

Lesson Plan Title

What Does The Sun Do?

Grade Level

Kindergarten

Subject Area

Science

MSCCRS

E.K.8B Students will demonstrate an understanding that the Sun provides the Earth with heat and light.

E.K.8B1 With teacher guidance, generate and answer questions to develop a simple model that describes observable patterns of sunlight on the Earth's surface (day and night).

E.K.8B2 With teacher guidance, develop questions to conduct a structured investigation to determine how sunlight affects the temperature of the earth's natural resources (e.g., sand, soil, rocks, and water).

E.K.8B3 Develop a device (i.e.' umbrella, shade structure, or hat) which would reduce heat from the sun (temperature) using the **Engineering Design Process** to define the problem, design, construct, evaluate and improve the device. ***EDP**

Art Form

Dance

MSCCR Creative Arts Standards

DA: Cr1.1.K Generate and conceptualize artistic ideas and work. EXPLORE

a. Respond in movement to a variety of stimuli (for example, music/sound, text, objects, images, symbols, observed dance).

b. Explore different ways to do basic locomotor and non-locomotor movements by changing at least one of the elements of dance.

- *Enduring Understanding:*
Choreographers use a variety of sources as inspiration and transform concepts and ideas into movement for artistic expression.
- *Essential Question(s):*
Where do choreographers get ideas for dances?

DA: Cr3.1.K Refine and complete artistic work. REVISE

a. Apply suggestions for changing movement through guided improvisational experiences.

- *Enduring Understanding:*
Choreographers analyze, evaluate, refine, and document their work to communicate meaning.
- *Essential Question(s):*
How do choreographers use self-reflection, feedback from others, documentation to improve the quality of their work?

Duration

1 Hour

Materials

Flashlight

Various items to make foot covering: hand towels, loaf pans, paper bags, wooden blocks, empty shoe boxes, tape (no glue!), ribbon, etc.

Objectives

Students will understand that the sun gives us light and heat.

Students will understand why we have day and night.

Students will name some of the earth's natural resources.

Students will use the **Engineering Design Process**.*

Students will use the elements of dance to choreograph movement.

Vocabulary

Sun

Earth

Heat

Light

Natural resources

Choreographer

Locomotor

Non-locomotor

Lesson Description

View **slide #1**

<https://docs.google.com/presentation/d/10Egc-xZxBoQm8uoHzZQlhHmyc4qM1BAPeo5Yvb9ePFA/edit?usp=sharing>

Question: "What do you see?" *Allow for discussion.*

Action/Question(s): Now view **slide #2**. Say, "Today we are going to talk about what the sun gives us" Ask, "Looking at this picture, what do you think the sun gives us?" *Allow for discussion.*

Question(s): "Where does the sun go at night?" "How can we find out?" *Allow for discussion.*

Action: Assign one student to be the sun and another student the earth. The sun will shine (using a flashlight) on 'the earth .+'. As the earth slowly spins, observe what happens to the sun. (The sun does not move!).

Question: "Wow! What did you observe?" *Allow for discussion.*

Question: "Do you know that the sun gives us something else? What do you think that is?" *Allow for discussion.*

Action/Question: Show **slide #3** Ask, "What do you see?" "What else does the sun give us?" (heat) "What evidence can you give to support your answer?"

Action: Review the 5 elements of dance by watching the video:
<https://www.pbslearningmedia.org/resource/d7fcd19b-ee9b-4d90-a550-833fbc22865c/the-five-elements-of-dance/>

Action: Practice some movements to show the students how to use BASTE.

Body - use the whole body or just the head, torso, arms or legs

Action - any movement of the body or body parts

Space - a lot of space or a small area, low medium or high, in a line

Time - a pulse or free-flowing

Energy - heavy or light

Action: Break the students into groups of 3-4 and ask them to create a movement for light and heat, reminding them to use BASTE.

Action: Allow students time to share their creative movements with the class. Encourage students to control traveling and freezing, starting, and stopping. (Teacher may even say "Freeze" from time to time).

Question: "What does the sun give us?" (light and heat)

Action/Question: Show **slide #4**. Say, "Natural resources are things found in nature that are not made by man. These are some of our natural resources: sand, soil, rocks, and water."

Question: "How do you think the sun's temperature affects these things?" "How would our bare feet feel walking on the rocks or sand that has been in the sun all day?"

Action: You left your shoes at home, and you want to walk on the hot sand. I need you, as a team (of 3-4) to:

- Define the problem (what is keeping us from doing what we want)
- Design something you can use (some type of proactive foot covering)
- Build it (using the materials laid out)
- Evaluate (try it out)
- Improve if needed

Action: Supply the students with materials they could use to make protective feet covering.

Action: Let each group share their invention. *Allow for discussion to decide if it will work or not, and give evidence to support their statement.*

Question: Remember, a choreographer is someone who creates dances. How do you think choreographers use self-reflection, feedback from others, and documentation to improve the quality of their work?

Allow for discussion.

Question: Where do choreographers get ideas for dances?

Allow for discussion.

Recommended Resources

*EDP overview <https://www.teachengineering.org/k12engineering/designprocess>

(This video is for you, the teacher. You do not have to explain the **EDP**, only the steps in the process.)

Music Options:

- “Here Comes the Sun” by The Beatles <https://youtu.be/xUNqsfFUwhY>
- Tropical music: <https://youtu.be/pz1BosPBGlo>
- “Walking on Sunshine” by Katrina & the Waves
<https://www.youtube.com/watch?v=iPUmE-tne5U>
- “I Make My Own Sunshine” by Steven Tyler https://youtu.be/K7r--_0bOYs

Extended Learning Activities

Write (or dictate) about something you can only do at night and then something you can only do during the day; illustrate. Allow the students to explain their answers!

Sources

Steven D. Shadwick

Tips

Gather material ahead of time and place in a large container

Assessment Strategies

- Self Reflection* - "I was surprised about..."
- 3-2-1 Strategy* - "Students identify 3 things they discovered, 2 interesting things they noticed, and 1 question they still have..."
- Self-Critiquing* - Allow students to conference with the teacher and self-critique their movements. What did they do really well? What could they have done better?
- Observation* - The teacher may want to simply walk around the classroom and observe the students as they work and check for evidence of student learning. This evidence may be recorded as anecdotal records, conferences, check-lists/task-lists, and rubrics.

Author

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