Name: _____

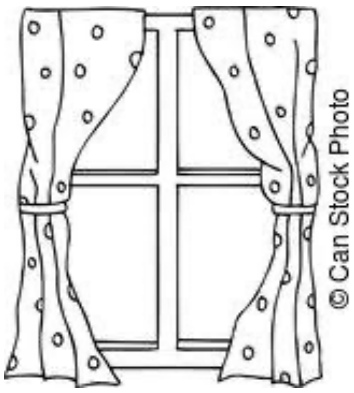
LIGHT INTENSITY ACTIVITY

1. Draw lines from terms in Column A to definitions in Column B:

Column A	Column B
Refraction	Allows all light to pass through
Translucent	Light bouncing off an object
Reflection	Does not allow light to pass through
Transparent	Light bending as it moves from one material to another
Opaque	Allows only some light to pass through

2. Describe these materials as *opaque (O)*, *translucent (TL)*, or *transparent (TP)*:

Plastic frame _____
Black paper _____
Tracing paper _____
White fabric _____
Patterned fabric _____
Plastic film _____
Silver UV filter _____



3. Predict which of the materials listed above will function similarly as window coverings by drawing arrows between the pairs.

Which of these materials do you expect to block the most light coming through a window?

(OVER)

<u>Light intensity</u>, or brightness over a given area, is measured in lux (lx).

4. Measure and record light intensity using the iPad and light metering App. Set Lux Light Meter Pro to "Front" and "Indoor." Measure light intensity by placing iPad on table behind plastic frame, with light shining through frame onto iPad. Press "sun" twice. Record center number (lx). Clear number by touching small max & avg numbers at top and bottom of circle.

Turn on clip lamp and measure light from clip lamp: _____lx

Place plastic frame in front of clip lamp and take reading: _____lx

The clip lamp represents the sun, and the plastic frame represents a window. Now place each of the following materials over the window to filter or block the sun. Take a reading for each material.

Black paper _____lx

Tracing paper _____lx

White fabric _____lx

Patterned fabric _____lx

Silver UV filter _____lx

5. Create a bar graph using the light intensity data.