



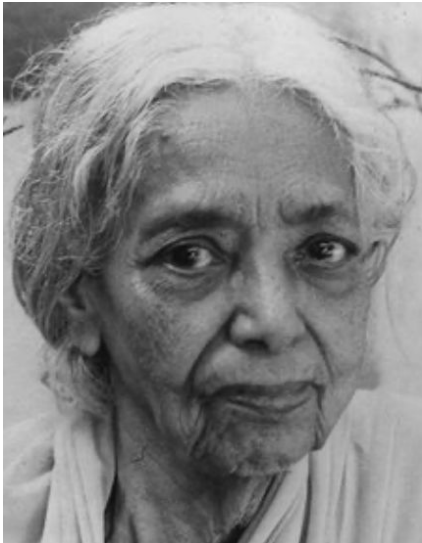
The Bio/Diversity Project  
Lesson Title: Migratory Pollinators

Teacher: *Monica Yorksmith, Bailee Martin*

Grade Level: *7th*

Time: *45 minutes*

Adapted from: <https://www.nationalgeographic.org/activity/why-animals-migrate/>

<b>AZ State Science Standard:</b>	<b>7.L1U1.11</b> <b>Construct an explanation</b> for how organisms maintain internal stability and evaluate the effect of the external factors on organisms' internal stability.
<b>Learning Objective:</b>	<ul style="list-style-type: none"><li>• <i>Students will be able to explain why pollinators migrate</i></li><li>• <i>Students will be able to explain the importance of migration</i></li></ul>
<b>Language Objective:</b> (Optional)	NA
<b>Scientist of the Week:</b>	Edavaleth Kakkat Janaki Ammal  <ul style="list-style-type: none"><li>• Botanist</li><li>• India</li><li>• Helped preserve Silent Valley National Park in order to Indian plants and co-authored the Chromosome Atlas of Cultivated Plants, which is still a key text for plant scientists today. Unlike</li></ul>



	<p>other botanical atlases that focused on botanical classification, this atlas recorded the chromosome number of about 100,000 plants, providing knowledge about breeding and evolutionary patterns of botanical groups.</p>
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Vocabulary	Materials
<p><i>Migration: seasonal movement of animals from one region to another.</i></p> <ul style="list-style-type: none"> <li>-ation: an action</li> </ul> <p><i>Survival: the state or fact of continuing to live or exist, typically in spite of an accident, ordeal, or difficult circumstances.</i></p>	<p>Slides: <a href="https://biodiversityproject.arizona.edu/sites/default/files/Lesson%20Plan%20%235-MIgratory%20Polliantors.pptx">https://biodiversityproject.arizona.edu/sites/default/files/Lesson%20Plan%20%235-MIgratory%20Polliantors.pptx</a></p> <p>Bingo: <a href="https://mfbc.us/m/z4mqez">https://mfbc.us/m/z4mqez</a></p> <p>Video: <a href="https://youtu.be/0QcN5M0bqbE">https://youtu.be/0QcN5M0bqbE</a></p>

**Seasonality:** N/A

<i>Monsoons</i> July-Sept.	<i>Autumn</i> Oct.-Nov.	<i>Winter</i> Dec.- Feb.	<i>Spring</i> Mar.-Apr.	<i>Dry Summer</i> May-June
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**Guiding Questions:**

- What are some reasons that different animals migrate?
- Why is migration important for an ecosystem?

5E Steps	Teacher Strategies	Student Behavior
<p><b>Engagement/Introductory Activity:</b></p> <p>This is what you will do to get the students engaged in and excited about the topic of the lesson! It should also provide an opportunity for you to get an idea of what they do (and do not) already know, and the assumptions that they have</p>	<p>**fun facts, scientist of the week</p> <ul style="list-style-type: none"> <li>Peardeck activity: have students draw or write two things they already know or want to know about pollinators of the Sonoran Desert.</li> <li>Fun facts               <ul style="list-style-type: none"> <li>Monica: I have</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Students will think about information that they already have about migrating pollinators and think about things that they want to know about.</li> </ul>



<p>going into the lesson.</p>	<p>lived in Arizona my whole life!</p> <ul style="list-style-type: none"> <li>○ Bailee: I played soccer for 10 years</li> </ul>	
<p><b>Exploratory Activity:</b> Provide step-by-step instructions on what the teacher and students will do in this activity to gain new skills and/or knowledge. Attach worksheets, PowerPoints, video links, or other material used to this section.</p>	<p>** who migrates **take a guess about where they migrate</p> <ul style="list-style-type: none"> <li>● Show a map of the world, use a peardeck activity to have the students take a guess and draw a life of where certain animals, birds and insects migrate to and from.             <ul style="list-style-type: none"> <li>○ Ex. “Where do monarch butterflies migrate from?, Where does the whit winged dove migrate from? Where do whales migrate from?”</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>● Students should interact with the activity and draw a line on the map to represent the migration patterns of the animals that they are asked about.</li> </ul>
<p><b>Explain:</b> What questions or prompts will you use to get students to explain their observations or to explain what the outcomes of the activity that they participated in were? This should provide an opportunity for students to communicate their new understandings, as well as to articulate what they still do not understand.</p>	<p>**migration video with questions</p> <ul style="list-style-type: none"> <li>● Video: <a href="https://youtu.be/0QcN5M0bqbE">https://youtu.be/0QcN5M0bqbE</a></li> <li>● We will show a video that shows different animals that migrate and their migration patterns. It will explain why migration is important to different groups of animals and environments.</li> <li>● Through the video we will pause and ask questions about pollinators that migrate to get the kids thinking about pollinators.</li> </ul>	<ul style="list-style-type: none"> <li>● Students will watch the video and think about how pollinators migrate and why they migrate.</li> <li>● They will think about why other pollinators benefit from migrating</li> </ul>
<p><b>Extension Activity/Questions:</b> This section provides an opportunity for students to connect</p>	<p>**connect to sonoran desert and specific pollinators in the Sonoran Desert</p>	<ul style="list-style-type: none"> <li>● Students should think about the video we watched and why species</li> </ul>



<p>the knowledge that they have gained to other contexts – can they take what they learned and logically expand upon it, or apply it to alternate situations? Provide one or two additional ideas for activities that students can use to expand upon the new knowledge that they have gained.</p>	<ul style="list-style-type: none"><li>• We will give a few different examples of pollinators that migrate in the Sonoran Desert and talk about why they migrate.</li><li>• Show students a map of where the sonoran desert is in the United States and ask them to take a guess of where bats, butterflies, and birds migrate when they leave the Sonoran Desert.</li><li>• Then show them the actual migration patterns and talk about why they migrate to those specific places.</li></ul>	<p>pollinate.</p> <ul style="list-style-type: none"><li>• Then take a guess about where and why pollinators of the Sonoran desert migrate</li><li>• Then think about why pollinators of the Sonoran Desert migrate and why migration is important for the environment.</li></ul>
<p><b>Evaluation Activity:</b> How will you evaluate whether or not the students have achieved the learning objective(s) of the lesson?</p>	<p>**Bingo game and think about it question</p> <ul style="list-style-type: none"><li>• <a href="https://mfbc.us/m/z4mqez">https://mfbc.us/m/z4mqez</a></li><li>• Ask questions about each answer before it is called out</li></ul>	<ul style="list-style-type: none"><li>• Students will play bingo with words from our lesson.</li><li>• They will answer the questions before they can mark their card</li></ul>