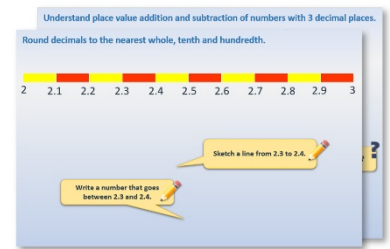


# Year 4: Week 5, Day 4

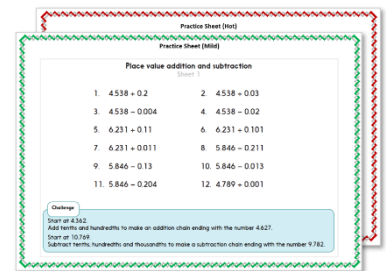
## 3-D shape (1)

Each day covers one maths topic. It should take you about 1 hour or just a little more.

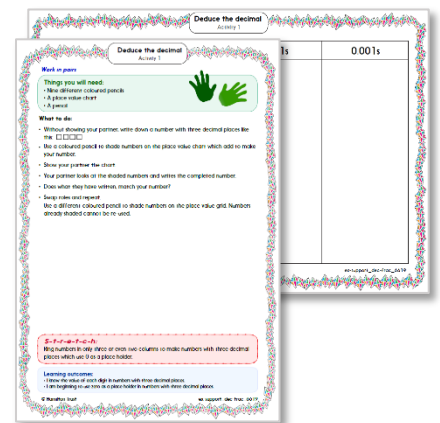
1. Start by reading through the **Learning Reminders**. They come from our *PowerPoint* slides.



2. Tackle the questions on the **Practice Sheet**. There might be a choice of either **Mild** (easier) or **Hot** (harder)! Check the answers.



3. Finding it tricky? That's OK... have a go with a grown-up at **A Bit Stuck?**

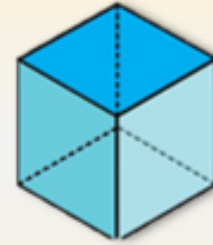


4. Think you've cracked it? Whizzed through the Practice Sheets? Have a go at the **Investigation**...

## Learning Reminders

Describe and name 3-D shapes and identify their properties.

Let's revise the names of  
3-D Shapes...



Cube



Cuboids



Cylinder



Sphere

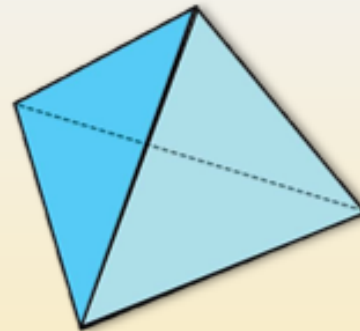
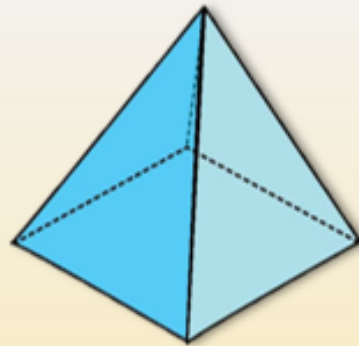


Cone

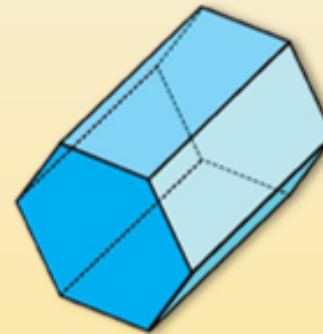
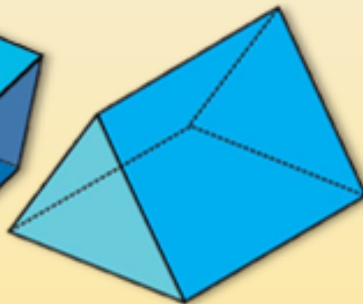
## Learning Reminders

Describe and name 3-D shapes and identify their properties.

Let's revise the names of  
3-D Shapes...



Pyramids



Prisms

## Learning Reminders

Describe and name 3-D shapes and identify their properties.

Let's check some 3-D  
shape vocabulary...

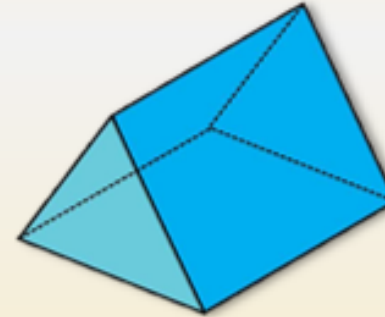
**Polyhedron** – a shape with polygon faces

Polyhedra have **faces, edges and vertices**

**Faces** – the 2-D shapes that make up the outside of a 3-D shape.

**Edges** – where the 2-D shapes meet along a joined side.

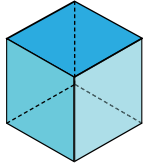
**Vertices** – the corners of the 3-D shape.



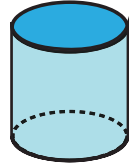
## Practice Sheet Mild

### Shape practice

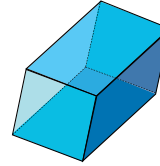
Fill in the missing shape information.



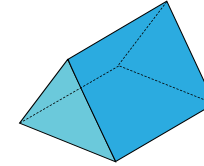
Name: \_\_\_\_\_  
 Number of faces: \_\_\_\_\_  
 Number of edges: 12  
 Number of vertices: 8  
 Shape of faces: 6 squares



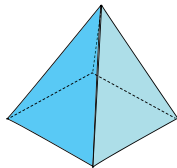
Name: \_\_\_\_\_  
 Number of faces: 3  
 Number of edges: \_\_\_\_\_  
 Number of vertices: 0  
 Shape of faces: 2 circles, 1 curved



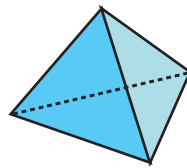
Name: cuboid  
 Number of faces: 6  
 Number of edges: 12  
 Number of vertices: \_\_\_\_\_  
 Shape of faces: \_\_\_\_\_



Name: triangular prism  
 Number of faces: \_\_\_\_\_  
 Number of edges: \_\_\_\_\_  
 Number of vertices: 6  
 Shape of faces: 2 triangles, 3 rectangles



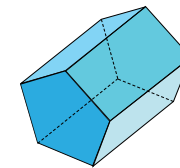
Name: \_\_\_\_\_  
 Number of faces: \_\_\_\_\_  
 Number of edges: \_\_\_\_\_  
 Number of vertices: 5  
 Shape of faces: \_\_\_\_\_



Name: \_\_\_\_\_  
 Number of faces: 4  
 Number of edges: 6  
 Number of vertices: \_\_\_\_\_  
 Shape of faces: \_\_\_\_\_



Name: \_\_\_\_\_  
 Number of faces: \_\_\_\_\_  
 Number of edges: 1  
 Number of vertices: \_\_\_\_\_  
 Shape of faces: \_\_\_\_\_

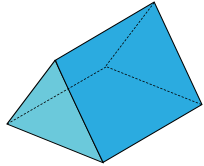


Name: pentagonal prism  
 Number of faces: 7  
 Number of edges: \_\_\_\_\_  
 Number of vertices: \_\_\_\_\_  
 Shape of faces: \_\_\_\_\_

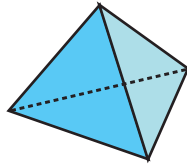
## Practice Sheet Hot

### Shape practice

Fill in the missing shape information.



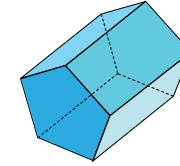
Name: triangular prism  
 Number of faces: \_\_\_\_\_  
 Number of edges: \_\_\_\_\_  
 Number of vertices: 6  
 Shape of faces: \_\_\_\_\_



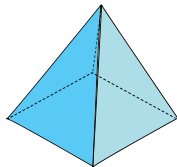
Name: \_\_\_\_\_  
 Number of faces: 4  
 Number of edges: 6  
 Number of vertices: \_\_\_\_\_  
 Shape of faces: \_\_\_\_\_



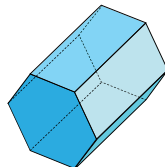
Name: \_\_\_\_\_  
 Number of faces: \_\_\_\_\_  
 Number of edges: 1  
 Number of vertices: \_\_\_\_\_  
 Shape of faces: \_\_\_\_\_



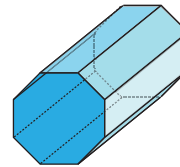
Name: pentagonal prism  
 Number of faces: 7  
 Number of edges: \_\_\_\_\_  
 Number of vertices: \_\_\_\_\_  
 Shape of faces: \_\_\_\_\_



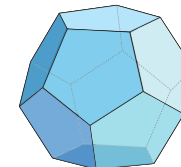
Name: \_\_\_\_\_  
 Number of faces: \_\_\_\_\_  
 Number of edges: \_\_\_\_\_  
 Number of vertices: 5  
 Shape of faces: \_\_\_\_\_



Name: \_\_\_\_\_  
 Number of faces: \_\_\_\_\_  
 Number of edges: \_\_\_\_\_  
 Number of vertices: \_\_\_\_\_  
 Shape of faces: 2 hexagons,  
6 rectangles



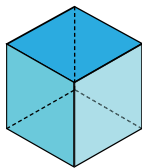
Name: octagonal prism  
 Number of faces: \_\_\_\_\_  
 Number of edges: \_\_\_\_\_  
 Number of vertices: \_\_\_\_\_  
 Shape of faces: \_\_\_\_\_



Name: dodecahedron  
 Number of faces: \_\_\_\_\_  
 Number of edges: \_\_\_\_\_  
 Number of vertices: \_\_\_\_\_  
 Shape of faces: \_\_\_\_\_

# Practice Sheet Answers

## Shape practice (Mild)



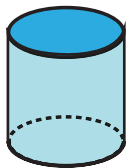
Name: cube

Number of faces: 6

Number of edges: 12

Number of vertices: 8

Shape of faces: 6 squares



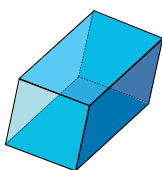
Name: cylinder

Number of faces: 3

Number of edges: 2

Number of vertices: 0

Shape of faces: 2 circles, 1 curved



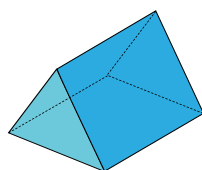
Name: cuboid

Number of faces: 6

Number of edges: 12

Number of vertices: 8

Shape of faces: 2 squares, 4 rectangles



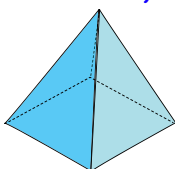
Name: triangular prism

Number of faces: 5

Number of edges: 9

Number of vertices: 6

Shape of faces: 2 triangles, 3 rectangles



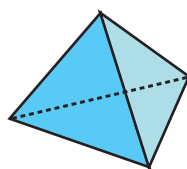
Name: square-based pyramid

Number of faces: 5

Number of edges: 8

Number of vertices: 5

Shape of faces: 1 square, 4 triangles



Name: pyramid

Number of faces: 4

Number of edges: 6

Number of vertices: 4

Shape of faces: 4 triangles



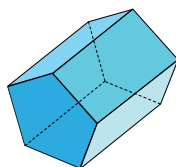
Name: cone

Number of faces: 2

Number of edges: 1

Number of vertices: 1

Shape of faces: 1 circle, 1 curved



Name: pentagonal prism

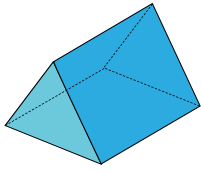
Number of faces: 7

Number of edges: 15

Number of vertices: 10

Shape of faces: 2 pentagons, 5 rectangles

## Shape practice (Hot)



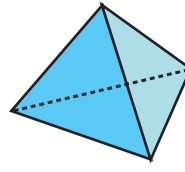
Name: triangular prism

Number of faces: 5

Number of edges: 9

Number of vertices: 6

Shape of faces: 2 triangles, 3 rectangles



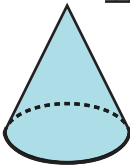
Name: pyramid

Number of faces: 4

Number of edges: 6

Number of vertices: 4

Shape of faces: 4 triangles



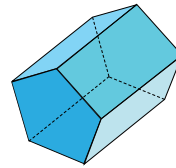
Name: cone

Number of faces: 2

Number of edges: 1

Number of vertices: 1

Shape of faces: 1 circle, 1 curved



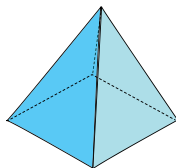
Name: pentagonal prism

Number of faces: 7

Number of edges: 15

Number of vertices: 10

Shape of faces: 2 pentagons, 5 rectangles



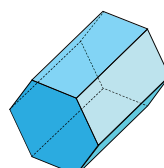
Name: square-based pyramid

Number of faces: 5

Number of edges: 8

Number of vertices: 5

Shape of faces: 1 square, 4 triangles



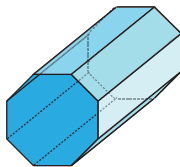
Name: hexagonal prism

Number of faces: 8

Number of edges: 18

Number of vertices: 12

Shape of faces: 2 hexagons, 6 rectangles



Name: octagonal prism

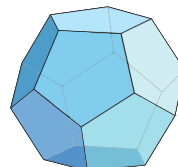
10

Number of faces: 24

Number of edges: 16

Number of vertices: 2 octagons,

8 rectangles



Name: dodecahedron

Number of faces: 12

Number of edges: 30

Number of vertices: 20

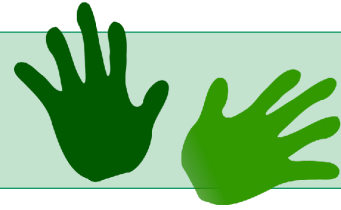
Shape of faces: 12 pentagons



## A Bit Stuck? Cube nets

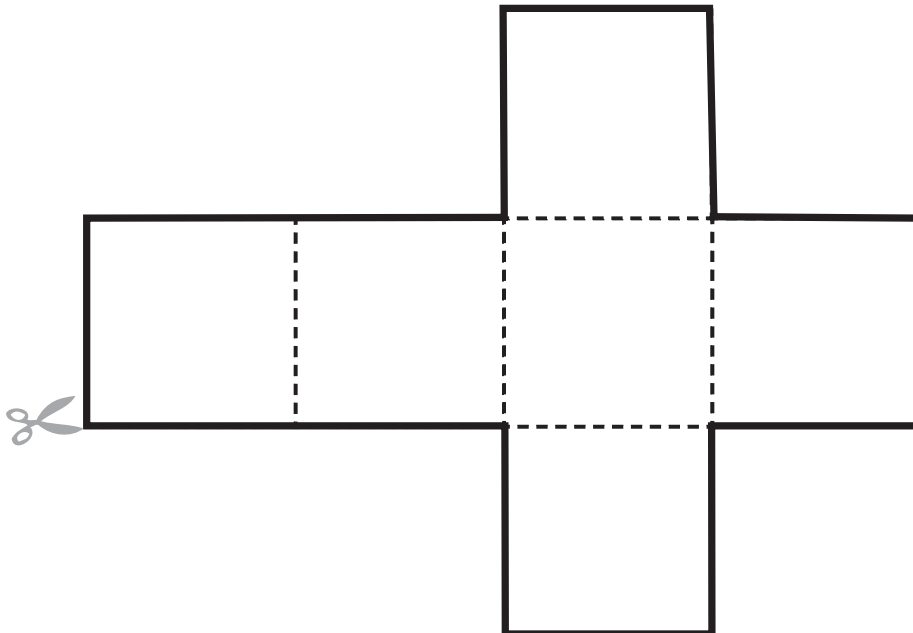
### Things you will need:

- Scissors
- Sticky tape



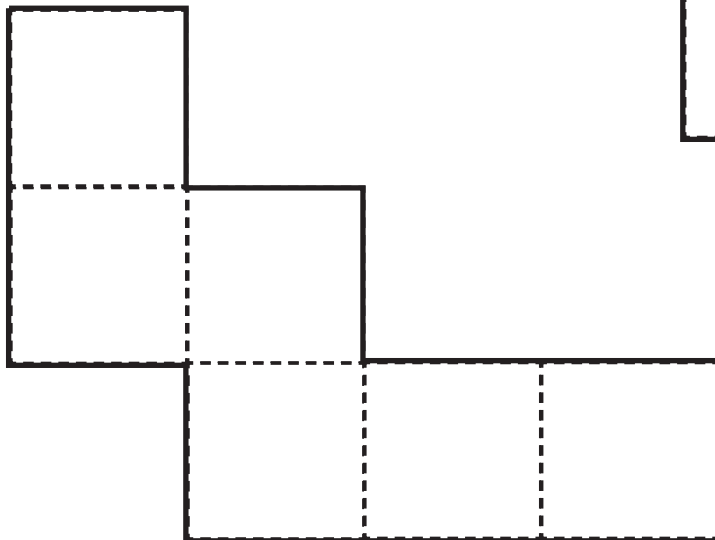
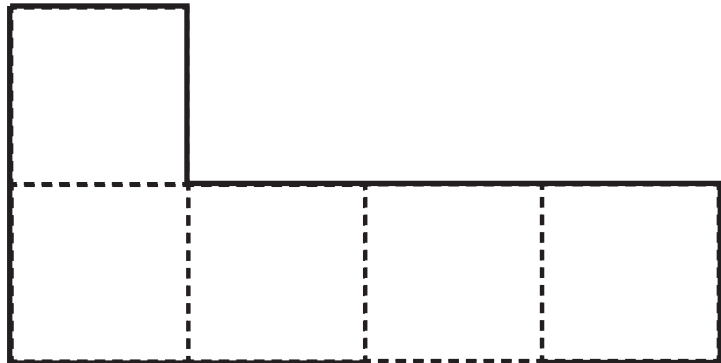
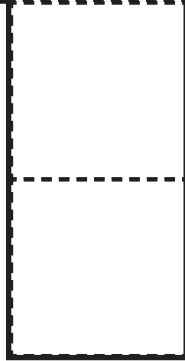
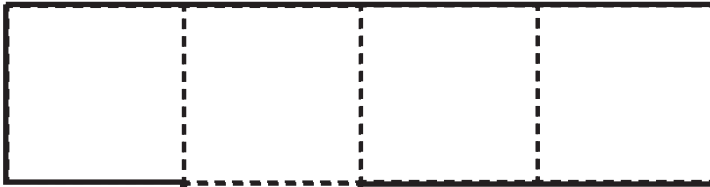
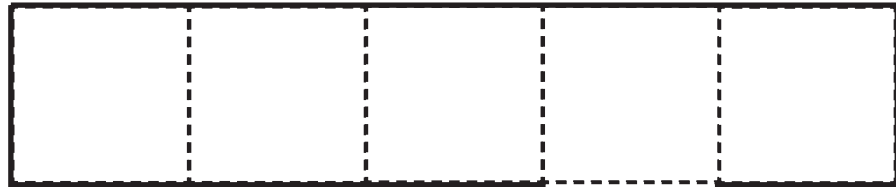
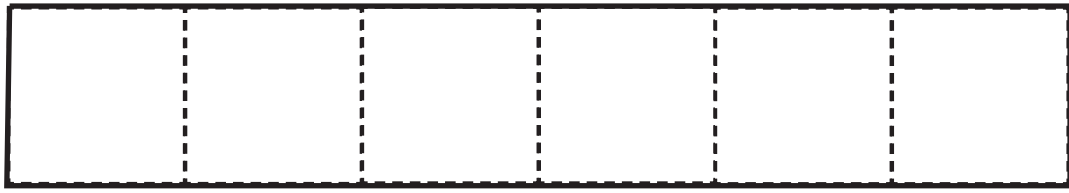
### What to do:

- Cut out this shape.  
It is called a net, a flat shape which folds to make a 3-D shape.
- Fold along the dotted lines, then use it to make a cube.  
Tape it to hold it in shape.



- Which of the following shapes do you think are cube nets?  
Cut them out and try to make them!

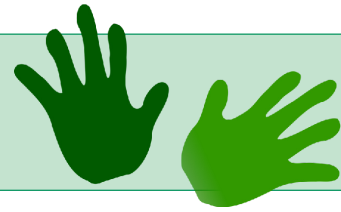
# A Bit Stuck? Cube nets



## Practical activity

### Things you will need:

- Scissors
- Sticky tape

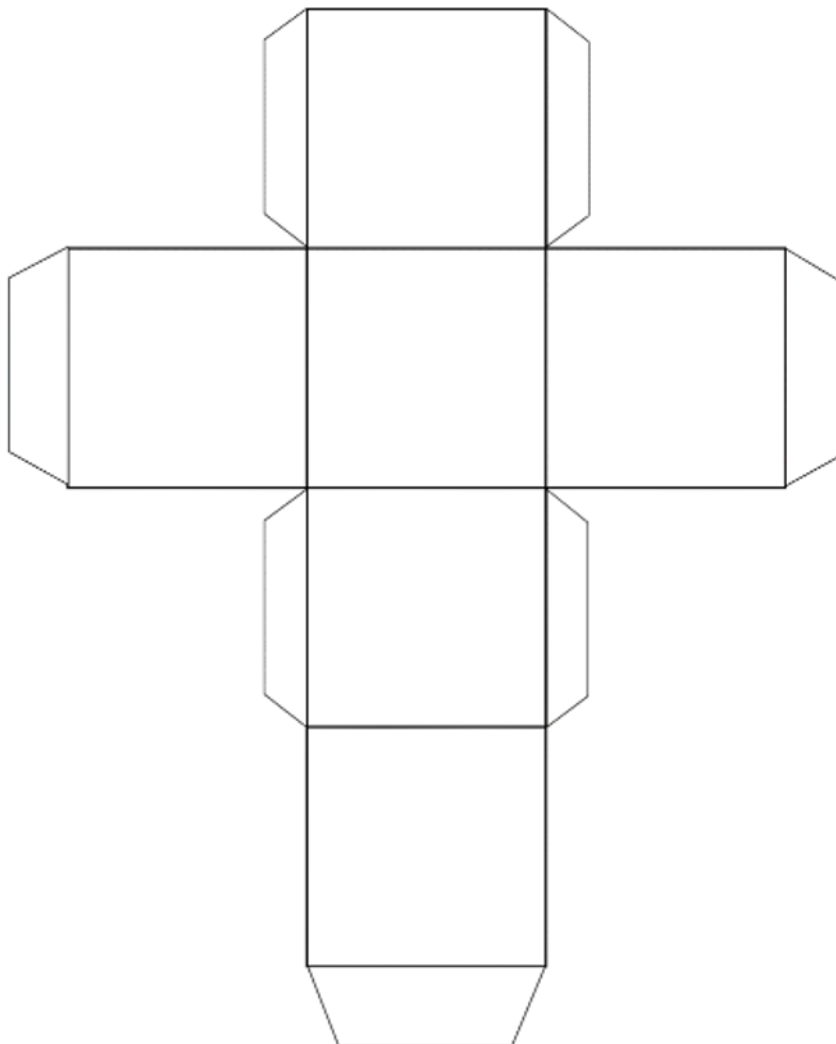


### What to do:

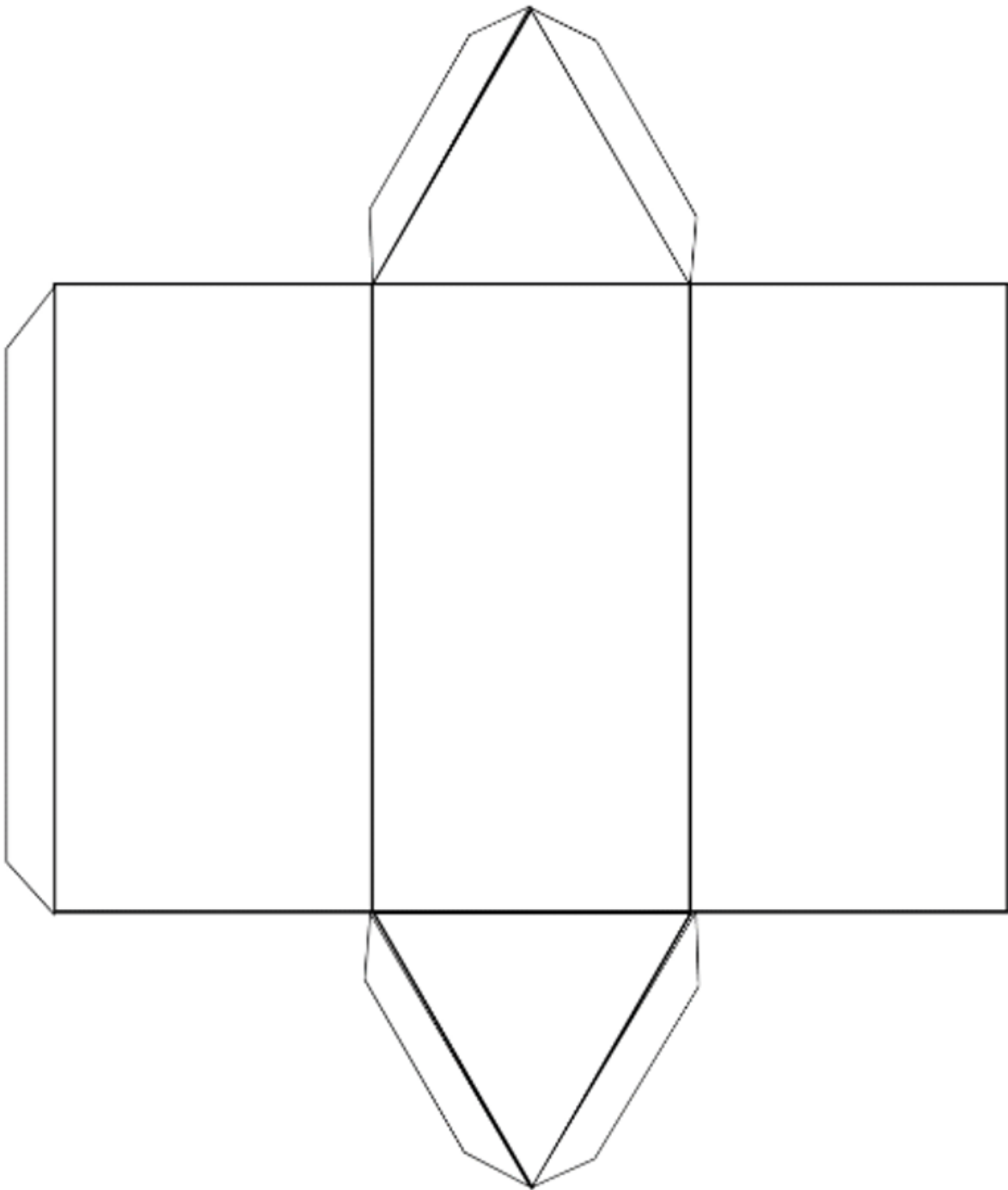
For this activity you will need a print-out of some of the nets, scissors and tape.

- Choose several of the nets to make into 3-D shapes.  
Can you name each shape? Describe it to an adult.
- Choose a 3-D shape.  
Can you make a different net that folds up to make the same shape?

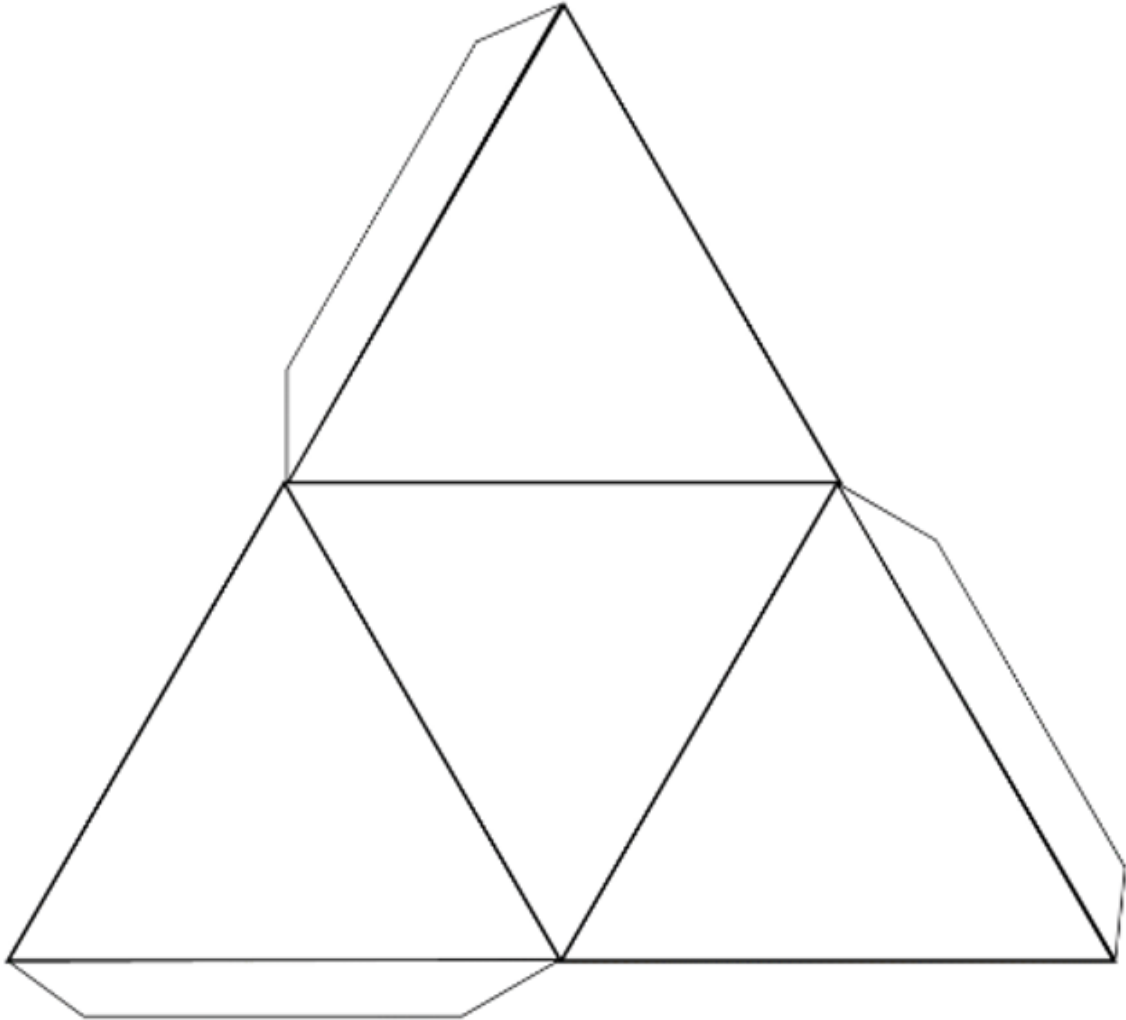
If you enjoy this, you can find some amazing nets at <https://www.polyhedra.net/en/model.php?name=octahedron>



**Practical activity**

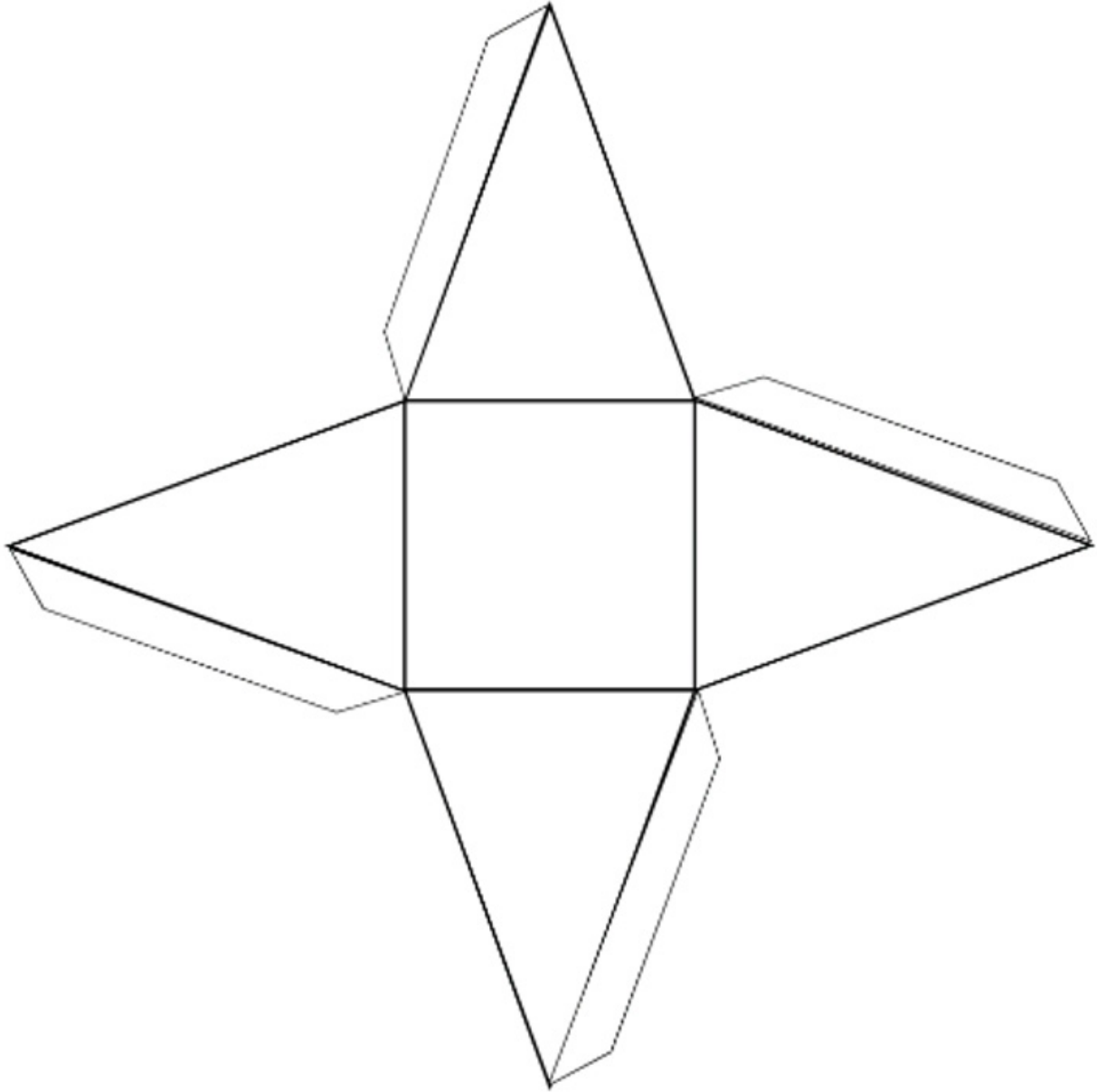


**Practical activity**





**Practical activity**



**Practical activity**

