

Teacher: Miss Kachmor **Date:** Fall 2007 **Grade:** 2 **Lesson title:** Many changes of the seasons

Many changes of the seasons

Lesson Overview: In this lesson about the many changes of the seasons students will work separately and then cooperative in groups to better understand the earth's orbit around the sun and how that makes the seasons change. They will know where the north and south poles are and also learn that when they are tilted they will show them why we have seasons.

Academic Goal: Second grade students will explore the sun and understand why we have four different seasons.

Performance Objectives:

Given lined paper students will write legibly what they recall from previous books read to them and given vocabulary words and writes at least one fact they learned about the seasonal changes.

Given an orange and a flash light students will work in a group and demonstrate why we have seasons.

Students will identify the characteristics of the sun in the day and night and share their thoughts with the class.

Social Goal:

Second grade students will use social skills such as talking, listening and helping their group members and participate in active learning.

Performance Objectives:

Given the proper materials and instructions each group will participate in their cooperative learning groups and will be graded on their participation by using the group processing rubric.

Given a specific writing assignment each student will complete the assigned task and be graded on their ability to follow directions and also by using a writing rubric.

STANDARDS

MST Standard 4: Science

Key Idea 1- Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

Performance indicator- Describe patterns of daily, monthly, and seasonal changes in their environment

Performance Indicator- Observe and describe properties of materials using appropriate tools

MST Standard 6: Interconnectedness: Common Themes

Key Idea 1- Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning.

Performance indicator- Analyze, construct, and operate models in order to discover attributes of the real thing

ELA Standard 1: Language for Information and Understanding

Key Idea 1- Students will listen, speak, read, and write for information and understanding. As listeners and readers, students will collect data, facts, and ideas; discover relationships, concepts, and generalizations; and use knowledge generated from oral, written, and electronically produced texts. As speakers and writers, they will use oral and written language that follows the accepted conventions of the English language to acquire, interpret, apply, and transmit information.

Performance Indicator- Ask specific questions to clarify and extend meaning

Performance Indicator- Present information clearly in a variety of oral and written forms such as summaries, paraphrases, brief reports, stories, posters, and charts

Materials-

1. K-W-L chart (Appendix A)
2. Book: *Sunshine Makes the Seasons* by Franklyn Branley
3. Oranges (Enough for half of your class to have one.)
4. Flashlights (Enough for the other half of your class.)
- Pencils (Enough for half of your class to have one.)
6. Push pins
7. Permanent markers
8. Large piece of blue construction paper folded in half for each student
9. Dictionaries

10. Writing paper and pencil

Group Size-

The class will be split in half and half of the class will have oranges and the other half will have flashlights for the group activity.

Roles-

Half of the class will be given a sharpened pencil and an orange. (*You will want to help students push the pencil in the orange to represent the axis.*) The other half will have a flashlight. Give each group a permanent marker and a push pin. Have each group mark the North and South Poles and the equator. Have the students push a pin in the orange to mark where they live. The other group will have flashlights to shine on the orange to show the seasons.

Introduction-

Task and cooperative goal structure

To get the students motivated and excited to learn about why the seasons change I will read them a book *Sunshine Makes the Seasons* by Franklyn Branley. This book emphasizes on the seasonal changes that occur due to the sun. The main words the students need to understand are pole, axis and rotate.

The students will be told that they will be split into two groups and the teacher will help to assist them with their assignments.

Each student will also be responsible for filling out a KWL chart, complete a hand writing activity and be able to identify and describe the characteristic of the sun.

DEVELOPMENT SIM/ cooperative learning

I will explain to the class that this activity is designed so they can have a visual idea of what occurs with the sun and land during the change of the seasons. They will learn why the sun rotates and how that causes the season to change four times a year. In order to do this the class will be divide in half. Half will have an orange and the other half will have flashlights and working together we will see why the seasons change.

One person holds the orange while the other person holds the flashlight. Keeping the Axis(the pencil) straight up and down on the earth/orange, walk around the flashlight in a circle while rotating the orange. A complete turn of the orange would be one day and a complete orbit/circle would be the same as a year. Because the axis is straight up and down there would be no change in seasons. Next the students will tilt the axis so the North Pole is tilted away from the sun/flashlight and follow the same process. This will show why we have seasons.

After this each student will individually fill out the rest of their KWL chart with the information they learned about the seasons and the sun. Since there is not a specific job for each student they will pair up with a classmate on the other side, so one has an orange and one has a flashlight. They will take turns rotating and shining the flashlight and then they will both describe what just happened. The class will then be given an evaluation form so they can assess themselves. This will tell me what each student gathered from the lecture, reading as well as the hands on activity.

GUIDED PRACTICE/ MONITORING AND INTERVIEWING

The teacher will monitor the class as they work in their groups with one another to see how well they work together as well as how well they understand the concept. Then when the groups break and they write about what they learned I will see if they have one fact at least from what they learned today. They will all be asked to copy down a story and I will check to see how legibly their handwriting is.

They will then write to me what they personally thought about the book read to them, the activity done and if they enjoyed learning about the seasons, sun, orbit, axis and the poles.

All of the students must learn to work in groups and gain more experience working in groups that are both large and small.

CLOSURE/ ASSESSING AND PROCESSING

In order to assess each student I will use a group evaluation form as well as a group rubric to better assess each student's individual learning. The final groups write up will show me what the class learned together.

I will assess their social skills by walking around the room and seeing how each group works together and communicates.

I will assess each student individually on their ability to follow the directions given to them to copy a story I give to them and write legibly so other class mates can read it.

I will respond to each student and give them written feedback on their groups skills and individual skills as well.

CRITIQUE OF LESSON

Was I clear when explaining the main objective?

Were the directions specific enough for another teacher to be able to teach the lesson?

Was the activity a good way to teach about the seasonal changes?

Was I able to properly assess the students?

Was I clear in explaining the parts of the lesson?

Were the students able to comprehend what they were assigned?