KCS @ home

Summer Edition

First Grade Science

Activity 4

knoxschools.org/kcsathome

1st Grade Science: Summer Activity 4

How do different materials used in a stained-glass window affect the path of light?

Directions: This handout can also accompany a KCSatHome Teacher Video. If you have access to the video, watch the video before doing this activity. You can find the videos at https://www.knoxschools.org/Page/21816

Have you ever seen a stained-glass window? Look at this picture of stained glass. Can you see anything through it?

- Sometimes you can see clearly through a material (**transparent**);
- Sometimes you cannot see anything at all (**opaque**);
- Sometimes you can see a little (**translucent**); and
- Sometimes you get back an image (**reflective**)

Your Task: Build a stained-glass window and observe how the light from a flashlight can travel through the different materials you use.

Step 1: Make a plan. Find a variety of different materials around your house that are transparent, translucent, and opaque. Here are some ideas for materials.

- Construction paper
- Aluminum foil
- Waxed paper
- Plastic wrap/plastic baggy
- Plastic grocery bag
- Brown bag
- Wrapping paper
- Colored tissue paper

Step 2: Take your materials and create a picture or pattern (see pattern on page 3) by attaching them together with tape.

Step 3: Hold up your stained-glass picture and shine a flashlight on the different materials. Does the beam of light shine through any of the materials? Does it shine through completely, partially or not at all? Test each material. In the table on page 2, draw and label each item in the correct category.

Can you see the light?

Transparent see through	**Translucent** see through a little bit	**Opaque** cannot see through at all	**Reflective** to give back an image

1. Materials that let some light pass through are

   _____.

2. If you can see through material, it is

   _____.

3. To keep light out completely, use material that is

   _____.

Stained Glass Pattern

Directions: First, cut out the butterfly. Next, cut out all the white areas inside the butterfly. Last, tape your materials over the empty spots inside your butterfly.