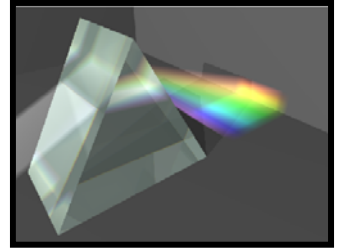


Lesson 9-2: Surface Area of Prisms and Pyramids

Hands-on Activity: *Area of a Prism*

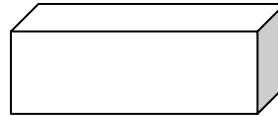


Objective:

Determine the surface area formula for prisms and pyramids.

Materials:

- 2 identical cardboard boxes (such as a tissue boxes)
- scissors
- rulers



Procedure:

1. Cut one box apart along all fold lines to form 6 rectangles
2. Find the length, width, and area of each of the 6 rectangles.
3. Find the sum of all 6 areas.
4. Measure the perimeter of the second box sitting in the normal position (tissues coming out of the top). Find the height of the box. Multiply the perimeter by the height. This is product #1
5. Next, measure the length and width of the top of the box. Multiply these together. Since the bottom of the box is identical to the top, double that for product #2.
6. Add together the products #1 and #2.
7. Compare the answer in #3 to the answer in #6. Can you see why it is faster to use the formula $SA = \text{perimeter} \times \text{height} + 2 \times \text{base area}$ or $SA = ph + 2B$
8. This same procedure can be used for prisms with any shape base.

