

1.3 Fading C.J.

Description

This experiment illustrates how sunlight changes the physical properties of an object. Students discuss the helpful and harmful effects of the sun. The total time to complete this experiment is two to four days. The first day, the students set up their experiments. The remaining days are used to detect any changes caused by sun exposure.

Activity

1. Students brainstorm harmful and helpful things the sun does. Record answers on chart paper and ask students to determine which column the item belongs in.
 - a. Helpful effects of the sun include: warming the Earth so people, plants, and animals can live and grow, as well as giving light so we can see.
 - b. Harmful effects of the sun include: melting things like ice cream; making things like streets and sidewalks hot; drying out and burning plants; making you thirsty; causing your skin to turn red and hurt. Be sure that sunburn is included in the discussion.
2. Pair students and hand out one C.J. Packet to each pair. One team member colors and cuts out the sun safe clothing (wide-brimmed hat, sunglasses, long-sleeved shirt, long pants, and shoes). The other member colors and cuts out the not sun safe clothing (sun visor, tank top, shorts). Be sure he or she keeps the sun safe and not sun safe clothes separate. Note that if students have difficulty with using scissors, a teacher's aide may need to help with this activity.
3. Tell the students to lightly glue or tape the not sun safe clothes on the sun safe Fading C.J. (these include a wide-brimmed hat, sunglasses, long-sleeved shirt, long pants, and shoes).
4. Tell the students to lightly glue or tape the sun safe clothes on the not sun safe Fading C.J. (these include a sun visor, tank top, and shorts).
5. Ask students to compare their Fading C.J.s to the examples created by the teacher.
6. Each team should locate a place where the sunlight is bright and tape up their two pictures so the sun hits them directly, such as on a window or windowsill. Let the sun do its work for two to four days.
7. Explain to students that this is an experiment and they will have to monitor the changes that occur.
8. Ask students to complete the C.J. Prediction Worksheet. You may need to explain that a "prediction" is a statement about what you think will happen in the future. Students will predict what will happen to C.J. over the next four days.

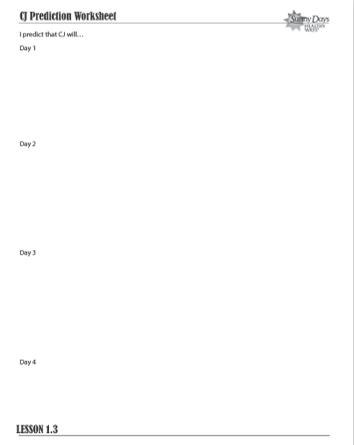
Learning Outcomes

Students will be able to:

- ☀ List the helpful and harmful effects of the sun.
- ☀ Identify the sun as a powerful source of light which can change the characteristics of things.
- ☀ Describe the relationship between the sun and changes in skin color.

Preparation

- ☀ Prepare Fading C.J. Packets: Print copies of Fading C.J.s from the website. NOTE -- It is important to use construction paper for the C.J. cutout or another type of paper that will fade when exposed to the sun.
- ☀ Print copies of the C.J. Prediction Worksheet from the website.



- ☀ Create a table on chart paper with the following headings: harmful and helpful.
- ☀ Prepare examples of C.J. wearing sun safe clothing and not sun safe clothing.

List of Supplies (see next page)

1.3 Fading C.J.

9. After a few days, have the students collect their cutouts of C.J. Ask them to gently remove the paper clothes from C.J. Has the sun changed the color of C.J.'s unprotected skin? (Yes, the parts of C.J.'s body that were not covered by clothes have faded and changed color).
10. Have each team compare their two pictures and begin a discussion on how the sun's rays damaged (faded) the area not covered by the paper clothes.
 - Which C.J. has more faded skin? (The one with the not sun safe clothes).
 - How does this relate to your skin and how you dress? (Unprotected skin can be damaged by the sun's harmful rays. The sun can change your skin color and cause freckles, a tan, or sunburn. The more clothes you wear that cover your skin, the more your skin will be protected from getting freckles, a tan, or sunburn).
 - It is important to protect yourself from the sun's strong rays.

Assessment

On a sheet of notebook paper, ask each student to list (or draw) three types of clothing that would protect their skin from the damaging rays of the sun.

List of Supplies

- ☀ Construction paper (or other paper that will fade in the sun)
- ☀ Scissors
- ☀ Fading C.J. Packets located on the website
- ☀ Chart paper
- ☀ Copies of C.J. Prediction Worksheet from the website
- ☀ Notebook paper
- ☀ Teacher-prepared examples of C.J. wearing sun safe clothing and not sun safe clothing. See below for examples:

CJ Prediction Worksheet



I predict that CJ will...

Day 1

Day 2

Day 3

Day 4