Lesson 3.2
Let’s Test!
Lesson Overview

Students read the book *Let’s Test!* to gain secondhand experience with light interactions. The children in the book test materials that block different amounts of light as they try to make shade in their lemonade stand. The teacher models Partner Reading, and then partners read the rest of the book, using a bookmark to support the process of asking and answering questions. After partners read, the teacher leads a discussion to help students reflect on how the different materials in the book blocked different amounts of light. The class participates in a kinesthetic model that helps students make sense of the ideas in the book. The lesson concludes with an introduction of new Explanation Language Frames that help students explain how light interacts with materials and surfaces. The purpose of this lesson is to explicitly introduce students to the idea that all, some, or no light can pass through a material to create an effect on a surface.

**Design Problem:** Design a puppet-show scene, using light.

**Investigative Phenomenon:** A surface can have a medium-bright area.

**Students learn:**

- Different materials let different amounts of light pass through them.
Reading: Let’s Test!

Students read *Let’s Test!* with a partner and use a bookmark to practice asking and answering questions to make sense of the text.

Instructional Guide

1. **Connect to prior learning.** Remind students that they have learned how to use materials to make dark areas on a surface. Now they are working to figure out how they can use materials to make other areas on a surface. Point to the Investigation Question on the board and read it aloud.

   - How do materials make areas on a surface that are not dark?

   Let students know that they are going to read a book that will help them think about how to make these other kinds of areas on a surface.

2. **Display the front cover of the *Let’s Test!* big book.** Invite students to describe what they see on the front cover.

   - This book is about two children who are also trying to find out if all materials block light. They test their possible solutions to solve a problem, just like light engineers do.

   - We will read this book to see how these children use different materials to solve their problem.

3. **Revisit asking questions.** Point out that students have been asking one another questions as they design and test materials to find a solution for the puppet-theater company. Remind students that they have also been asking questions while they read to think about why certain things are happening in a book.

4. **Introduce the *Let’s Test!* Bookmark.** Hold up a bookmark.

   - This bookmark has several questions to help you think about what is happening in the book while you read. You can use these questions to help you think about how the children in the book are working like engineers.

   Point to each question on the bookmark and read it aloud, encouraging students to read with you.
How will they solve their problem?

What material did they test?

What did they learn about the material?

Point to the question mark at the bottom of the bookmark.

This question mark will remind you that you can ask your own questions while you read.

5. Revisit Partner Reading. Let students know that they will be reading Let’s Test! with partners. Point to the Partner Reading Guidelines and remind students that these guidelines will help them as they read with a partner. Let students know that you have added two additional guidelines. Invite a volunteer to be your reading partner. Read each guideline aloud and model the corresponding behavior with your partner.

- Sit next to your partner.
- Put the book between you.
- Take turns.
- Read in a quiet voice.
- Work together to read and understand.

6. Model reading and asking questions with a partner. Repeat the purpose of reading the book.

We are going to read this book to see how different materials help these children solve their problem.

- Have your partner read aloud page 4 of Let’s Test! Turn to your partner.

I’m going to ask a question that is not on the bookmark. What is the problem they are trying to solve?

- If your partner is ready, have her answer your question. [The sun is too bright. They need shade.]
- If your partner is not yet sure of the answer, let her know that together, you can keep reading to find the answer.
- Remind students that the reason partners are asking questions while they read is to help each other understand.
- Read aloud page 5. Pause and model how to use the bookmark to ask your partner a question. Hold up the bookmark and point to the first question.

I want to use this question on the bookmark. How will they solve their problem?

- Discuss possible answers to the question with your partner.

7. Assign partners and distribute books and bookmarks. Distribute one book and one bookmark to each pair.
8. **On-the-Fly Assessment: Partners read and ask questions.** As partners read, circulate and listen for how they ask the questions printed on the bookmark and discuss possible answers to those questions.

### Embedded Formative Assessment

**On-the-Fly Assessment 8: Asking Questions While Reading**

**Look for:** As partners read *Let’s Test!*, circulate and listen for how they pose and respond to the questions printed on the bookmark and if they are using content from the book to respond to the questions. Students should be starting to pose questions that are not printed on the bookmark. Note whether or not students are using question words and asking questions, rather than making comments and connections. You can also observe if students’ questions are relevant to the content of the book, or if students are having difficulty understanding the text’s focus on how light passes through different materials.

**Now what?** If students are posing questions but are not answering questions with information from the book, refer them to the book and pose follow-up questions that direct their attention to evidence that will answer the questions (e.g. *When the children tested the blanket, what did you read about how the blanket blocked the light? What did the children learn about the material?*). If students are not using question words, consider writing “How?” “What?” “Where?” “When?” and “Why?” on a sheet of chart paper or on the board as a reference to help students. You may consider rereading sections of *Let’s Test!* and offering examples of questions and non-questions to help students determine which is asking a question (e.g. *How can we block the sunlight?* vs. *The blanket blocks too much light.*). Similarly, if students’ questions are not related to the content you are discussing, you may have them listen to and choose between a related question and a non-related question (e.g. *Will the blanket block the light?* vs. *Which blanket will keep us the warmest?*).

### Teacher Support

**Background**

**About the Book: *Let’s Test!***

*Let’s Test!* follows two young children who test several different shade devices for their lemonade stand before finding the perfect one. It’s a hot day, and the kids want to sell lemonade, but the sun is too bright and hurts their eyes. They try out three different versions of a light-blocking design: the first one makes it too dark, the second one doesn’t block enough light, and the third one is just right. Within a relatable story and structure, this book provides a very clear model of the design process that students will be using in this unit. The characters experience a problem and design a solution to the problem, revising their design as they go along. *Let’s Test!* is a Partner Read, so the book uses very simple language and supportive illustrations to make the content accessible to early readers.
Supporting English Learners: Asking Questions
To help students distinguish questions from statements, you may consider modeling by asking questions and then generating a list of question words you can write on the board or on a chart. You can add to this list of question words throughout the unit and encourage students to use these words to help compose questions.
Reading: Let’s Test!

Students read Let’s Test! with a partner and use a bookmark to practice asking and answering questions to make sense of the text.

Instructional Guide

1. **Connect to prior learning.** Remind students that they have learned how to use materials to make dark areas on a surface. Now they are working to figure out how they can use materials to make other areas on a surface. Point to the Investigation Question on the board and read it aloud.

¿De qué manera los materiales crean áreas que no son oscuras sobre una superficie?

Let students know that they are going to read a book that will help them think about how to make these other kinds of areas on a surface.

2. **Display the front cover of the Let’s Test! big book.** Invite students to describe what they see on the front cover.

Este libro trata sobre dos niños que también están intentando averiguar si todos los materiales bloquean la luz. Testean sus posibles soluciones para solucionar un problema, igual que los ingenieros de la luz.

Leeremos este libro para ver cómo estos niños usan diferentes materiales para resolver su problema.

3. **Revisit asking questions.** Point out that students have been asking one another questions as they design and test materials to find a solution for the puppet-theater company. Remind students that they have also been asking questions while they read to think about why certain things are happening in a book.

4. **Introduce the Let’s Test! Bookmark.** Hold up a bookmark.

Este marcalibros tiene varias preguntas para ayudarles a pensar en lo que está sucediendo en el libro mientras leen. Pueden usar estas preguntas para ayudarles a pensar en cómo los niños en el libro están trabajando como ingenieros.

Point to each question on the bookmark and read it aloud, encouraging students to read with you.
¿Cómo resolverán su problema?
¿Qué material testearon?
¿Qué aprendieron sobre el material?

Point to the question mark at the bottom of the bookmark.

Este signo de interrogación les recordará que pueden hacer sus propias preguntas mientras leen.

5. **Revisit Partner Reading.** Let students know that they will be reading Let’s Test! with partners. Point to the Partner Reading Guidelines and remind students that these guidelines will help them as they read with a partner. Let students know that you have added two additional guidelines. Invite a volunteer to be your reading partner. Read each guideline aloud and model the corresponding behavior with your partner.

- Sit next to your partner.
- Put the book between you.
- Take turns.
- Read in a quiet voice.
- Work together to read and understand.

6. **Model reading and asking questions with a partner.** Repeat the purpose of reading the book.

Vamos a leer este libro para ver cómo diferentes materiales ayudan a estos niños a resolver su problema.

- Have your partner read aloud page 4 of Let’s Test! Turn to your partner.

Voy a hacer una pregunta que no está en el marcalibros. ¿Cuál es el problema que están intentando resolver?

- If your partner is ready, have her answer your question. [The sun is too bright. They need shade.]
- If your partner is not yet sure of the answer, let her know that together, you can keep reading to find the answer.
- Remind students that the reason partners are asking questions while they read is to help each other understand.
- Read aloud page 5. Pause and model how to use the bookmark to ask your partner a question. Hold up the bookmark and point to the first question.

Quiero usar esta pregunta en el marcalibros. ¿Cómo resolverán su problema?

- Discuss possible answers to the question with your partner.

7. **Assign partners and distribute books and bookmarks.** Distribute one book and one bookmark to each pair.
8. **On-the-Fly Assessment: Partners read and ask questions.** As partners read, circulate and listen for how they ask the questions printed on the bookmark and discuss possible answers to those questions.

**Embedded Formative Assessment**

**On-the-Fly Assessment 8: Asking Questions While Reading**

**Look for:** As partners read *Let's Test!*, circulate and listen for how they pose and respond to the questions printed on the bookmark and if they are using content from the book to respond to the questions. Students should be starting to pose questions that are not printed on the bookmark. Note whether or not students are using question words and asking questions, rather than making comments and connections. You can also observe if students’ questions are relevant to the content of the book, or if students are having difficulty understanding the text’s focus on how light passes through different materials.

**Now what?** If students are posing questions but are not answering questions with information from the book, refer them to the book and pose follow-up questions that direct their attention to evidence that will answer the questions (e.g. *When the children tested the blanket, what did you read about how the blanket blocked the light? What did the children learn about the material?*). If students are not using question words, consider writing “How?” “What?” “Where?” “When?” and “Why?” on a sheet of chart paper or on the board as a reference to help students. You may consider rereading sections of *Let’s Test!* and offering examples of questions and non-questions to help students determine which is asking a question (e.g. *How can we block the sunlight?* vs. *The blanket blocks too much light.*). Similarly, if students’ questions are not related to the content you are discussing, you may have them listen to and choose between a related question and a non-related question (e.g. *Will the blanket block the light?* vs. *Which blanket will keep us the warmest?*).

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