



Drake Class
Year 5 Maths Home Learning Activities
Week beginning Monday 01/06/20



Volume and Capacity

Also, the **Oak Academy online lessons** have 5 sessions – including video, explanations and independent tasks
There are 5 volume sessions here: <https://www.thenational.academy/online-classroom/year-5/maths#subjects>

Step 1:

Work out the volume of each solid.

Shape A



Shape B

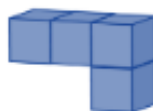


Shape A has a volume of ___ cm^3

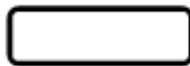
Shape B has a volume of ___ cm^3

Which has the greatest volume?

Look at the 4 solids below. Put the shapes in ascending order based on their volume.



Count the cubes to find the volume of the shapes and use 'greater than', 'less than' or 'equal to' to make the statements correct.



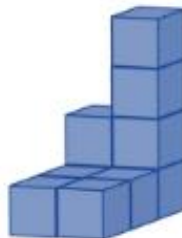
Step 2:

Shape A has a height of 12 cm. Shape B has a height of 4 cm.

Dora says Shape A must have a greater volume.

Is she correct? Explain your answer.

Eva has built this solid:



Amir, Whitney and Mo all build a shape using cubes.

Mo has lost his shape, but knows that its volume was greater than Whitney's, but less than Amir's.

Amir's



Whitney's



Tommy has built this solid:



Eva thinks that her shape must have the greatest volume because it is taller.

Do you agree?

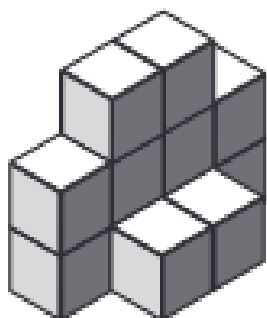
Explain your answer.

What could the volume of Mo's shape be?

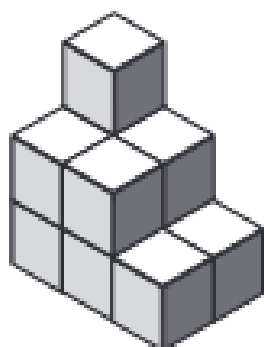
Step 3: Visualise volume with cubes

How many cubes make up each shape?

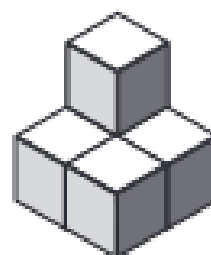
1.



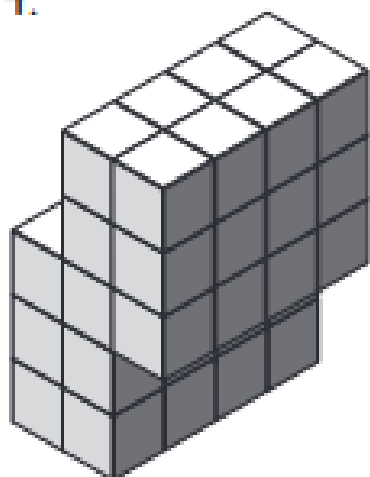
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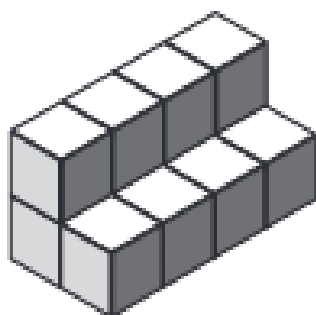
3.



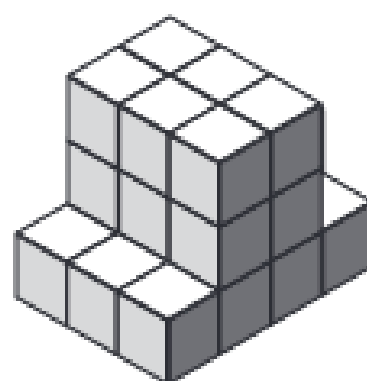
4.



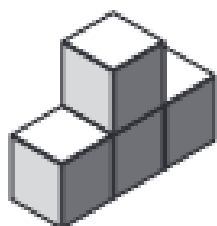
5.



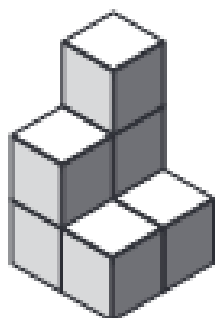
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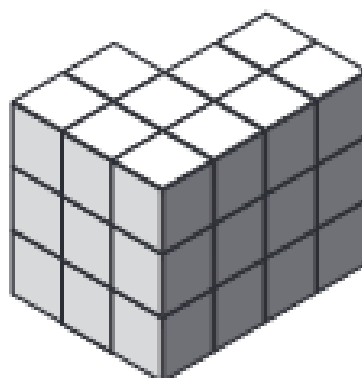
7.



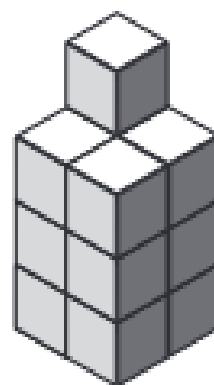
8.



9.



10.



Step 4: Estimating capacity

Volume is the amount of space an object takes up whereas **capacity** is how much space an object can hold – only a little difference in wording but it can make a huge difference in the answer.

Estimate and match the object to the correct capacity.

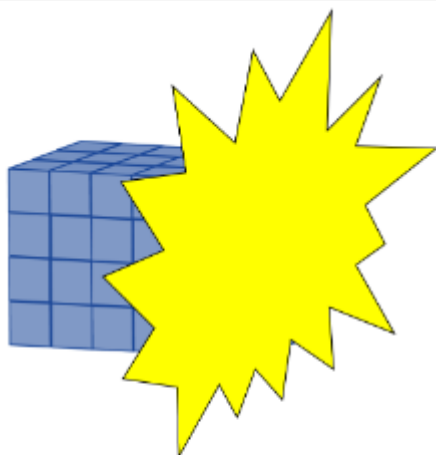


3,600 cm³

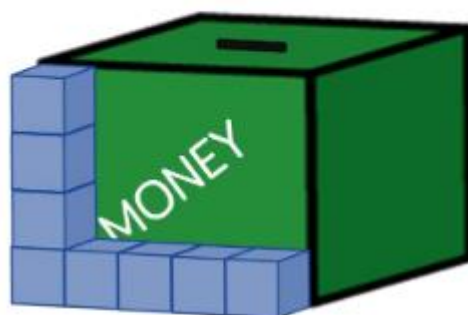
1,000 cm³

187,500 cm³

Jack is using cubes to estimate the volume of his money box.



Each of the cubes have a volume of 1 m³
The volume of the whole shape is between 64 m³ and 96 m³
What could the shape look like?



He says the volume will be 20 cm³

Do you agree with Jack?
Explain your answer.

What would the approximate volume of the money box be?

Step 5: Real life capacity

- Fill a tumbler half full.
- Fill a tumbler one quarter full.
- Fill a tumbler three quarters full.
- Fill a tumbler, leaving one third empty.
- Fill a tumbler that has more than the first but less than the third, what fraction could be filled?

Match the containers to their estimated capacity.



5,000 ml

500 ml

5 ml

Find everyday objects which show you the capacity – can you order them or find out how many of one object it takes to fill the other?

Which of your mugs/cups/glasses at home hold the most/least water? Use a measuring jug to calculate the amount and the difference.

Additional areas to work on:

Play on Hit the Button - focus multiplication tables.

Work through the areas of an arithmetic paper (which can be found on the KS2 Maths Organiser on the school website) Look at the Calculation Policy on the school website under 'Curriculum' and then 'Maths' for help in how to support + - x and ÷

<https://www.sampford-peverell-primary.devon.sch.uk/website/maths/459621>

Also in the maths section of the website is a link to a fantastic maths revision interactive resource which gives the children extra questions in whichever area of maths they would like to work on a little more – with YouTube links to explain the process!