I Can See and Feel the Change in the Seasons

Summary
Students use their senses to investigate changes in the seasons.

Main Core Tie
Science - Kindergarten
Standard 2 Objective 3

Time Frame
2 class periods of 15 minutes each

Group Size
Large Groups

Materials
For the teacher:
- umbrellas, boxes, or large pieces of butcher paper
- digital camera
- collecting bag
For each student:
- exploration kit with materials to help investigate the particular season
- clipboard
- paper
- pencil
- crayons (optional)
- thermometer
- magnifyer
- black sheet of construction paper to collect snowflakes (investigating winter)
- appropriate dress for the season

Background for Teachers
Seasons change as our earth rotates around the sun. When we receive more direct sunlight, the result is summer heat; as the earth tilts away from the sun, we lose heat and experience winter cold. These changes happen gradually and we see and feel evidence of change all around us.

Intended Learning Outcomes
- Display a sense of curiosity.
- Demonstrate aesthetic awareness.
- Apply prior knowledge and processes to construct new knowledge.
- Develop vocabulary.

Instructional Procedures
1. In early fall, when temperatures are still relatively warm, go on an exploratory walk to help students see and feel the signs of the season. Give each student a clipboard with paper and pencil. If desired, bring "exploration kits" (which could include crayons, clipboards, pencils, paper bags, thermometers, magnifiers, bug jars, etc.) for the students to use. Students observe signs of the season and record
their findings on their clipboards. Students can collect objects that are signs of the season and place them in the class collecting bag for later discussion or extension activities.

2. Have students stand in the sun for several minutes. What do they feel? Have students orally describe what they feel. Have students brainstorm what they could do to be cooler. (If possible, try the students' suggestions.) Using the umbrella, box, or paper, let students try standing in the shade. Ask students to describe what they feel. Is it different in the shade? What happened when the cover was over their heads? Why? What heats our earth? What is happening in the fall? Record student observations on a class language experience chart for comparison with other seasons.

3. Repeat the activity with each new season (or as often as desired). Taking photographs of each seasonal outing enhances seasonal comparisons. Have students explore the same ideas in each season: how the sun feels, what they see around them, whether shade feels any different, what they would do to warm up/cool down, etc.

4. Keep and compare data from these walks. As the year progresses, students will have visual reminders of how the world around them has changed.

Strategies for Diverse Learners
Learn the names of some of the objects from the collection bag in a different language. If a child has recently moved from a different country or location, ask the child about seasons there. Is winter always in December? Is winter always cold? Do some places stay cold all the time?

Extensions
1. Gather two of each of the following items: plastic spoons, containers of water, metal spoons, ballons, or balls of clay. Ask students to predict what will happen when the objects are placed in the shade or in the sun. Place one of each object in the direct sunlight and the other in complete shade. Return to the classroom. On a poster or chalkboard, make a chart. List "Sun" and "Shade" across the top; list the items down the left side. Discuss and record student predictions for what will happen to each object. After the objects sit for an hour, return and feel them. Have students describe how each object feels and record the results. Compare results with the students' predictions. Compare and contrast which objects feel the hottest and the coolest. Repeat the activity in a different season. Compare the relative temperatures of the objects in the two different seasons. Discuss differences in their observations.

2. Take a walk outside. Have the students find a partner and take turns being each other's shadow. When do we see a shadow? Play shadow tag. Have students identify where shadows come from. Use flashlights in a darkened classroom and let students make shadows on the wall or movie screen. Literature resources: Asch, F. (1990). Bear Shadow NY: Scholastic, Inc. ISBN 0-590-44054-3. Bear sets out to get rid of his shadow because it scared the big fish away. When the shadow keeps coming back, the bear makes a deal.

Assessment Plan
The students' clipboard papers offer a way to assess each child's observation skills, drawing and writing skills, and ability to note changes in the seasons. If the activity is continued throughout the year, the teacher can observe how each child progresses in these areas.

Bibliography
Now I Know Changing Seasons

Authors
- Julie Cook
- Teresa Hislop
- Elasha Morgan