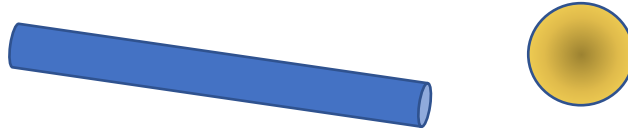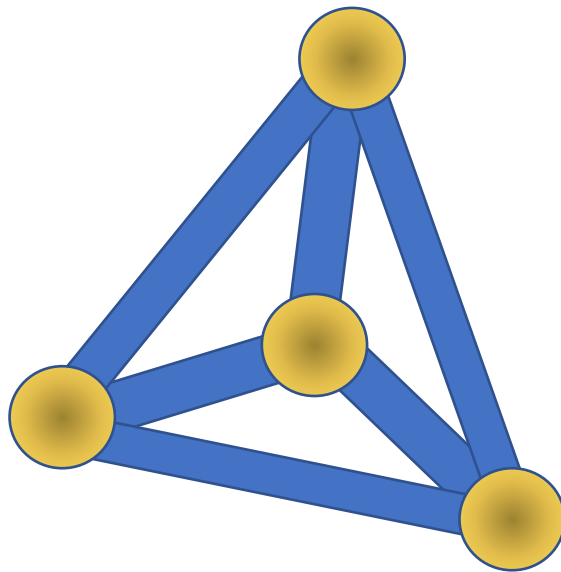# Assessment: Models of 3D objects

You can make models of 3D objects using straws and modelling clay.

This is how you can make a triangular pyramid called a tetrahedron.

It is made up of 6 straws and 4 balls of modelling clay.

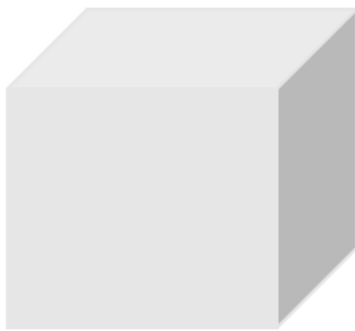**Task:** You have 26 straws and 17 balls of modelling clay.

Which of these objects can you make using all of your straws and balls of modelling clay?

square pyramid

square prism

hexagonal prism

triangular prism

Explain your strategy for working this out.

Assessment guide: Models of 3D objects

Use this guide to support your assessment of a student's knowledge and skills related to the following section of the Year 3 achievement standard.

By the end of Year 3, students make, compare and classify objects using key features.

The task requires students to visualise geometric objects such as prisms and pyramids using their knowledge of key features such as the shape and number of faces and/or surfaces, edges and vertices.

Students need to work out how many straws, which represent the edges, are required to make a 3D model of the object. They also need to calculate how many balls of modelling clay they need which represent the corners (vertices).

Students may use trial and error to work out number of straws and number of modelling clay balls.

Another approach may include making a table to work out what objects are able to be made from 26 straws and 17 balls of modelling clay.

Sample table

Object	Number of straws required	Number of balls of modelling clay required
triangular prism	9	6
square prism	12	8
hexagonal prism	18	12
square pyramid	8	5

Students should find that they can only make the **hexagonal prism** and the **square pyramid** using all 26 straws and all 17 balls of modelling clay.