Smith Farm Elementary Lesson Plan

Teacher Name: Edwards	**Grade Level:** 4th Grade	**Subject:** Science
Date: November 7-11	**Standards:** **4.E.1.1** Explain the cause of day and night based on the rotation of Earth on its axis. **4.E.1.2** Explain the monthly changes in the appearance of the moon, based on the moon's orbit around the Earth.	

	Monday, November 7	
Standards-aligned Materials and Resources	• Science notebook • Sun-Earth-Moon System interactive notebook sheet	
Clear Learning Goals (I Can statements)	I can explain the relationship between the Earth, moon, and sun, including the cause of day and night based on Earth's rotation.	
Vocabulary	rotate, revolve, orbit, axis	
Build Background	**KWL Chart:** In the K column, students will write down everything they already know about day and night and the moon phases. Once they have thought about everything they already know, they can move to the W column and write down what they would like to know about day and night and the moon phases.	
Direct Instruction (Teacher led)	This week in science we will begin our Earth in the Universe unit. Over the next few days we will be learning more about what causes day and night, as well as what the phases of the moon are. Explain to students that today we will be completing a Sun-Earth-Moon system interactive notebook page in our science notebook. This will be done as a class and students will follow along in their science notebook.	**Time: 5 min.**
Student Practice	As a class, we will complete the Sun-Earth-Moon system interactive notebook page. Students will need their science notebooks and the half sheet that has the sun, earth, and moon on it. They will begin by cutting the pieces out. After cutting the pieces, model for the students how to glue them in their notebooks. This model should show the Earth's orbit around the sun, as well as the moon's orbit around Earth. Teachers should use the example to help them model for the students.	**Time: 25 min.**

	After gluing in the pieces, write notes around the model explaining how long it takes the Earth to rotate on its axis and revolve around the sun, as well as how long it takes for the moon to orbit Earth.	
Check for Understanding	**Quick Write:** On a sticky note, have students write down one thing they learned about the Sun-Earth-Moon system during today's lesson. If you have a good place in the room, students can stick their sticky notes on the wall/board and look through each other's answers.	**Time: 5 min.**

	Tuesday, November 8	
Standards-aligned Materials and Resources	• Science notebook • Day and Night Cycle interactive notebook sheet	
Clear Learning Goals (I Can statements):	I can create a model of the Earth's day/night cycle, and use this to explain the cause of day and night.	
Vocabulary	rotate, revolve, orbit, axis, cycle, clockwise	
Build Background	**Turn and Talk:** What does it mean if something is rotating? What does it mean if something is revolving?	
Direct Instruction (Teacher led)	Yesterday we learned about the Earth-Moon-Sun system, and touched on how the Earth's rotation causes day and night. In order to review the difference between Earth rotating on its axis and Earth revolving around the sun, we will watch the video linked below. Earth's Rotation & Revolution: Crash Course Kids 8.1 After watching the video, have students discuss the difference between the Earth revolving and rotating in their table groups. After they have had a few minutes to discuss, come together as a class and have the groups share their thoughts.	**Time: 5 min.**
Student Practice	Today we will focus on the Earth's day and night cycle, and how the Earth's rotation every 24 hours causes day and night. To do this, we will use the day and night cycle interactive notebook page to create a model in our science notebook.	**Time: 25 min.**

	First, we will cut out the sun and Earth models, and we will glue the sun into our science notebook. **Keep in mind that the Earth will not be glued.** On the Earth model, we will label where we live. Then, using a brad, we will attach the Earth model to our page so that we will be able to rotate it. Give students a few minutes to play around with rotating the model. Have them find the location of Earth when it is daytime/nighttime for us. Then we will label the model.	
Check for Understanding	**Quick Write:** How do you think our experience of day and night would change if the Earth rotated clockwise?	**Time: 5 min.**

	Wednesday, November 9	
Standards-aligned Materials and Resources	• Science notebook • Lunar Cycle interactive notebook sheet • Colored pencils	
Clear Learning Goals (I Can statements):	I can explain why the moon's appearance changes based on its orbit around Earth and position in space.	
Vocabulary	moon, orbit, phases, waxing, waning, gibbous, crescent, illuminated	
Build Background	**Turn and talk:** What do you notice about the moon at night? How does its appearance change throughout the month?	
Direct Instruction (Teacher led)	Over the past two days, we have learned about the relationship between the sun, Earth, and moon, as well as the day and night cycle. Today we are going to focus on the lunar cycle, meaning the phases of the moon. Explain to students that the moon orbits around the Earth, which takes about 27.3 days. During this time, the moon goes through phases, which are changes in the amount of sunlight reflecting off the moon. Today we will create a diagram in our science notebook showing the different moon phases depending on the moon's position in space.	**Time: 5 min.**
Student Practice	Each student will be given a lunar cycle interactive notebook page. They will cut out the sun, Earth, and moon phases pieces and glue them into their notebooks. This will take up 2 pages in their notebook, so model for them what the correct position for each piece is.	**Time: 25 min.**

	Once students have glued the pieces in their notebook, we will shade and color in each moon phase to show which parts are illuminated. We will label each phase and discuss the difference between waxing and waning.	
Check for Understanding	Using the link below, pull up the monthly moon phases calendar. On a piece of paper or sticky note, have students identify which moon phase we will see tonight and draw a picture of it. Moon Phase Calendar	**Time: 5 min.**

	Thursday, November 10	
Standards-aligned Materials and Resources	• Moon Phases Scavenger Hunt	
Clear Learning Goals (I Can statements):	I can explain why the moon's appearance changes based on its orbit around Earth and position in space.	
Vocabulary	orbits, phases, reflected, waxing, waning	
Build Background	**Turn and Talk:** What is the difference between waxing and waning moons?	
Direct Instruction (Teacher led)	Yesterday we began learning about the phases of the moon and why the appearance of the moon changes throughout the month. Today we are going to continue learning about the moon and its phases by doing a moon phases scavenger hunt in the classroom. First, give each student one of the moon information sheets. Then, explain to students that there are 16 information cards about the moon scattered around the room and they will use these cards to fill in their fact sheet. Using one of the information cards, model for students how to find the information and record it on their papers.	**Time: 5 min.**
Student Practice	Students will be given 15-20 minutes to walk around the room, read the information cards about the moon, and fill in their scavenger hunt sheets. They can work with each other, but everyone must fill in their own pages. Once students have had a chance to work, go over it with them.	**Time: 25 min.**

Check for Understanding	**Quick Write:** Why does the moon's appearance change throughout the month?	**Time: 5 min.**

	Friday, November 11	
Standards-aligned Materials and Resources	**No School - Veterans Day**	
Clear Learning Goals (I Can statements):		
Vocabulary		
Build Background		
Direct Instruction (Teacher led)		**Time: 5 min.**
Student Practice		**Time: 5 min.**
Check for Understanding		**Time: 15 min.**

Direct Instruction (Teacher led): ***Examples - Modeling, providing new vocabulary, questioning, anchor charts, scaffolding, chunking content, etc.***

Student Practice: ***Examples - Small group w/ teacher, pairs, individual; graphic organizers, writing prompts, think-pair-share, student-led discussions, student summaries, pictorial notes, mini-projects, etc.***

Check for Understanding: ***Examples - ticket out the door, kahoot, white boards, four corners, turn and talk, thumbs up/down, parking lot/Windshield, summative assessment, project, performance, Pear Deck slides, Flipgrid, Padlet, etc.***

Phases of the Moon Anchor Chart