## Unit 1 Lesson 11: Polyhedra and Nets

### 1 What are Polyhedra? (Warm up)

#### Student Task Statement

Here are pictures that represent **polyhedra**:



Here are pictures that do *not* represent polyhedra:



1. Your teacher will give you some figures or objects. Sort them into polyhedra and non-polyhedra.
2. What features helped you distinguish the polyhedra from the other figures?

#### Activity Synthesis



### 2 Prisms and Pyramids

#### Student Task Statement

1. Here are some polyhedra called **prisms**.
* 
* Here are some polyhedra called **pyramids**.
* 
	1. Look at the prisms. What are their characteristics or features?
	2. Look at the pyramids. What are their characteristics or features?
1. Which of these **nets** can be folded into Pyramid P? Select all that apply.
* 
1. Your teacher will give your group a set of polygons and assign a polyhedron.
	1. Decide which polygons are needed to compose your assigned polyhedron. List the polygons and how many of each are needed.
	2. Arrange the cut-outs into a net that, if taped and folded, can be assembled into the polyhedron. Sketch the net. If possible, find more than one way to arrange the polygons (show a different net for the same polyhedron).

### 3 Using Nets to Find Surface Area

#### Student Task Statement

1. Name the polyhedron that each net would form when assembled.
* 
1. Your teacher will give you the nets of three polyhedra. Cut out the nets and assemble the three-dimensional shapes.
2. Find the **surface area** of each polyhedron. Explain your reasoning clearly.



© CC BY Open Up Resources. Adaptations CC BY IM.