

First Grade Science Learning Cycle Lesson Plan

Amanda Eclipse, Brian Fries, Jennifer Hetrick

Topic: Sorting the Seasons CT: Kelly Stewart, Greenwood Elementary School

Date/Time: November 5, 2010, 10:55 am

NSES: Teaching Standards A, B, C, Program Standards A & B

SOL: 1.7 The student will investigate and understand weather and seasonal changes. Key concepts include

- a) changes in temperature, light, and precipitation affect plants and animals, including humans;
- b) there are relationships between daily and seasonal changes

Subject: Science**Daily Question:** What items best represent each season?

Procedures for Learning Experience	Guiding Questions	Materials Needed	<u>Evaluation</u> (Assessment)	Approximate Time Needed
<p>Engagement: Teacher will explain to the class that we will be talking about the seasons and call on students to answer the guiding questions. Teacher will distribute stickers indicating the seasonal team, job, and number of each student. Stickers have the names of the seasons in both Spanish and English. Explain that you want them to make “season circles.” Each “season circle” should have one person from each seasonal team. Once students have a complete “season circle,” they hold hands and sit down. Start with a group that correctly executed their “season circle and have them explain why they got in this order with these people. Ask other students to give a “thumbs up” if they agree that this group is right, “thumbs down” if not. Invite the other groups to make changes to their order and then do a thumbs up/down vote for each group. Students will regroup in their seasonal teams and the teacher will review individual jobs/responsibilities. Team investigator is in charge of reading the worksheet out loud to the group while the team recorder is in charge of writing down the answers. The team manager will be in charge of making sure that everyone on the team participates in the exploration activity. The team communicator is in charge of asking the teacher(s) questions; the team organizer is in charge of keeping the collected materials neat.</p>	<ul style="list-style-type: none"> - How many seasons re there? - Can anyone name the four seasons? - What season is it now? - What season comes after fall? - What season comes before fall? - What season comes after winter? 	Stickers (see attached)	<ul style="list-style-type: none"> - Observed ability to answer guided questions - Successful creation of groups of four students, with one from each seasonal team 	10 minutes

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<p>Exploration: Each seasonal team will be assigned a team area in one of the four corners of the room. The teacher will explain that all of his/her things got mixed up and he/she doesn't know which things are for which season. The teacher(s) will empty a bag of seasonal objects in the center of the four groups. Explain that each group member has a number, 1-5, and that all of the 1s will pick up an item first, then 2s, and so on. Team managers must make sure that their team members wait for the teacher to call their number. Once you have selected an item, bring it back to your season's area. Repeat this until all group members have had a turn. Once each group has five items, ask the recorder to write down what items their group has and why their group thinks that those items are best for their season. There will be extra items in the center of the room. Ask who has certain items (see starred items on the attached seasonal objects list), and ask the group why they chose that item for their season. Ask the class to thumbs up/down that item for that season. If thumbs up, move on. If thumbs down, ask someone with a thumbs down why. Allow the group the opportunity to defend their decision or change their object. Repeat for approximately 5 items.</p>	<ul style="list-style-type: none"> - Because you (the students) are experts on the seasons (name seasons and point to groups), can you help sort through all of these seasonal objects? - Can you find the five best items for winter, spring, summer, and fall? - Are some items equally suited for all seasons? 	<p>4 pairs of sunglasses, winter coat, warm hat, mittens, evergreen branch, umbrella, rain boots, daisies, baby stuffed animal, sunscreen, swimming goggles, bathing suit, basil plant, beach towel, sweater, pumpkin, pouf vest, acorn, light scarf</p>	<ul style="list-style-type: none"> -Observed ability to work with group - Observed ability to fulfill group job - Ability to listen to and follow directions - Written explanations of why each item is best for the given season found on worksheets - Ability to justify group choices verbally - Ability to improve upon original choices 	<p>10 minutes</p>
<p>Explanation: Students will leave their group piles where they are and gather as a class in front of the Smart Board. Explain that the choices that each group just made show some of the ways that people get ready for each season. People have to decide what they are going to wear and what they are going to eat depending on the season. Other living things, like plants and animals have to change with the seasons, too. Show image of mature deer in the fall, eating grass and ask students what season they think it is and why they guessed that season. What is the animal in the picture doing? What are the plants like in the picture? What</p>	<ul style="list-style-type: none"> - What other living things change because of the seasons? - What decisions to animals make in the fall? - How do plants change with the seasons? - Why are baby animals born in the 	<p>PowerPoint slide show with images (see attached)</p>	<ul style="list-style-type: none"> - Student's ability to make inferences about the content of the images - Student observations of both plant and animal behavior in the images 	<p>5 minutes</p>

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<p>season do they think is next? Show image of deer sleeping in the snow. Image of mother and baby deer in the spring with blooming flowers, image of deer running in fields in the summer.</p>	<p>spring? - Why do many animals eat a lot of food in the fall?</p>		<p>- Student ability to verbally answer questions</p>	
<p>Extension: Short discussion about current season in Virginia and what season we have to get ready for next. Explain that your friend, Alex, about to move to Virginia from Mexico. Where she is from in Mexico, it is warm all year. In the winter (<i>invierno</i> in Spanish) she is used to wearing shorts, a tank top, and flip-flops like in the summer (<i>verano</i> in Spanish). Do you think she needs to go shopping before she moves to Virginia? Have students raise their hands to suggest items for Alex’s winter shopping list. Have the class thumbs up/thumbs down each suggestion. Write class suggestions of on a poster/interactive whiteboard.</p>	<p>- What season do we have to get ready for next in Virginia? - Does Alex need to go shopping before she moves to Virginia? - What would you suggest Alex buys to get ready for winter? - Does anyone know the names of fall or spring in Spanish? (<i>otoño y primavera</i>)</p>	<p>Blank slide on interactive whiteboard or poster</p>	<p>- Student attentiveness - Student ability to predict temperature and weather changes - Student ability to refer to prior knowledge</p>	<p>5 minutes</p>

Notes:

- **Safety:** Make sure that group organizers remind their groups to be cautious with seasonal objects (especially the umbrella & plants)
- **Adaptations:** For ESL students, make references to the Spanish names of the seasons in the lesson. Have student seasonal team stickers in both languages. To adjust for odd numbers or absences, have the teacher (or one of the teachers) stand in as the missing season when forming season circles. If this is not an option, make sure that students recognize the missing season and leave a space in their circles. Have a teacher fill in for the missing person’s team job or assign one group member 2 jobs. If there are 16 or fewer students, combine the jobs of Investigator and Communicator.
- Students were randomly grouped into seasonal teams prior to this lesson

Learning Cycle Lesson Groups	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>	<i>Summer</i>
Manager (makes sure everyone gets a chance to pick an item)	Katia	TyiShaun	Ashley	Anthony
Recorder (writes down group’s answers)	Mia	Amiley	Elijah	Bianca
Investigator (reads questions out loud)	Brittany	Maggy	Steven	Ayden
Communicator (asks questions to the teacher)	Ivan	Jaden	Janelli	Laisha
Organizer (makes sure that materials stay neat)	Gabe	Torri	Tristan	



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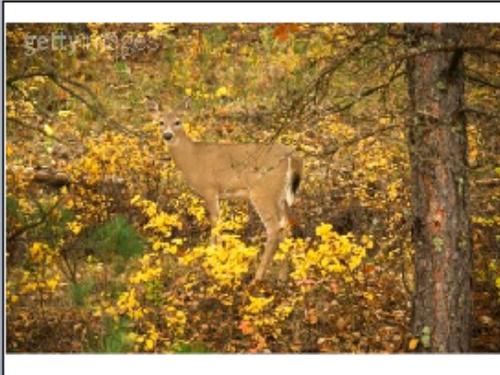
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Alex's Winter Shopping List:

Screenshot of accompanying PowerPoint slides.