

Grade: 6

Subject: Social Studies

Theme: The physical environment and its impact on human activities

Duration: 2 X 40 minutes

Attainment Target: Understand the processes and forces that have formed the physical and built environment

Focus Question: How do the movements which the Earth makes as it orbits the Sun impact us?

Lesson Topic: Why do we have night and day?

Objectives: By the end of the lesson students should be able to:

- i. Define and use correctly the terms hemisphere, rotation, day, daytime, axis, sunrise, sunset
- ii. Use a model/diagram to explain how rotation causes day and night
- iii. Use measurement to create model/draw diagram
- iv. Display willingness to acquire new information and use it to understand the world in which we live
- v. Contribute ideas and listen to the ideas of others to complete assigned tasks

Resources: Globe, flashlight, atlas/map of the world, play dough, tooth pick/large paper clip, markers, cartridge paper, ruler, push pins/thumbtacks
<https://www.youtube.com/watch?v=hWkKSkI3gkU>

Engagement: Students will listen to the story “Why There is Day and Night” from Solar-Folklore. Students will then watch YouTube video
<https://www.youtube.com/watch?v=hWkKSkI3gkU>

Students will then say which explanation of why we have day and night they believe and why?

Exploration: Place students in groups of 4-6. Students will watch the video “Day and Night Explained” <https://www.youtube.com/watch?v=hWkKSkI3gkU>

and answer the questions on the worksheet provided:

Each group will use play dough and tooth pick/large paper clip to make a model of the Earth on its axis.

- ✓ The Earth must be spherical.
- ✓ The circumference of the sphere should be greater than 10cm.
- ✓ Draw a horizontal line to divide the sphere into halves. The line that divides the Earth in halves is called the Equator. Each half is called a hemisphere
- ✓ Use the globe, atlas or map to find Jamaica
- ✓ Use push pin/thumb tack/small piece of play dough to locate Jamaica in the northern hemisphere
- ✓ Use the paper clip/tooth pick to make the Earth's axis, and identify the North Pole and the South Pole

Explain:

- ✓ Each group will demonstrate, rotation, day and night using model made and flashlight/cell phone.
- ✓ Group will then draw and label diagrams to show Jamaica experiencing night and day.
- ✓ The label must include – Sun, Earth, axis, Northern Hemisphere, Southern Hemisphere, day, night , rays of the sun

Extend/Elaborate: Students will investigate how animals and humans respond to day and night)

Evaluate:

Rubric for model

The Model	9- 10 (Accurate)	8-6 (Satisfactory)	5-3 (Needs improvement)
Shape of Earth			
Circumference of Earth			
Axis of Earth is tilted			
Equator is identified			
Hemisphere are identified			
Jamaica is in the correct hemisphere			
Demonstration of Day and Night			
Sun is stationary			
Earth rotates on its axis			
Explanation of day and night			

Worksheet

1. What is daytime?

2. How long is a day?

3. What is rotation?

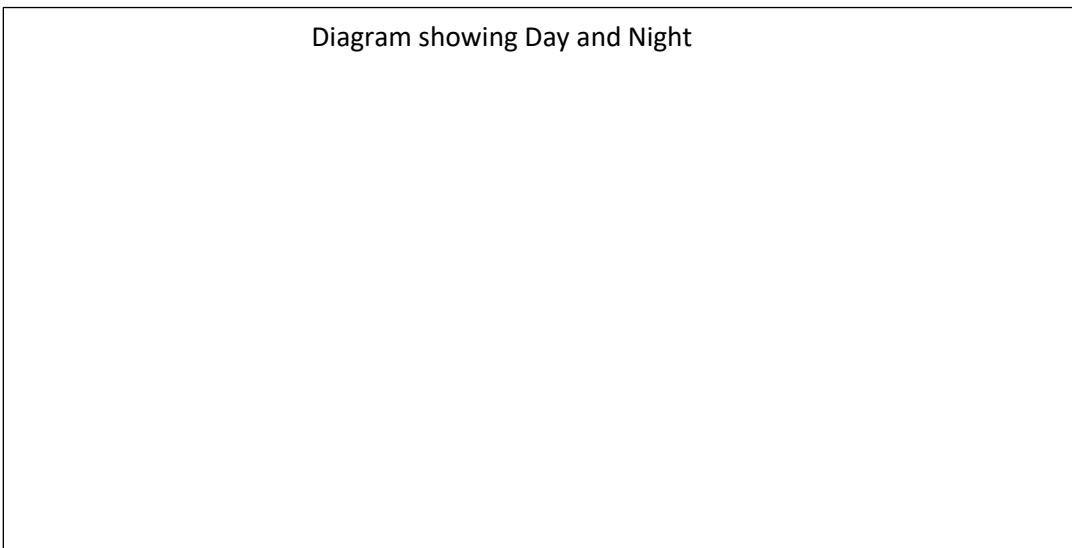
4. In what direction does the Earth rotate?

5. What is the Earth's axis?

6. Why do we have night and daytime?

7. Name two things other than Earth that rotate on an axis.

Diagram showing Day and Night



We have day and night on Earth because of the Earth's rotation on its axis. Axis is an imaginary line passing through North and South poles of the Earth. The Earth takes 24 hours to complete one rotation. The Sun rises in the east in the morning (sunrise) and sets (sunset) in the west. In reality, the Sun is not moving, it is our Earth that is rotating, this rotation causes day and night.

http://www.makemegenius.com/science-videos/grade_3/day-and-night-explanation-for-kids

Why There is Day and Night



As told by [Lynn Moroney](#)

Before there were people, there were only the animals and the birds. And in those days, the day and the night were exactly the same. One time, when Rabbit was going along, he began to think about the days and the nights and how they were alike and how there wasn't enough light. And then, in a loud voice, he said, "There is not enough light. I cannot see where I'm going. I need more light."

Just then, Rabbit heard a voice, and it said, "There is plenty of light." Rabbit could not see who was talking and so he called out "Who is there, who is speaking to me?" "It is I. It is Owl. And I say there is enough light in the world." Then Rabbit said, "Well I say there is not enough light, and I will call the animals together. We will have a council. And I will ask them. I will ask them if they think there is enough light and they will agree with me and then you will know that there is not enough light in the world." But then Owl said, "I will invite all the birds of the air. We will join in the council and then you will see that the birds will agree with me and then you will note that there is enough light in the world."

Well, all the animals and all the birds came together and they all sat around in a great circle and waited for Rabbit and Owl to speak. Rabbit stepped forward and said "There is not enough light in the world. We need more light." Then Owl stepped forward and then he said, "There is too much light. We do not need more light."

Well, with that, all the animals and birds began to talk to one another. Bear said that there was way too much light, that he liked to sleep in the dark and, if there were more light, it would interrupt his rest. Some of the birds said that they wanted more light so that they could see to gather twigs for their nests. Raccoon said that he agreed with Owl. Raccoon did not want light. Frog said that there was enough light, and that he couldn't sing well when there was too much light. Then Buffalo said that, with so little light, he couldn't find enough grass and that he was often hungry. Then all of the animals and birds began to talk at once. Some of them agreed with Owl and some of them agreed with Rabbit.

Finally, Rabbit and Owl decided that they would settle the argument by seeing which of them had the strongest medicine. And whoever had the greatest power, well, that person would have his way. So Owl began to say "Night, night, night, night." And then Rabbit spoke faster, "Light, light, light, light." And then Owl spoke even faster, "Night, night, night, night." Rabbit's friends warned him, "Rabbit, do not say Owl's word, or it will be night all the time." And Owls' friends warned him, "Owl, be careful. Do not say Rabbit's word or there will be light all the time."

Owl was saying "Night, night, night, night, night, night, night...." when he heard his friends say the word "light". And he accidentally said, "Night, night, night, night, light ... oh, oh," said Owl. But it was too late, he had already said the word "light".

And so it was that Rabbit won. And since that time, the day has had lots of light. But because some of the animals could not hunt or sleep with so much light, Rabbit declared that part of the time would be night after all. And that is why, in these days, we have both day and night.

Variants found throughout North American Indian lore

Tale courtesy of [Lynn Moroney](#).

Background was created by Brad Snowder of the [Western Washington University Planetarium](#). Used with permission. The raven is a head-dress produced by the Haida tribe. It is owned by the Department of Anthropology, National Museum of Natural History, Smithsonian Institutes. Washington D.C. The photographer is Don Eiler.

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