

Name:

Alien Type:

## Looking Through Alien Eyes

Each group of 4 should have 4 colored visors, and an assortment of felt figures (pond, cloud, and tree). Do NOT look at the felt figures under the larger piece of felt until you have put your visor on. In this activity you are going to pretend that you are an alien from a planet orbiting another star. You want to find three earth objects (pond, cloud and tree) in their correct color as seen on Earth (blue, white and green). The challenge is that you will have to do so through alien eyes. Secure your visors with the paperclips on the back—you are now looking through alien eyes! Note the color of your visor at the top of this worksheet (red alien, blue alien or green alien). All the visible colors of the rainbow hit the filter on your visor, but only particular colors will make it through.

### Introduction Questions

Look around the room and find a familiar object (for example: a piece of clothing of a particular color). Think about how the color of this object changed now that you are looking through alien eyes.

- 1) What color objects do you expect will look bright through the red filter?
- 2) How will blue or green objects look when viewed through the red filter?

### Identifying the Green Tree

Retrieve the tree shaped felt cut-outs and place them in front of your group.

- 3) Ask the red alien to identify which trees look dark. Are the trees that appear dark to the red alien good candidates for being the green tree? If yes, keep them and place the others off to the side. If no, place them off to the side.

4) Ask the blue alien to identify the best candidates for the green tree. Do these candidates appear bright or dark to the blue alien?

5) Finally, ask the green alien to pick his or her top choice for the green tree. If there is disagreement on which tree is the true green tree, discuss within your group and try to reach a consensus. Record any important discussion points here.

## **Identifying the Blue Pond**

Retrieve the pond shaped felt cut-outs and place them in front of your group. Follow a similar process as above to identify the blue pond. Start with the red alien eliminating some of the choices, then the green alien, and finally the blue alien.

6) Is there a pond that appears bright to both the red and blue aliens? If so, is this pond likely to be blue? Why or why not?

7) Record any import discussion here if there is disagreement on which pond is the blue one.

## **Identifying the White Cloud**

Retrieve the cloud shaped felt cut-outs and place them in front of your group. Follow a similar process as above to identify the white cloud.

8) White light contains all the colors of the rainbow. Write down a strategy (or process of elimination) for determining which cloud is the white cloud.

## Challenge Questions

You may now remove your visors and see how well you did!

9) In this activity you used filters to help you sort objects. Give one example of how astronomers use filters in their observations.

10) You also used filters to help simulate looking through alien eyes. If you were an alien living on an exoplanet around an A type star, what kind of light might you be most accustomed to? What about if you were an alien living around an M type star? How is this different than on Earth?