

Name: _____

Class: _____

Year 7 MasterChef Context: Integrated Science & Mathematics Assessment.

Geometry & Measurement: Create a net and use side lengths to identify interior angles, plus perimeter, area and volume.



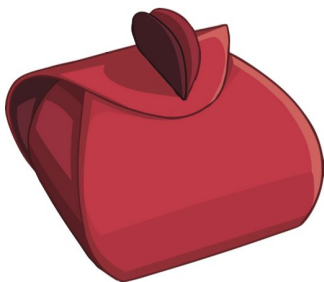
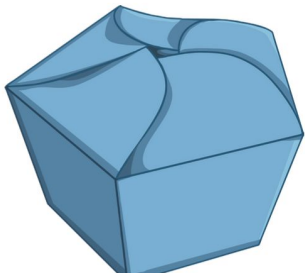
Plan, measure & construct a net to present your 'states of matter' baking within. This will also be the structure from which angle, perimeter, area & volume calculations will be performed.

Master Chef

Mastering Measurement & Geometry

Your job as **Master Chef** is to participate in kitchen science to explore changes in states of matter. However, prior to this you will need to **design** a **net** to hold your sweet kitchen creations. This will also serve as a **model** from which you are to **demonstrate** your understanding of angle, perimeter, area and volume.

A student's ability to use **geometric equipment** with precision (eg. ruler, compass and protractor) is essential when learning to master the art of **net construction** for gift packaging. Please also remember to record all **units of measurement** when **applying** your addition (angle/perimeter) and multiplication (area/volume) **calculations**.



What do you need to do?

1. Take a look at the information provided **above**.
2. Make sure you **read** the **rubric** (marking criteria) on Page 2.
3. You will need to **complete your calculations** on Page 3 of this document to demonstrate that you understand angle, perimeter, area and volume.
4. **To start, select** the **net** you would like to **plan** out, **draw** to an appropriate **scale** and **construct**.
5. **Think** about your placement of your net on your A2 card.
6. Think about how you will include **units of measurement** in this assessment.
7. Show a stage of your planning and your finished construction by way of two **photos** on Page 3.
8. Finally, **describe** at least two challenges that you encountered during this **investigation** in your reflection.
9. It is an **individual project**.
10. Upload your completed **document** as a **pdf** to MH Online.

Have **fun** and remember to cut out a '**Honey Rice Bubble Slice**' label to glue to the front of your package. Attach your gift tag then take your slice home to present to someone special.



Remember: Take care and time to measure precisely!

Year 7 Maths Assessment: Geometry & Measurement



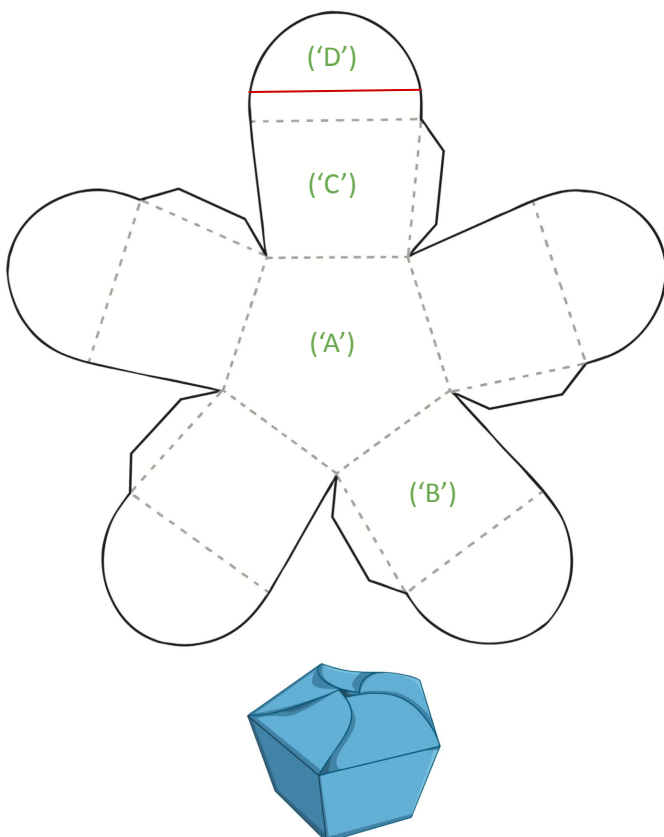
Level 3/4:

- Use appropriate metric units for length, area, volume and capacity, weight (mass) and angle.
- Convert between metric units, using whole numbers and commonly used decimals.
- Use side or edge lengths to find the perimeters and areas of rectangles, parallelograms, and triangles and the volumes of cuboids.

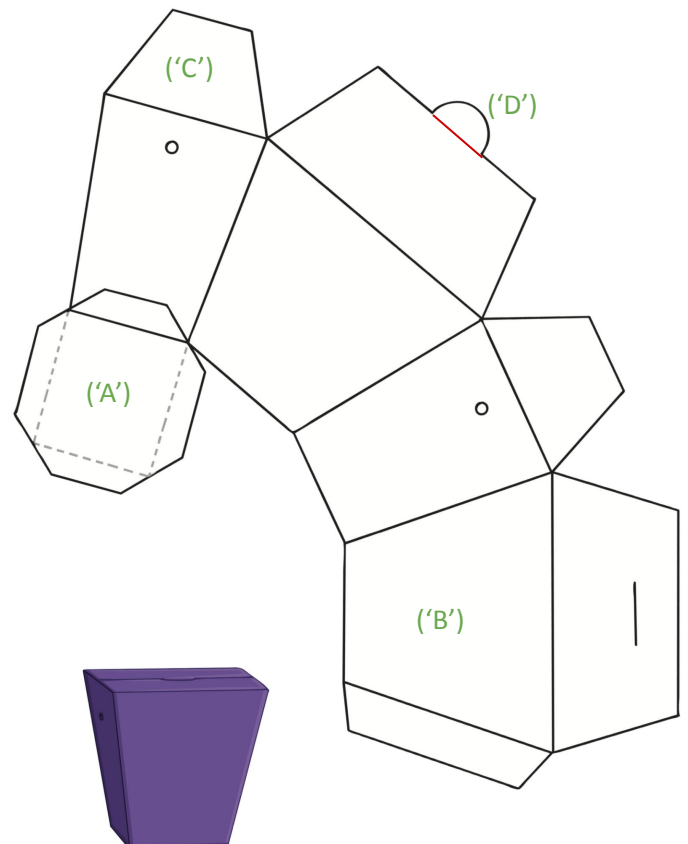
L3/4 Year 7	Working Towards	At	Above	Beyond
Metric Measurement and conversion of units	You have attempted to use scales to measure lengths and calculate conversions	You have used scales to measure lengths and calculate conversions	You have used scales to measure lengths, calculate conversions and record units of measurement	You have used scales to measure lengths, calculate conversions and record all units of measurement accurately
Perimeter, Area & Volume Calculations	You have attempted to find the perimeter and area of basic shapes	You have calculated the perimeter and area of basic shapes	You have calculated the perimeter, area and volume of basic shapes with correct units	You have applied your understanding of measurement to calculate the area of circles, compound shapes and volume with correct units
Geometry - Angles	You have attempted to draw, measure and name angles	You have drawn, measured and named some angles	You have drawn, measured and named angles and applied your knowledge of angle properties	You have accurately drawn, measured and named angles and applied your knowledge of angle properties
Overall Grade	WORKING TOWARDS Curriculum expectation	Working AT curriculum expectation	Working ABOVE curriculum expectation	Working BEYOND curriculum expectation

Question One: Highlight the **net** that you will be enlarging, drawing and constructing for this **MasterChef** assessment...

Net 'A'



Net 'B'





Question Two:

Calculate the perimeter of the base of your net ('A')

Insert a photo of your planning/measurement here...

Question Three:

Measure the interior angles of the trapezium ('B') to the nearest degree, using a protractor.

Question Four:

Calculate the area of the trapezium marked ('C')

Question Five:

Calculate the area of the semi circle marked ('D')

Question Six:

Estimate the volume of your gift package.

Insert a photo of your completed construction here...

Describe at least two challenges that you encountered during this **MasterChef Investigation**.

Write here...

Question Seven: Now complete the 'Geometry & Measurement Question Bank' on Maths Buddy.

Honey Rice Bubble Slice



Measurement, Geometry
& 'States of Matter'
19.09.22

Honey Rice Bubble Slice



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