

WRAP THE BOX

Name _____

Grade 6

Prior Knowledge:

A net is a two-dimensional representation of a solid.

Predictions:

Click on <https://www.nctm.org/Classroom-Resources/Illuminations/Interactives/Cube-Nets/> or look at Net 1 Sheet.

Which design will fold into a box? Write under each net “Yes” if you think it folds into a box or “No” if you do not think it folds into a box.

Activity:

6 of the nets have been enlarged for you and labeled Net A, Net B, Net C, and so on. Cut out the nets and fold them.

Which ones folded into a box?

Which one(s) surprised you and why?

Predictions:

What do you think surface area means?

Literacy Connection:

Read Wrappers Wanted: A Mathematical Adventure in Surface Area by Candice Brucke

After Reading:

What tools or information do you need to measure surface area?

Activity:

You need to cover one of the boxes you made with wrapping paper. How much do you need?

1) What is the shape of your box? Circle one.

- a. cube
- b. triangular prism
- c. rectangular pyramid
- d. cylinder

2) How many faces does your box have? _____

3) What are the dimensions of each face?

4) Estimate how many square inches or square feet of wrapping paper you need.

Estimated dimensions: _____ x _____

Cut needed wrapping paper or sections of wrapping paper to cover the box and tape where needed.

Understanding:

How did your estimate for the amount of wrapping paper needed compare to how much you used when wrapping the boxes? What might have accounted for some of the differences?

What are some situations where people might need to know the surface area of objects?

Extension: