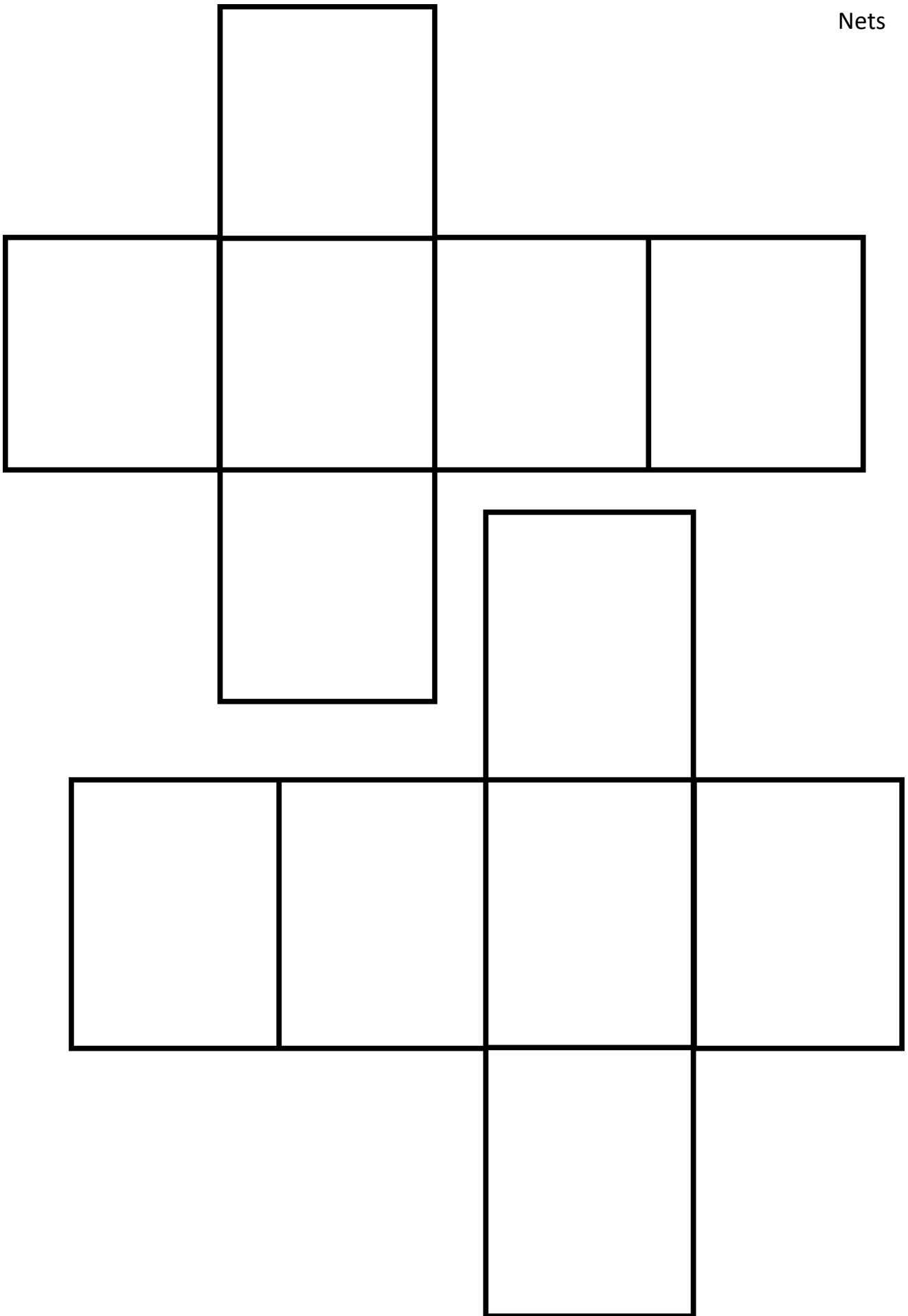


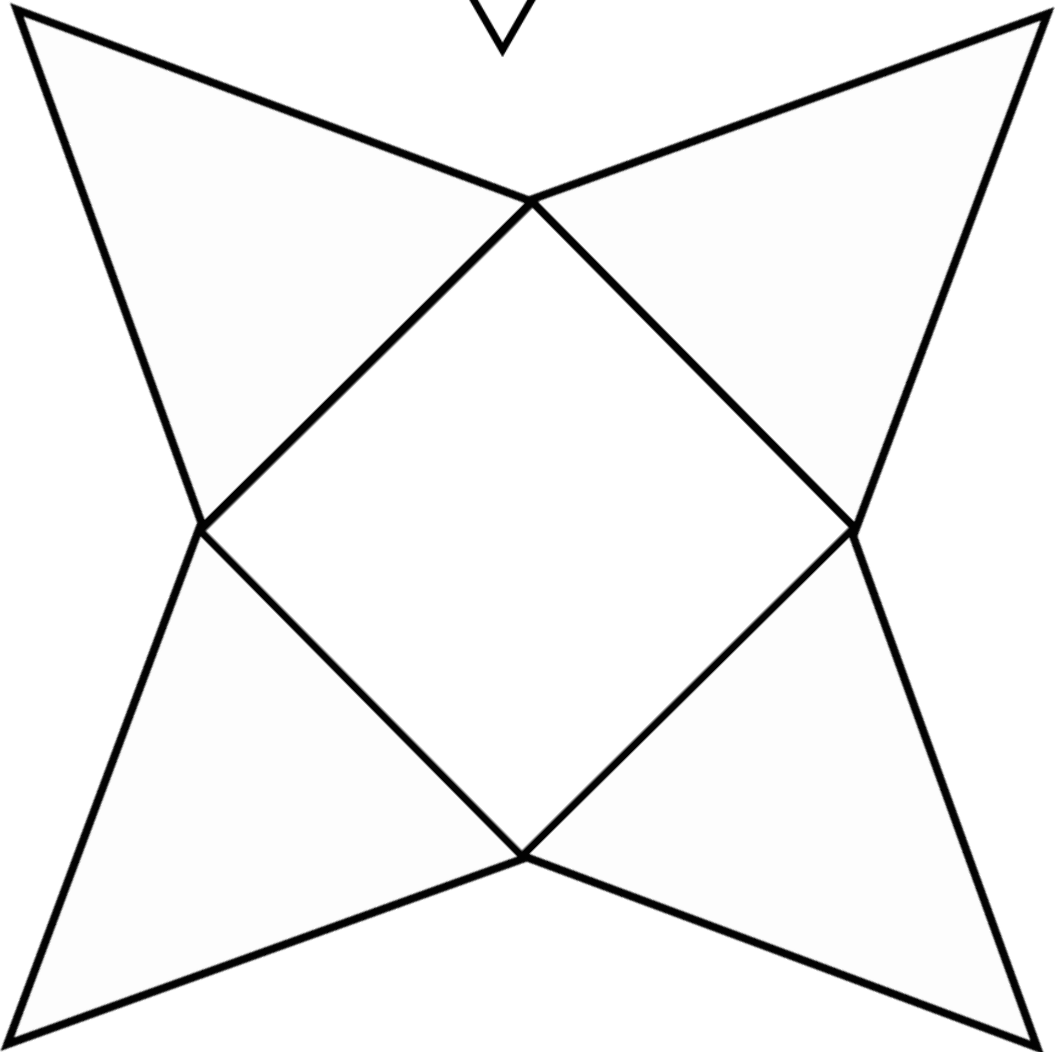
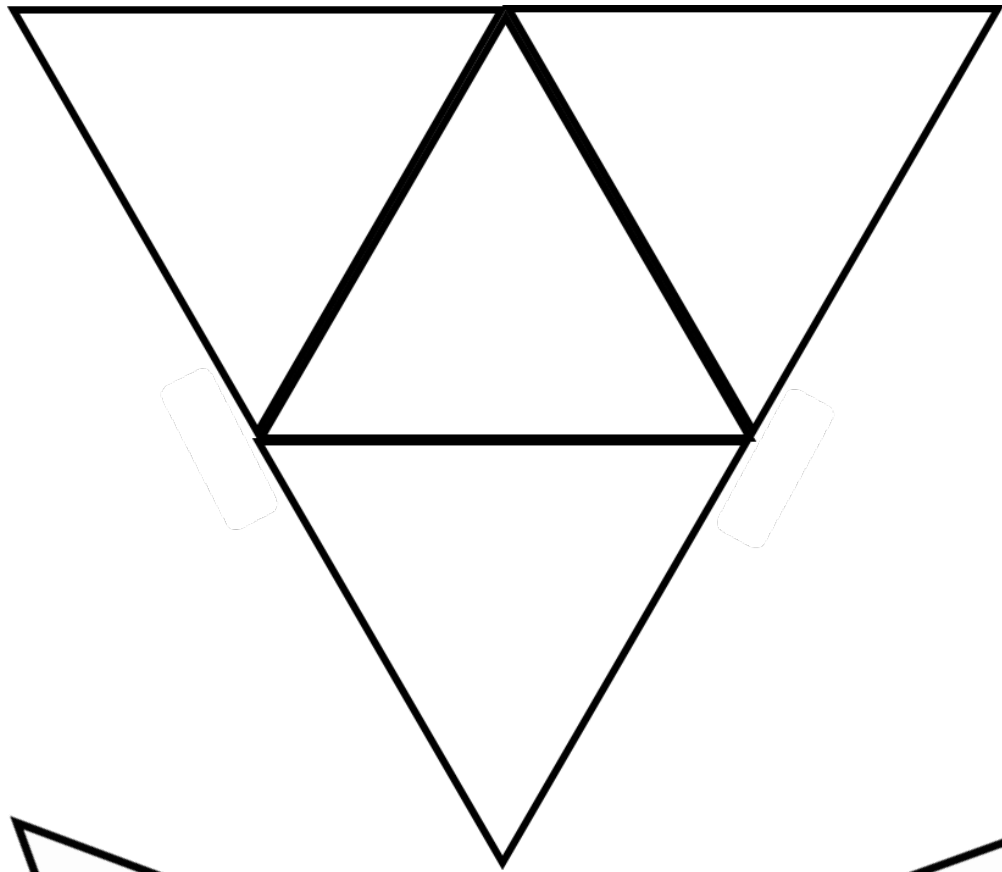
PRISMS, PYRAMIDS – FACES, BASES.

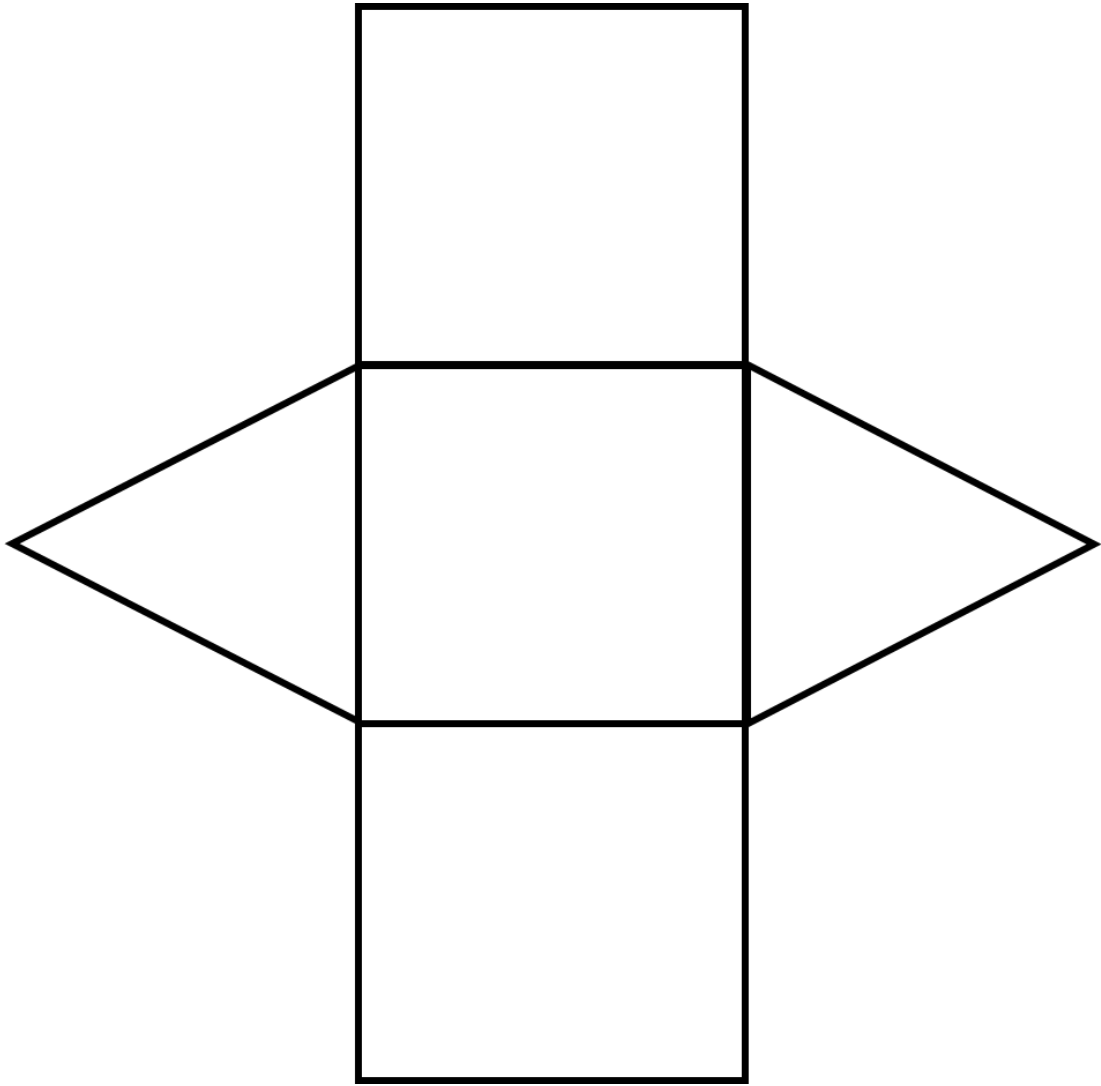
INVESTIGATIONS OVERVIEW PAGE

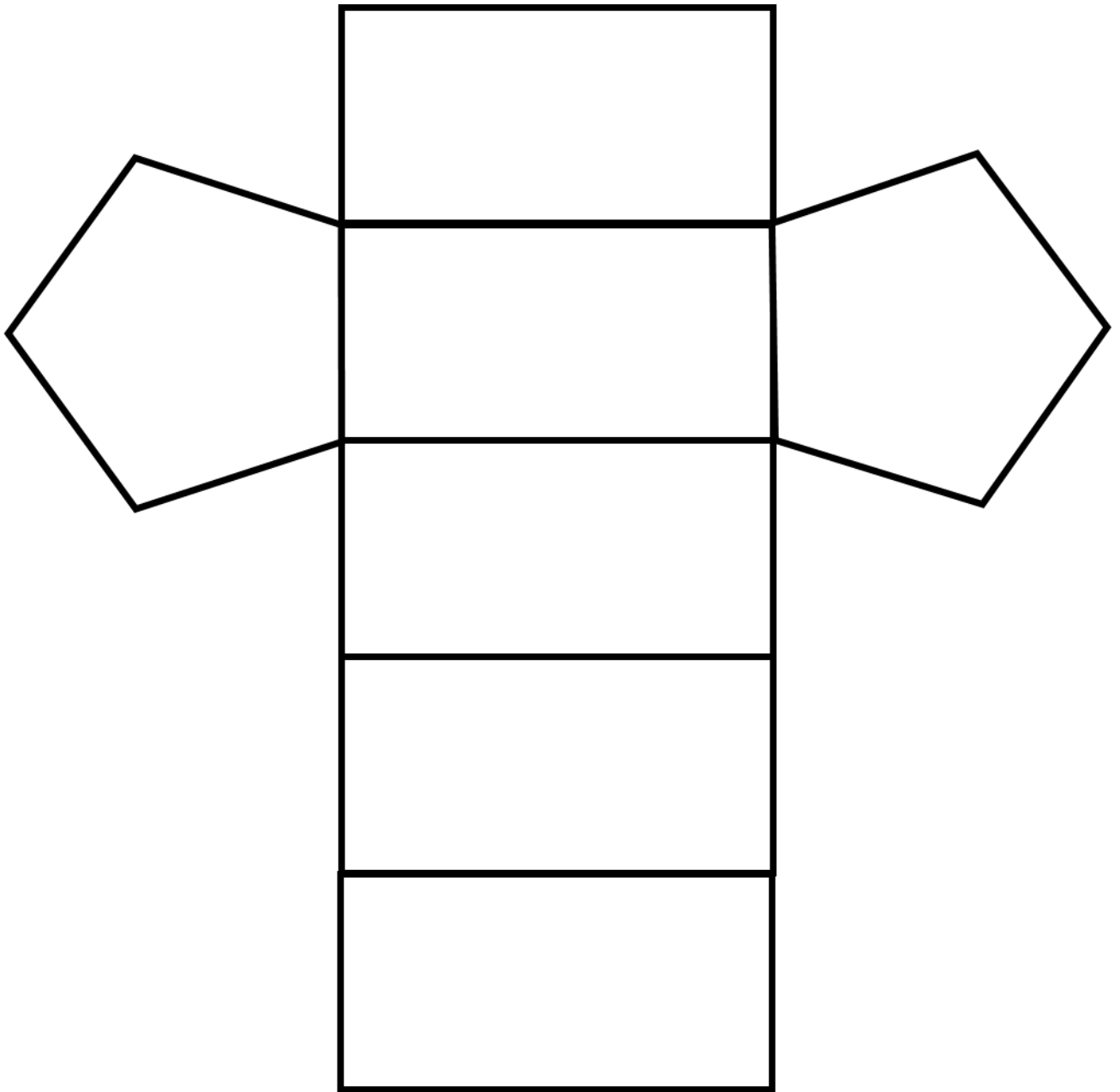
THIS PAGE IS A SUMMARY OF THE INVESTIGATIONS THAT STUDENTS MAY ENGAGE IN TO DEEPEN THEIR RELATIONAL UNDERSTANDING. INVESTIGATIONS WITH INSTRUCTIONS TO STUDENTS FOLLOW ON SUBSEQUENT PAGES.

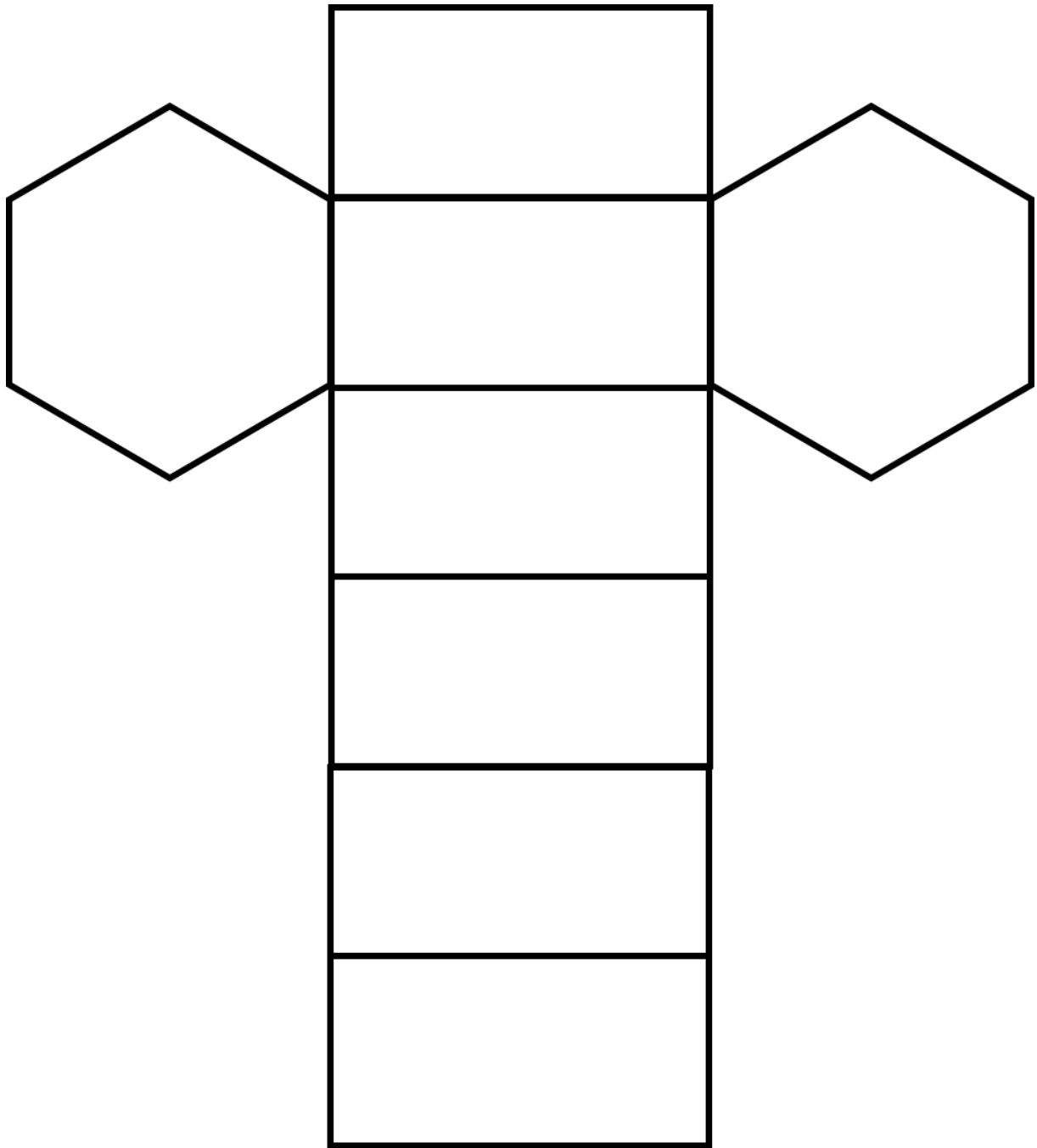
- In pairs or small groups, children select a prism or pyramid. They place it so that the base or a face that is not the base is facing them. They draw the prism or pyramid by placing a perspective point on a page and draw the prism or pyramid from one viewpoint and / or drawing the 2 bases of the prism and connecting the vertices on the bases with lines. They describe the faces, edges and vertices to a friend. They place the prism or pyramid so that a different face is facing them, and draw again from a different viewpoint, again describing the faces, edges and vertices to a friend. *Reflection: How can we use what we know about faces, edges and vertices on a prism or pyramid to draw it from different perspectives?*
- In pairs, children have the net of a prism or pyramid (on pages following these Investigations and Reflections). They describe the faces on the net. They fold the net to make the prism or pyramid. They describe the faces, edges and vertices to a friend. They name the prism or pyramid. They cut out the faces, and rearrange them to create different nets, and fold to see if it is still a net of the prism or pyramid. *Reflection: How can we create a prism or pyramid from its net?*
- In pairs, children have the net of a prism or pyramid (on pages following these Investigations and Reflections). They describe the faces on the net. They predict what prism or pyramid it will make. They fold the net to make the prism or pyramid. They describe the faces, edges and vertices to a friend. *Reflection: How can we use what we know about the faces, edges and vertices of a prism or pyramid to identify it from its net?*
- In small groups, children sit at each side of a table. In the centre of the table is a prism or pyramid. They discuss and describe the faces, edges and vertices. Each child draws the prism or pyramid from their viewpoint. They compare the drawings, identifying the faces, edges and vertices. They place them in order as if a person is walking around the prism or pyramid. This may form an artwork. *Reflection: How can we use what we know about faces, edges and vertices on a prism or pyramid to draw it from different perspectives?*
- Children draw a prism or pyramid from different viewpoints. They share their drawings with a friend who identifies the object. They discuss and describe the faces, edges and vertices. *Reflection: How can we use what we know about faces, edges and vertices on a prism or pyramid to draw it from different perspectives?*
- Children take photos of prisms and pyramids from different viewpoints. They discuss and describe the faces, edges and vertices. They use a program or app (for example, PowerPoint) to create an artwork or collage of the photos. *Reflection: How can we use what we know about faces, edges and vertices on a prism or pyramid to photograph it from different perspectives?*
- Children use computer programs such as <http://www.sketchup.com/> to draw three-dimensional objects in two-dimensional space. *Reflection: How can we use what we know about faces, edges and vertices on a prism or pyramid to draw it from different perspectives?*









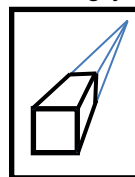


Prisms, Pyramids – Faces, Bases.

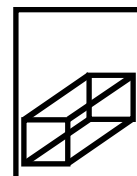
Select a prism or pyramid.

Place it so that the base or a face that is not the base is facing you.

Draw the prism or pyramid by placing a perspective point on a page and draw the prism or pyramid from one viewpoint, for example,



and / or drawing the 2 bases of the prism and connecting the vertices on the bases with lines, for example,



Describe the faces, edges and vertices to a friend.

Place the prism or pyramid so that a different face is facing you, and draw it again from a different viewpoint, again describing the faces, edges and vertices to a friend.

Reflection: How can we use what we know about faces, edges and vertices on a prism or pyramid to draw it from different perspectives?

Prisms, Pyramids – Faces, Bases.

Select the net of a prism or pyramid.

Describe the faces on the net.

Fold the net to make the prism or pyramid.

Describe the faces, edges and vertices to a friend.

Name the prism or pyramid.

Cut out the faces, and rearrange them to create different nets, and fold to see if it is still a net of the prism or pyramid.

Reflection: How can we create a prism or pyramid from its net?

Prisms, Pyramids – Faces, Bases.

Select the net of a prism or pyramid.

Describe the faces on the net.

Predict what prism or pyramid it will make.

Now fold the net to make the prism or pyramid.

Describe the faces, edges and vertices to a friend.

Reflection: How can we use what we know about the faces, edges and vertices of a prism or pyramid to identify it from its net?

Prisms, Pyramids – Faces, Bases.

In small groups, sit at each side of a table.

In the centre of the table place a prism or pyramid.

Discuss and describe the faces, edges and vertices.

Each of you draws the prism or pyramid from your viewpoint.

Compare the drawings, identifying the faces, edges and vertices.

Place the drawings in order as if a person is walking around the prism or pyramid.

You may use the drawings to form an artwork.

Reflection: How can we use what we know about faces, edges and vertices on a prism or pyramid to draw it from different perspectives?

Prisms, Pyramids – Faces, Bases.

Draw a prism or pyramid from different viewpoints.

Share your drawings with a friend.

Your friend identifies the object.

Discuss and describe the faces, edges and vertices.

Reflection: How can we use what we know about faces, edges and vertices on a prism or pyramid to draw it from different perspectives?

Prisms, Pyramids – Faces, Bases.

Take photos of prisms and pyramids from different viewpoints.

Discuss and describe the faces, edges and vertices.

Use a program or app (for example, PowerPoint) to create an artwork or collage of the photos.

Reflection: How can we use what we know about faces, edges and vertices on a prism or pyramid to photograph it from different perspectives?

Prisms, Pyramids – Faces, Bases.

Use computer programs such as <http://www.sketchup.com/> to draw three-dimensional objects in two-dimensional space.

Reflection: How can we use what we know about faces, edges and vertices on a prism or pyramid to draw it from different perspectives?