Lesson 1.2
Blue Whales and Buttercups
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Lesson Overview

Through reading an informational text, students continue to explore how organisms can be similar and different. Students read the book *Blue Whales and Buttercups*, which provides many examples of the great diversity of organisms on Earth and the many ways in which they can be similar and different. Students are introduced to the sense-making strategy of asking questions and use this strategy to help them understand and engage with the book. The purpose of this lesson is to introduce students to the concept that even though organisms can be quite different, they are all related.

**Investigative Phenomenon:** Wolves, foxes, and wild dogs have similarities and differences.

**Students learn:**

- An organism is a living thing, such as a plant or an animal.
- All organisms are related.
- Scientists closely observe the similarities and differences between different organisms to see how closely related they may be.
- Asking questions during reading helps readers better understand the ideas in the text.
- Science findings are based on recognizing patterns.
- Science findings are limited to what can be answered with evidence.
Partner Reading

Partners read *Blue Whales and Buttercups* and ask questions as they read.

### Instructional Guide

1. **Distribute books.** Distribute one copy of *Blue Whales and Buttercups* to each pair of students.

2. **Introduce and project notebook page.** Have students turn to page 5, *Asking Questions When Reading: Blue Whales and Buttercups*, in their notebooks and review the directions. Let students know that when they read, they will ask questions and record their questions in their notebooks. Explain that first, you will complete an example with them.

3. **Model asking questions.** Turn to pages 4 and 5 of *Blue Whales and Buttercups* and read the text aloud as partners follow along in their books.

   - I read on page 5 that differences such as fur or no fur and flowers or no flowers are referred to as variation.

   - This makes me wonder whether organisms that look similar have variation?

   In Column 1 of the table being projected on the board, write “Do organisms that look similar have variation?” Have students record the question in their notebooks.

4. **Model locating information.** Turn to pages 6 and 7 and read the text aloud.

   - As I read the “Organisms Grow to Different Sizes” section on page 6, it discusses size variation between bats. The text states that the largest species of bat is about 10 times bigger than the smallest species of bat.

   - This information helps answer my first question about whether organisms that look similar have variation. So, I’m going to record the information that answers my question in Column 2. When you record information in this column, be sure to include the page number where you found the information so you can discuss these ideas later with the class.

   In Column 2 of the projected table, write “Page 6. Bats look similar but have variation. The bats are different sizes.” Have students record this in their notebooks.
5. Discuss other ways of investigating. Ask students to help you brainstorm other ways to investigate the question you recorded in Column 1. Record students’ responses in Column 3.

6. Review the reading task. Explain that partners should take turns reading and that both partners should complete their notebook pages. Students should record their own questions during reading; they do not necessarily need to have the same questions as their partners. Remind students of the Partner Reading Guidelines posted on the wall, if necessary.

As you read the remainder of the book with your partner, I’d like you to record your own questions and answers in your notebook.

7. On-the-Fly Assessment: Students ask questions as they read. Give students time to read the rest of the book with their partners. As you circulate, listen and make note of the questions students are asking. This will help you guide the discussion when students share their questions with the class.

8. Discuss students’ responses from the notebook page. Call on a few students to share their questions and the information they found in the book that answers their questions. Have students point out the page numbers so their classmates can turn to those pages as students explain their answers. If needed, point out that answers to questions cannot always be found in the text. Therefore, thinking of other ways to investigate the question is important in order to keep working on finding answers.

9. Discuss Column 3. Call on a few students to share other ways to investigate their questions. Accept all responses.

Embedded Formative Assessment

On-the-Fly Assessment 1: Asking Questions About Blue Whales and Buttercups

Look for: This is students’ first opportunity to ask questions while reading in order to deepen their understanding of the text. This lesson serves as an introduction to the sense-making strategy of asking questions and is a chance for students to try out the strategy themselves with Blue Whales and Buttercups. Students will continue to develop facility with this strategy throughout the unit through additional modeling and continued practice. As you circulate, make note of the questions that students are asking. Do their questions relate to the Investigation Question? Will their questions help them think about ways organisms can be similar or different?

Now what? If students are having trouble getting started with asking questions, or if they are asking unrelated questions, you may want to provide additional modeling by using another example from Blue Whales and Buttercups. Depending on how many students need this support, you could either coach a few students individually during the Partner Reading activity, or you could work with a small group or the whole class. Remind students that they are trying to figure out ways that organisms can be similar or different.
Teacher Support

Rationale

**Literacy Note: Asking Questions T-chart**
The Asking Questions T-chart will be used both when students read and when they investigate. In this lesson, students are introduced to the “Reading” column. The questions in this column are also reflected on page 5, Asking Questions When Reading: *Blue Whales and Buttercups*, in the Investigation Notebook. Students’ questions are expected to be on topic, which means that their questions should help them think about the content of the unit. Students may locate information in the text that helps them answer their questions, and they will record this information in the second column of the table, including the page number on which they found the information. The third column of the table prompts students to think about and record other ways that scientists can find answers to their questions. As students progress through the unit, they will learn more ways to investigate by asking their own questions as well as by reading about how a real scientist investigates (in Chapter 4).

Rationale

**Literacy Note: Recording Information When Reading**
Recording ideas, observations, research, and data is an important part of what scientists and engineers do. In this lesson, students will record information and document where the information came from as they read *Blue Whales and Buttercups* and ask questions. The table on page 5, Asking Questions When Reading: *Blue Whales and Buttercups*, in the Investigation Notebook supports students’ thinking as they practice the sense-making strategy of asking questions. For each book in this unit (except the reference book), there will be an Asking Questions When Reading notebook page for students to record their questions and ideas about those questions.

Rationale

**Literacy Note: Suggested Approach to Reading**
Throughout the unit, we suggest that students first read the text with a partner, followed by a class discussion and rereading of selected portions of the text. During interactive discussion that follows the Partner Read, you can highlight key ideas and important concepts in the text and pose comprehension questions. You can also guide students in making sense of challenging vocabulary and in linking what they read to what they have been investigating. The purpose of letting students read with partners first is to allow students time to practice reading informational text, making sense of the visual representations, grappling with the ideas, and practicing the strategy you have modeled. This promotes student engagement and independence with reading. However, you may want to vary this approach given the needs of your students and your classroom routines.

**Instructional Suggestion**

**Student Thinking: Metric System**
To support students’ understanding of the scale of the organisms on pages 6–7 of *Blue Whales and Buttercups*, you may wish to show students a meterstick. You could point out 1 centimeter (0.39 inches) and 1 meter (3.28 feet) and then use the meterstick to demonstrate the various sizes of the organisms listed in the book. For example, you could point out that the cactus would be as tall as 5 metersticks, the elephant would be as tall as 3.5 metersticks, and the frog would measure 1 centimeter long.
Possible Responses

Investigation Notebook
Asking Questions When Reading: *Blue Whales and Buttercups* (page 5)

Answers will vary. Examples:

**Row 1**
Why are some of the pigeons in the picture white, while others are darker?
Page 12. All organisms have different traits.
Read more about pigeons and their markings.

**Row 2**
How many cells do I have?
Page not found.
Research the human body on the Internet or in a book.

**Row 3**
Am I related to other organisms?
Page 22. Being made of cells is a trait that all organisms have in common. Therefore, all organisms are related to one another.
Asking Questions When Reading:  
*Blue Whales and Buttercups*

Directions:
1. As you read the book, record questions you have in Column 1.
2. If you find the answers to your questions as you read, record your answers in Column 2. Be sure to include the page number from the book where you found the information so you can discuss these ideas with the class.
3. In Column 3, record other ways you could investigate your questions.

<table>
<thead>
<tr>
<th>Question</th>
<th>Information from the book that helps answer my question</th>
<th>Other ways to investigate my question</th>
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3. **Model asking questions.** Turn to pages 4 and 5 of *Blue Whales and Buttercups* and read the text aloud as partners follow along in their books.

   - Leí en la página 5 que diferencias como pelaje o no pelaje y flores o no flores se denominan variación.
   - Esto me hace preguntarme si los organismos que se ven similares tienen variación.

   In Column 1 of the table being projected on the board, write “Do organisms that look similar have variation?” Have students record the question in their notebooks.

4. **Model locating information.** Turn to pages 6 and 7 and read the text aloud.

   - Mientras leo la sección "Los organismos crecen hasta diferentes tamaños" en la página 6, encuentro que discute la variación de tamaño entre murciélagos. El texto menciona que la especie más grande de murciélago es alrededor de 10 veces más grande que la especie más pequeña de murciélago.
   - Esta información ayuda a responder mi primera pregunta acerca de si los organismos que se ven similares tienen variación. Entonces, voy a apuntar la información que responde mi pregunta en la Columna 2. Cuando apunten información en esta columna, asegúrense de incluir los números de página donde encontraron la información para que puedan discutir estas ideas más tarde con la clase.

   In Column 2 of the projected table, write “Page 6. Bats look similar but have variation. The bats are different sizes.” Have students record this in their notebooks.
5. **Discuss other ways of investigating.** Ask students to help you brainstorm other ways to investigate the question you recorded in Column 1. Record students’ responses in Column 3.

6. **Review the reading task.** Explain that partners should take turns reading and that both partners should complete their notebook pages. Students should record their own questions during reading; they do not necessarily need to have the same questions as their partners. Remind students of the Partner Reading Guidelines posted on the wall, if necessary.

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### Hacer preguntas al leer: 
*Ballenas azules y botones de oro*

**Instrucciones:**
1. Mientras lees el libro, apunta preguntas que tengas en la columna 1.
2. Si encuentras las respuestas a tus preguntas mientras lees, apunta tus respuestas en la columna 2. No olvides incluir el número de la página donde encontraste la información, para que puedas discutir estas ideas con la clase.
3. En la columna 3, apunta otras maneras en las que podrías investigar tus preguntas.

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<thead>
<tr>
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