

**Project FOCUS
Best Lessons
FOURTH GRADE**

Title of Lesson: Changing of the Seasons

Theme: Earth/Space Science

Unit Number: **Unit Title:** Weather

Performance Standard(s) Covered (enter codes):

Enduring Standards (objectives of activity):

Habits of Mind

- Asks questions
- Uses numbers to quantify
- Works in a group
- Uses tools to measure and view
- Looks at how parts of things are needed
- Describes and compares using physical attributes
- Observes using senses
- Draws and describes observations

Content (key terms and topics covered):

Rotation, Revolution, Solstice, Equinox, Equator, North Pole, South Pole, Hemisphere, Seasons

Learning Activity (Description in Steps)

Abstract (limit 100 characters): This activity will demonstrate how the revolution of the Earth causes the seasons.

Details: First I asked the students if they knew what the seasons are and what caused them? I then defined revolution and rotation and explained how the Earth revolves around the Sun and rotates around its own axis. We then discussed how it takes 1 year (365 days) for the Earth to revolve around the Sun and how it takes 24 hours for Earth to rotate on its axis, which causes day and night. You can use the flashlight to demonstrate what one day is like and how different sides of the Earth experience day and night at different times. I then explained how Earth is tilted on its axis and that causes the Sun to hit Earth unevenly. I then used the flashlight and the tilted, labeled ball to demonstrate how the light hits one side more directly, explaining that this is why the Northern Hemisphere and the Southern Hemisphere have opposite seasons. I then defined Summer Solstice, Winter Solstice, Vernal Equinox, and Autumnal Equinox. Next I asked for student volunteers - one child to be the Sun and one to be the Earth. I got the student who was the Earth to start revolving around the Sun. When they were in the position of different seasons I asked the other students to see what season it was. After they figured that out, I asked for a volunteer to hold up a sign displaying what season it was after that position. re

Materials Needed (Type and Quantity):

1. Medium to large bouncy ball (or globe) with the Equator and the North and South Poles labelled.
2. Flashlight
3. Signs that are labelled with the Equinox and Solstices.

Notes and Tips (suggested changes, alternative methods, cautions):

I made 2 worksheets - one where the students had to label the Hemispheres, Solstices, and Equinoxes. On the other they had to draw what type of weather they thought would be occurring in different parts of the world on June 21st (the Summer Solstice.)

Sources/References:

- 1)
- 2)
- 3)