Lesson 1.5
What Are Seeds?
Lesson Overview

In this lesson, students continue to discuss what has changed in the Bengal Tiger Reserve and how new trees have appeared on the 2015 map. They are introduced to the next Investigation Question: *How do new plants grow?* Students engage in a hands-on investigation of how seeds of various plants are similar and different. They then read a section in *Handbook of Habitats* to deepen their understanding of seeds and how plants grow. Finally, students sort different stages of a plant’s growth to solidify their understanding of how a seed can become a full-grown plant. The purpose of this lesson is for students to gain experience with seeds so they can begin to explain how new plants grow.

**Anchor phenomenon:** No new chalta trees are growing in the Bengal Tiger Reserve in India.

**Investigative phenomenon:** New plants grow.

**Students learn:**

- Seeds come in a variety of shapes, sizes, and colors.
- First seeds sprout, and then they grow to become full-grown plants.
- Plants make seeds that can grow into new plants.
Reading About Seeds

Students read about seeds and how new plants grow in *Handbook of Habitats*.

### Instructional Guide

1. **Set a purpose for reading.**

   
   Remember, we are investigating the question, *How do new plants grow?* We think new plants grow from seeds. Let’s read in *Handbook of Habitats* to find out more about seeds and how new plants grow.

   Add “Find out more about seeds and how new plants grow” to the Setting a Purpose chart.

2. **Distribute *Handbook of Habitats***. Distribute one copy of the reference book to each pair.

3. **Have students turn to the contents page.** Model how to find the section to read.

   
   Remember, the Table of Contents lists the sections of the book and tells us where to find them. We want to find out how new plants form from seeds. I think the section called “Making New Plants” might have what we’re looking for.

   
   What page does “Making New Plants” start on? [Page 7.]

4. **Have student pairs read pages 7–9.** When students have finished reading, have them keep their books open on their desks.

5. **Debrief the text.**

   
   What new information did you find out about seeds?

   Have students turn and talk to a partner about what they found out about seeds. Have a few volunteers share what they discussed with their partners. If no one mentions it, point out that seeds come from plants.
What did you find out about how new plants grow?

Have students turn and talk to a partner about what they found out about how new plants grow. Then have a few volunteers share what they discussed. If no one says so, point out that new plants sprout from seeds, and that seeds need water and sunlight to grow.

6. Introduce the What Does a Seed Need to Sprout and Grow? chart. Explain to students that this chart is a place where they can keep track of what a seed needs to grow.

Based on what we read in Handbook of Habitats, what are two things that seeds need to grow? [Water and sunlight.]

Write down "water" and "sunlight." Let students know that the class will add to this chart as they continue to investigate seeds.

7. Introduce and post the seeds and sprout vocabulary cards.

We just read about seeds and how they sprout into new plants. Seeds are things a plant makes that can grow into new plants. Sprout means to start to grow from a seed.

Teacher Support

Instructional Suggestion

Promoting Deeper Thinking: Accessing Prior Knowledge

Providing time for students to call to mind what they already know about a topic helps prepare them to learn new information. This kind of priming can be especially helpful for English learners and other students who may struggle with the cognitive load of encountering a new topic if they do not have time to prepare mentally. In addition, the sharing of ideas with the whole class exposes students with less experience with the topic to ideas and experiences other students come in with.
Reading About Seeds

Students read about seeds and how new plants grow in *Handbook of Habitats*.

**Instructional Guide**

1. **Set a purpose for reading.**

   Recuerden, estamos investigando la pregunta, ¿Cómo crecen las plantas nuevas? Pensamos que las plantas nuevas crecen de las semillas. Leamos en *Manual de hábitats* para averiguar más sobre las semillas y cómo crecen las plantas nuevas.

   Add “Find out more about seeds and how new plants grow” to the Setting a Purpose chart.

2. **Distribute *Handbook of Habitats*.

   Distribute one copy of the reference book to each pair.

3. **Have students turn to the contents page.** Model how to find the section to read.

   Recuerden, la tabla de contenidos enumera las secciones del libro y nos dice dónde encontrarlas. Queremos descubrir cómo las plantas nuevas se forman de las semillas. Pienso que la sección llamada “Hacer nuevas plantas” podría tener lo que estamos buscando.

   ¿En qué página comienza “Hacer nuevas plantas”? [Página 7].

4. **Have student pairs read pages 7–9.** When students have finished reading, have them keep their books open on their desks.

5. **Debrief the text.**

   ¿Qué nueva información descubrieron sobre las semillas?

   Have students turn and talk to a partner about what they found out about seeds. Have a few volunteers share what they discussed with their partners. If no one mentions it, point out that seeds come from plants.
¿Qué descubrieron sobre cómo crecen las plantas nuevas?

Have students turn and talk to a partner about what they found out about how new plants grow. Then have a few volunteers share what they discussed. If no one says so, point out that new plants sprout from seeds, and that seeds need water and sunlight to grow.

6. Introduce the What Does a Seed Need to Sprout and Grow? chart. Explain to students that this chart is a place where they can keep track of what a seed needs to grow.

Basándonos en lo que leímos en el Manual de hábitats, ¿cuáles son dos cosas que necesitan las semillas para crecer?
[Agua y luz del sol].

Write down “water” and “sunlight.” Let students know that the class will add to this chart as they continue to investigate seeds.

7. Introduce and post the seeds and sprout vocabulary cards.

Acabamos de leer acerca de las semillas y cómo germinan en plantas nuevas. Las semillas son cosas que genera una planta que pueden crecer y convertirse en plantas nuevas. Germinar significa comenzar a crecer de una semilla.

Teacher Support

Instructional Suggestion

Promoting Deeper Thinking: Accessing Prior Knowledge

Providing time for students to call to mind what they already know about a topic helps prepare them to learn new information. This kind of priming can be especially helpful for English learners and other students who may struggle with the cognitive load of encountering a new topic if they do not have time to prepare mentally. In addition, the sharing of ideas with the whole class exposes students with less experience with the topic to ideas and experiences other students come in with.