measuring the volume medicine in a dropper:

1. How could you use instruments to measure it?
2. What units would you use to measure it? Why?
3. Have a guess: what do you think the volume will be? Why?
4. Choose an instrument and measure it. What did you get?
5. How good was your guess?

How did you decide whether to use litres or millilitres or both?

How did you measure things that would not fit into cup measures?

### **BACKWARDS QUESTION:**

Your soccer team had a drinks cooler for the team to use. How could you work out if the cooler holds enough water for everyone to have 2 cups full?

Multiplication and division practice grids:


x	2	6	4	3	9	7	8	5	10
2									
3									
4									
5									
6									
7									
8									
9									
10									

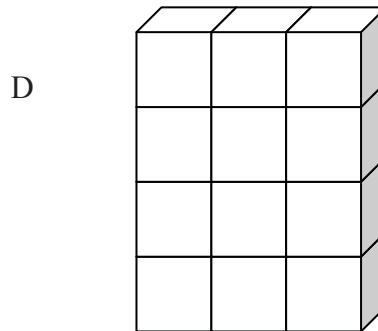
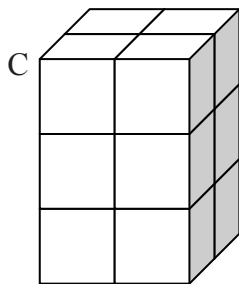
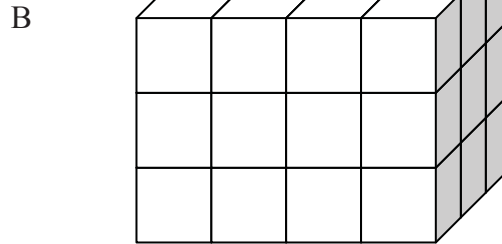
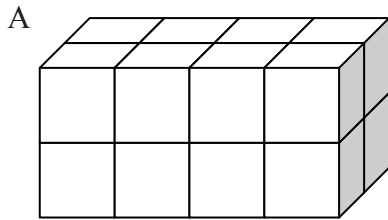
x	4	8	7	2	3	9	10	6	5
9									
3									
6									
5									
2									
7									
4									
8									
10									

÷									
		16				6			
			21		15				
						8		40	
	20			30					
			42						54
					35		21		
		64		48					
	36								81
					20		100		

÷									
		27							30
			6				4		
	40								25
				24		36			
	56			28					
					63			45	
						60			100
		36					8		
			48		56				

## Eq. Volume of a rectangular prism

 Build the following shapes out of cubic centimetre blocks (eg MAB units) and count the blocks to calculate the volume. Use the table below to help you find a pattern between the number of blocks in each layer, the number of layers and the volume.



Rectangular prism	No. blocks in the bottom layer	No. layers in the shape	Volume (cu cm)	Is there a pattern?
A				
B				
C				
D				

What is the rule for finding the volume of a rectangular prism?

**BACKWARDS QUESTION:**

If the volume of a rectangular prism was  $100\text{cm}^3$ , what could its sides be?

## Interleaved practise

Year 5, week 6

Number:

1. Write the pattern that matches this description: start with **Seven million, two hundred and 6 thousand, four hundred and thirty-two**. Take away twenty thousand for each new number until you have eight numbers in the pattern.
2. I have  $2\frac{1}{2}$  thousand cans of soft drink to sell at a festival. I sold 639 on the first day, 806 on the second day and 742 on the third day. Use rounding to work out approximately how many cans I have left.

3. Circle the numbers that are factors of 72

2      3      4      5      6      7      8      9      10      11      12

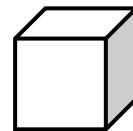
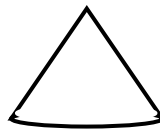
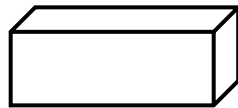
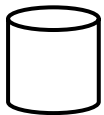
4. Write either the  $>$  or  $<$  sign in the boxes to show which fraction is bigger.

$$\frac{4}{8} \square \frac{3}{8} \quad \frac{1}{7} \square \frac{1}{5} \quad \frac{1}{2} \square \frac{3}{4} \quad \frac{2}{3} \square \frac{1}{2}$$

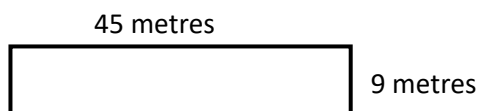
5. How many pizzas will I need to buy if my three friends and I each eat  $\frac{2}{3}$  of a pizza? Will I have any left over?

Measurement/Geometry:

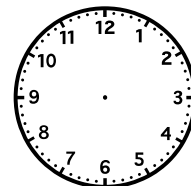
6. What 3-dimensional objects do these drawings represent?



7. What is the area of this rectangle? Show how you worked it out.



8. Show what time it will be on this clock at 15:35.



Chance/Data:

9. I rolled a 6-sided dice 40 times and these are the numbers that I rolled:  
1, 3, 2, 5, 6, 3, 5, 3, 4, 1, 2, 1, 2, 3, 6, 4, 1, 6, 3, 5,  
5, 1, 2, 4, 4, 4, 3, 3, 4, 2, 6, 3, 4, 3, 2, 3, 3, 3, 1, 2

Use the blank graph to show the results of my experiment. Each square represents 2 rolls of the dice.

1	2	3	4	5	6

## E8. What is a standard unit for volume?

We use standard units for measuring capacity/volume. This activity teaches you what they are and how to change between them.

### **Standard units:**

1. What units have you used for measuring volume or do you know of for measuring capacity? Write them down from the smallest unit to the biggest unit.
2. Look at the words that you have listed. Can you find a 'base word' that is in all of them. What is it?
3. This is the standard unit for measuring volume. All the other units are fractions of this unit or multiples of this unit.

### **Parts of a standard unit:**

1. 1000 of these make up one litre. What are they called?
2. One of these is made up of 1000 litres. What is it called?
3. Look at the words that you have listed. Can you find a 'base word' that is in all of them. What is it?
4. This is the standard unit for measuring capacity. All the other units are fractions of this unit or multiples of this unit.

What is the pattern between your measurements? How did you know what each unit was called?

### ***BACKWARDS QUESTION:***

Your teacher will now place an object out the front for you to measure. You need to record the capacity of the container in millilitres and litres. Do you need to measure it twice? Explain how you could work it out: