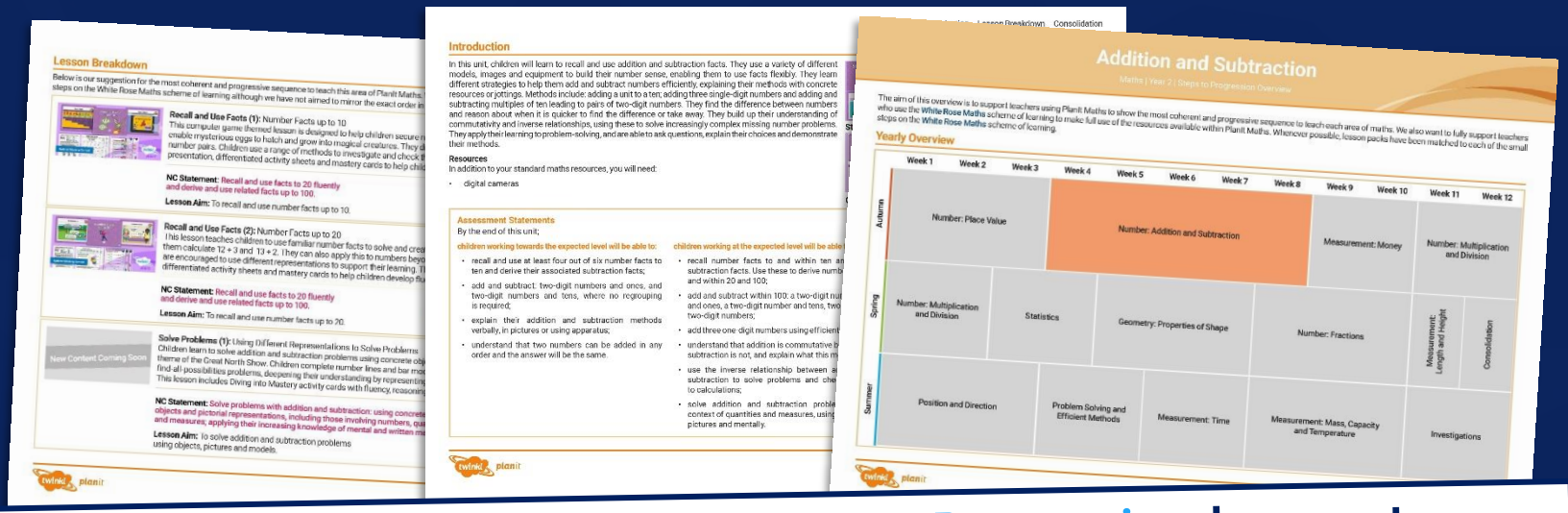
Maths

Properties of Shapes

Need a coherently planned sequence of lessons to complement this resource?

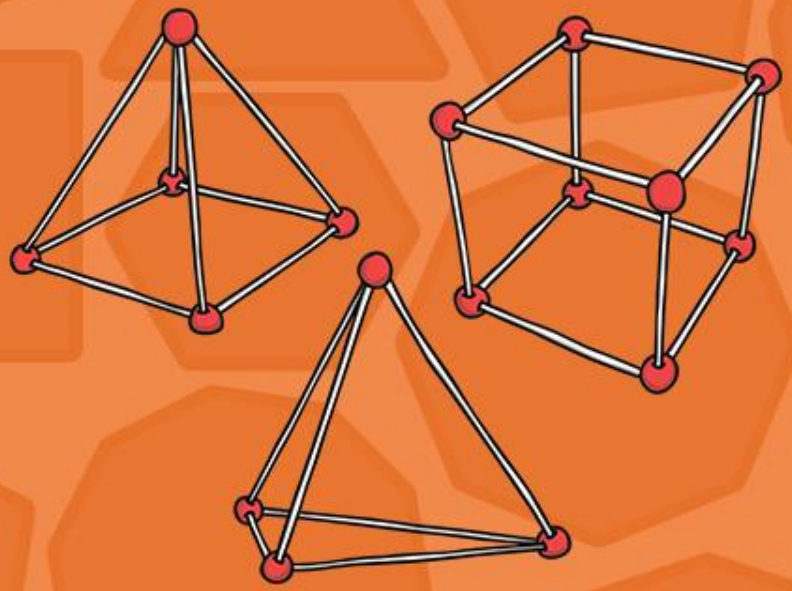


See our Properties of Shapes Steps to Progression document.

Twinkl PlanIt is our award-winning scheme of work with over 4000 resources.

twinkl planit

Build 3D Shapes



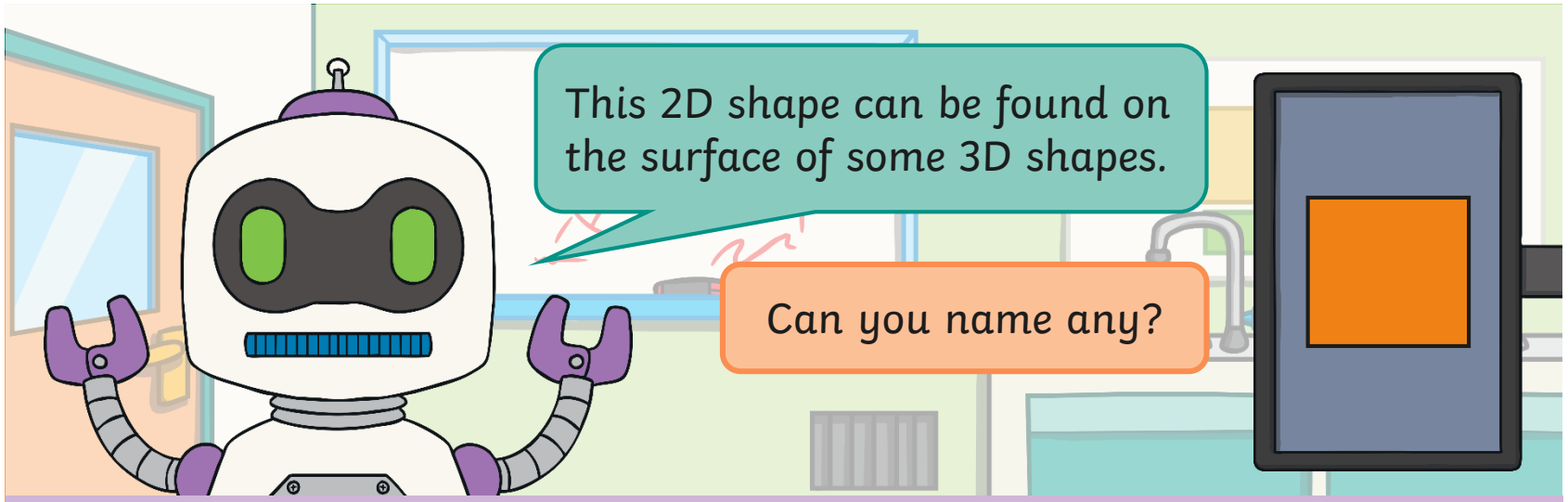
Aim

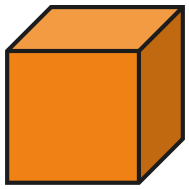
- To construct 3D shapes from 2D diagrams.

Success Criteria

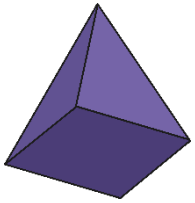
- I can match 3D shapes to 2D representations.
- I can describe 3D shapes according to faces, edges and vertices.
- I can construct 3D shapes from 2D diagrams.

Remember It

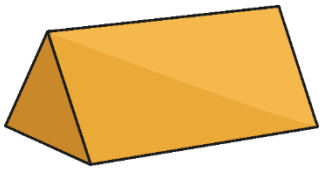




cube



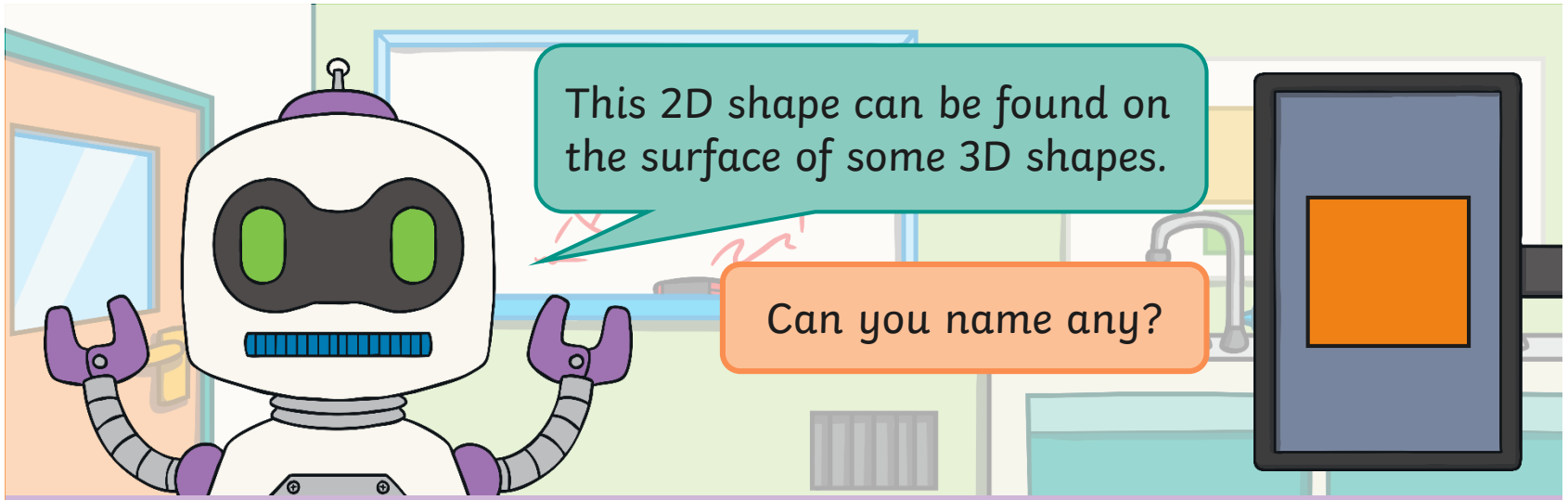
square-based pyramid

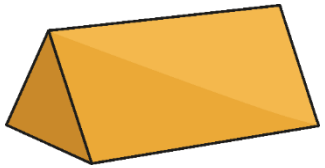


some triangular prisms

some cuboids

Remember It





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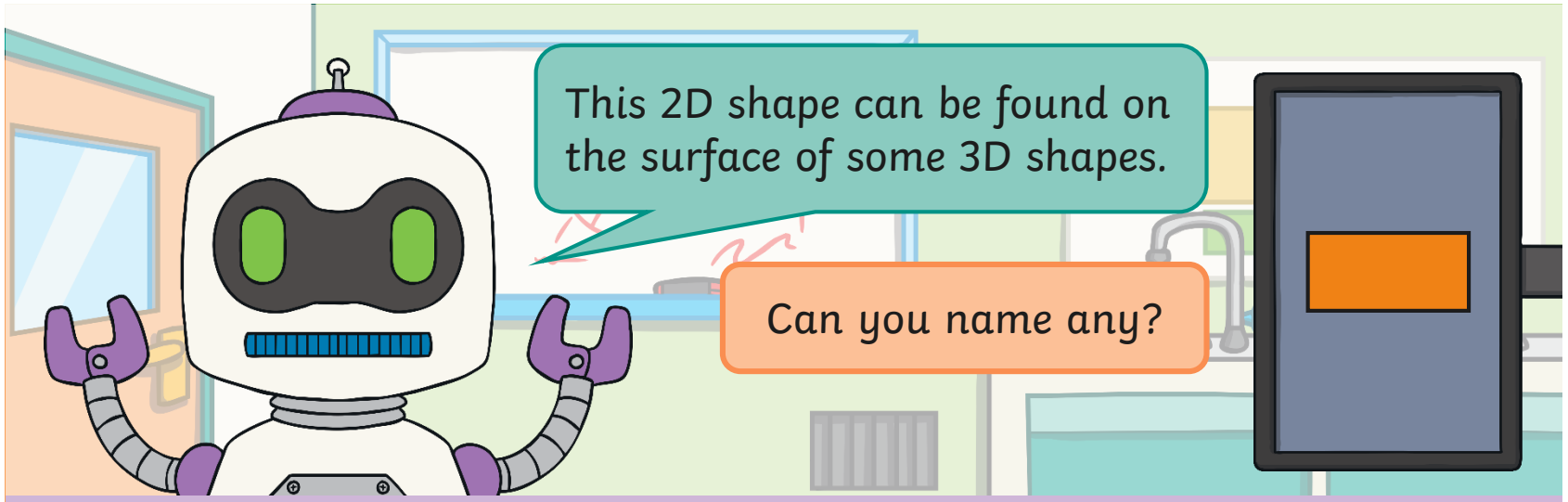
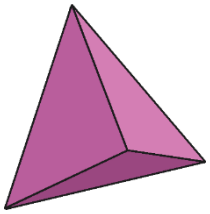
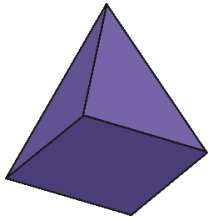
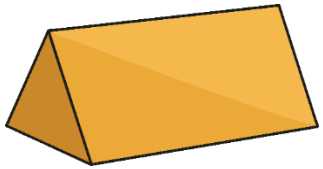




triangular-based pyramid
also known as a tetrahedron



square-based pyramid

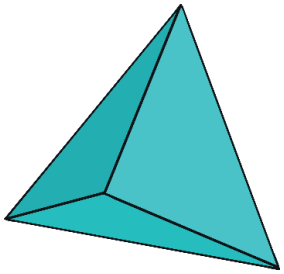


triangular prisms

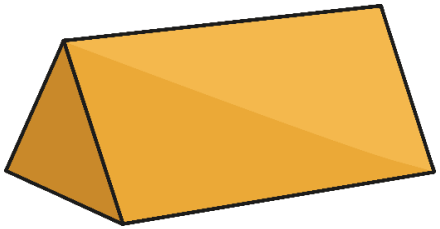
Shape Models

Whole Class

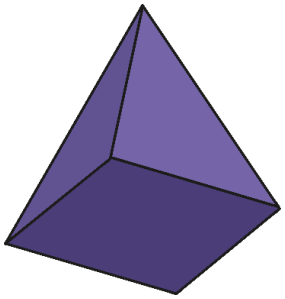
Which diagram is the same as my shape model? Can you explain why?



triangular-based pyramid (tetrahedron)

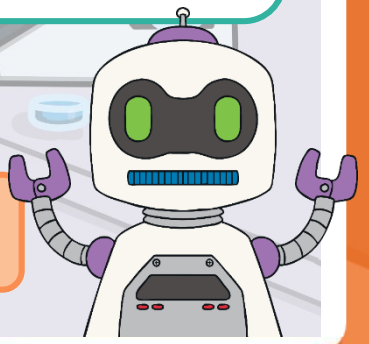


triangular prism



square-based pyramid

It is a square-based pyramid as it has 5 faces, 8 edges and 5 vertices. All of the edges are the same size.



Shape Models

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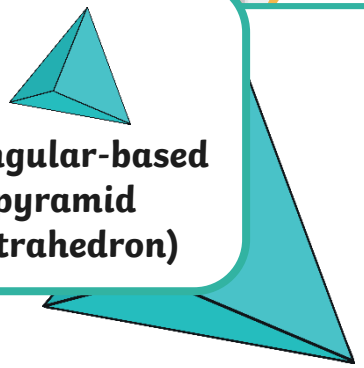

triangular-based pyramid (tetrahedron)

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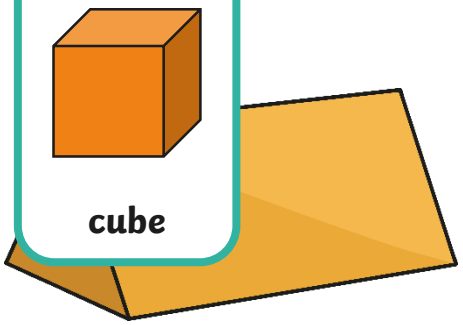
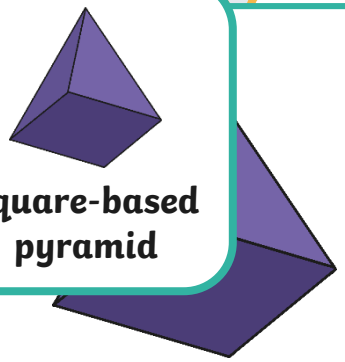


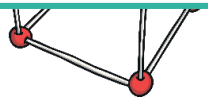
cube

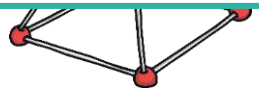
triangular prism



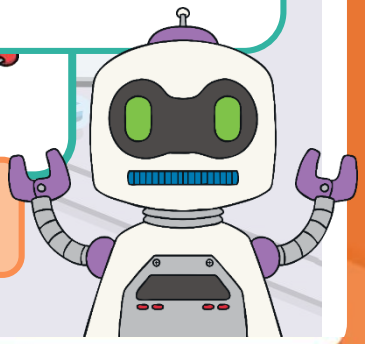
square-based pyramid

square-based pyramid



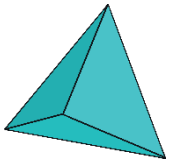


What is the same about these shapes? What is different?

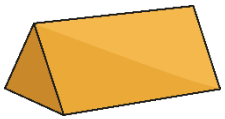


Build It

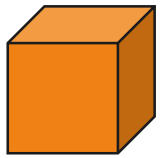
Can you build these shapes with straws and clay?
Discuss how you might do this.



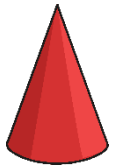
triangular-based pyramid (tetrahedron)



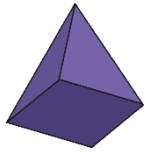
triangular prism



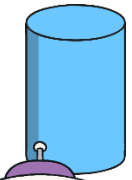
cube



cone



square-based pyramid



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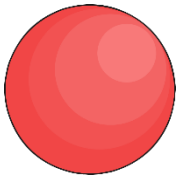
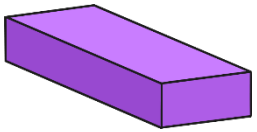


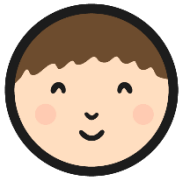
sphere



cuboid

Top Tips:
Build your models from the base upwards in order to make this task easier!
Roll your clay into balls in order to make strong joints!

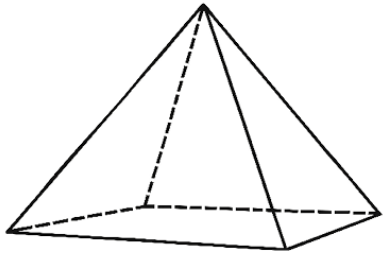
Build It



Build It

I can construct 3D shapes from 2D diagrams.

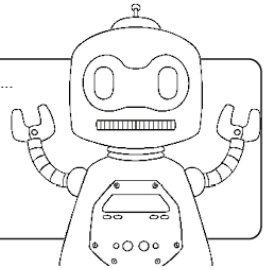
Use straws and modelling clay to build a 3D model of this shape.



square-based pyramid

Before building your shape, think about...

- How many faces does it have?
- What shapes are these faces?
- How many vertices does it have?
- How many edges does it have?



Build It

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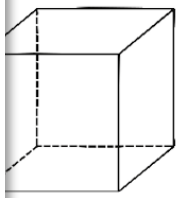
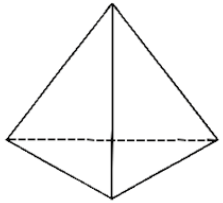
straws and modelling clay to build a 3D model of these shapes.



cube



tetrahedron (triangular-based pyramid)

building your shape, think about...

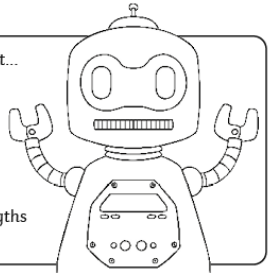
How many faces does it have?

What shapes are these faces?

How many vertices does it have?

How many edges does it have?

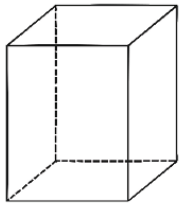
What do you notice about the lengths of these edges?



uild It

D shapes from 2D diagrams.

y to build a 3D model of these shapes.



cuboid

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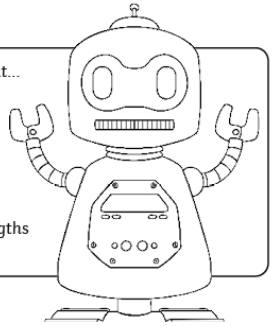
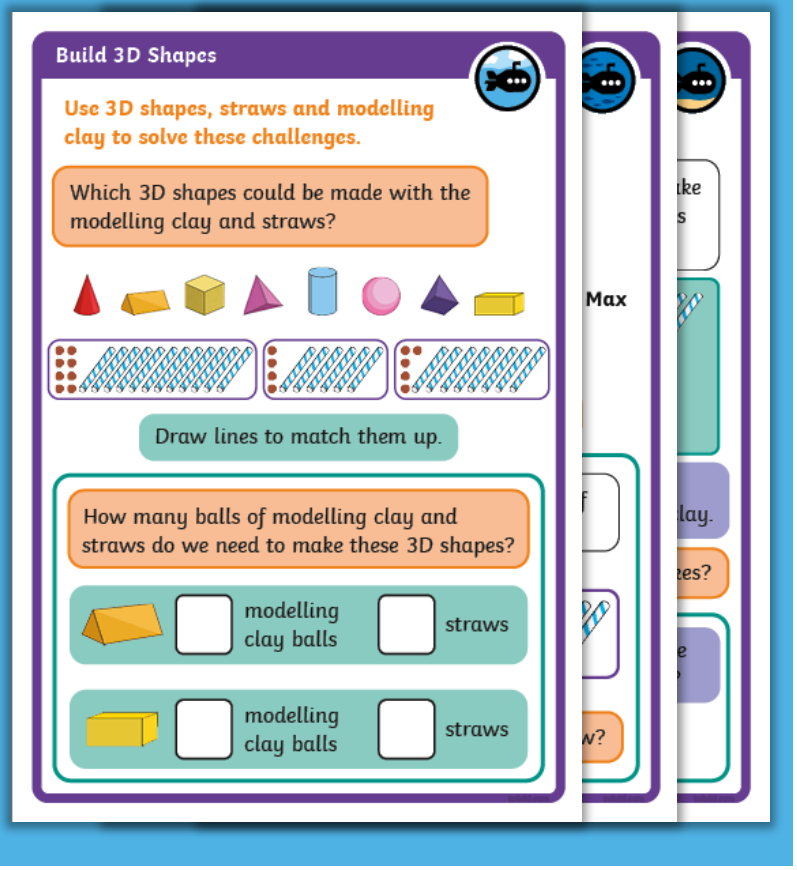


Diving into Mastery

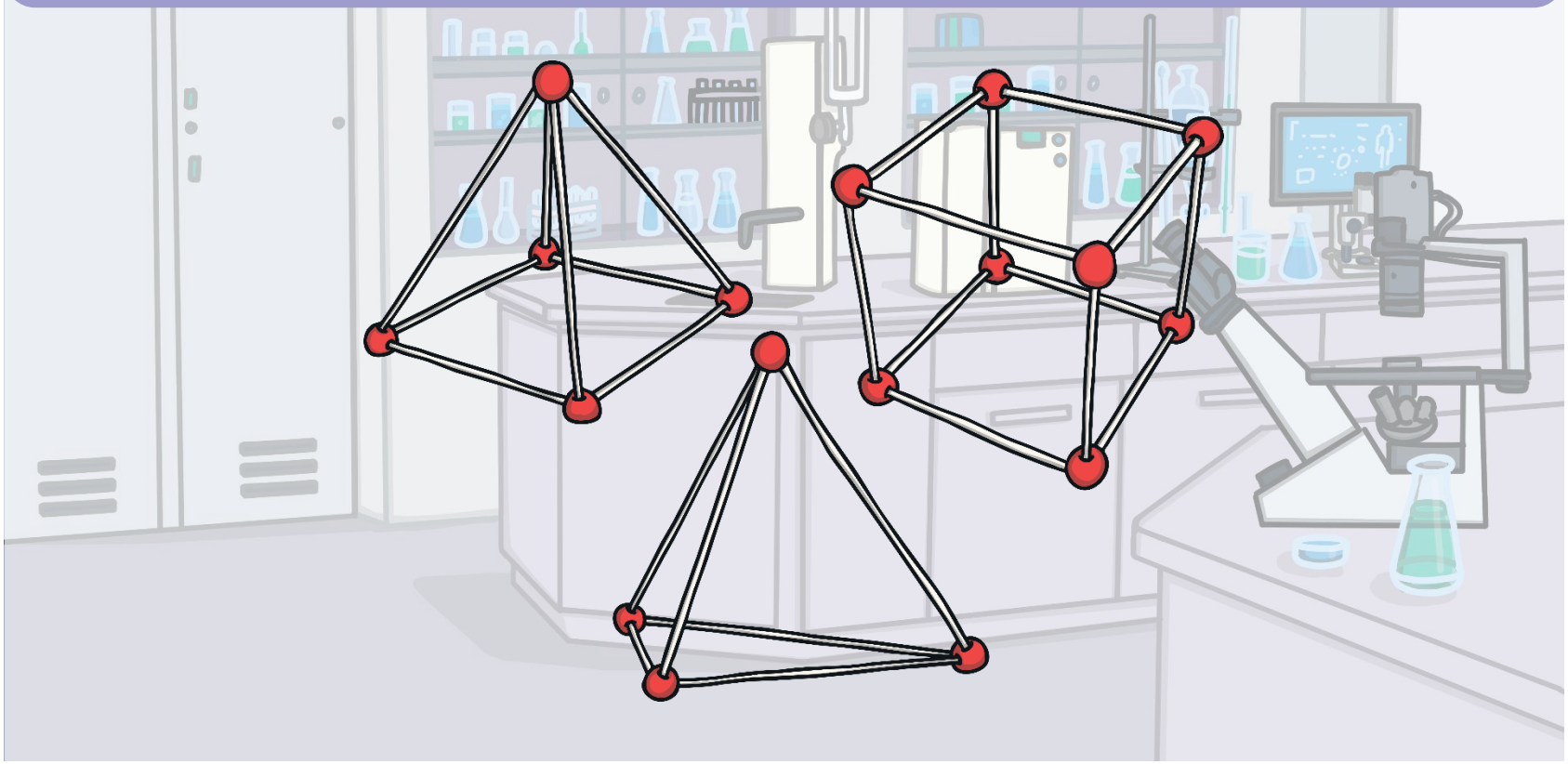
Dive in by completing your own activity!



Describe My Shape

Hide your model and describe its properties to your partner.

Can they guess what you built?



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