Variations in Plants and Animals
Lesson 3a: Variations in Traits of Cottonwood-Tree Seeds

Grade 1	**Length of lesson:** 45 minutes	**Placement of lesson in unit:** 3a of 5 lessons on variations in plants and animals
Unit central question: How do differences (variations) in plants or animals of the same kind help them survive so they can produce young (babies or seeds)?		**Lesson focus questions:** Will bigger or smaller cottonwood-tree seeds be more likely to survive and grow after the wind carries them away? Why do you think so?
Main learning goal: Trait variations in plants or animals of the same kind affect which individual plants or animals survive and which don't.		
Science content storyline: The traits of individuals of the same kind of animal or plant, such as a cottonwood tree, can vary. For example, some cottonwood-tree seeds are bigger than others. When the wind disperses the seeds, the size of the seeds can affect how far they travel. Scientists collect and analyze data (evidence) to find out whether trait variations, such as the size of cottonwood-tree seeds, affect which plants or animals of the same kind survive and which don't. A model can help us test ideas when it's too hard to test them in the real world.		
Ideal student response to the focus questions: Cottonwood trees have seeds that are different sizes. Some seeds are big, and others are small. When the wind blows, the seeds travel away from the cottonwood tree. The seeds that travel the farthest from the parent tree are more likely to grow and survive.		

Preparation

Materials Needed
- Student notebooks
- Chart paper and markers
- Class chart of sunflower traits and variations (from lesson 2a)
- Class chart of snake traits and variations (from lesson 2b)
- **Optional:** Class data table and bar graph (from supplemental math lessons)
- *A Dandelion's Life* by John Himmelman
- Materials for the cottonwood-seed demonstration (see handout 3.2)
- **Optional:** YouTube video, *Cottonwood Seed Blowing in the Wind*

Student Handouts and Teacher Masters
- 3.1 *A Dandelion's Life*: Suggestions for Reading (Teacher Master)
- 3.2 Protocol for the Cottonwood-Seed Demonstration (Teacher Master)
- 3.3 Cottonwood-Seed Model: Your Predictions (1 per student)

Ahead of Time
- Review the content background document.
- Read *A Dandelion's Life* to students *before* you begin this lesson. (See handout 3.1 for reading suggestions.)
- Set up the cottonwood-seed demonstration, following the protocol in handout 3.2.
- **Optional:** Preview the 30-second YouTube video (*Cottonwood Seed Blowing in the Wind*) at https://youtu.be/9Cgvjm04EVg.
- **ELL support:** Meet with ELL students in advance and introduce them to the lesson content, structure, materials, and activities so they know what's expected of them and can participate more fully in the lesson. Identify words in the lesson plan to review with students in advance, including *predict/predictions*, *data*, *evidence*, *survive*, *survival*, and *represent(s)*.

Lesson 3a General Outline

Time	Phase of Lesson	How the Science Content Storyline Develops
6 min	**Link to previous lessons:** The teacher engages students in reviewing what they learned about traits and variations in previous lessons.	• Plants or animals of the same kind share many of the same traits that make them more alike than different. But these traits can vary from individual to individual. Variations in traits can help some individual plants or animals survive.
1 min	**Lesson focus questions:** The teacher introduces the focus questions, *Will bigger or smaller cottonwood-tree seeds be more likely to survive and grow after the wind carries them away? Why do you think so?*	
6 min	**Setup for activity:** The teacher elicits ideas from students about the "white stuff" on a cottonwood tree and then compares the cottonwood-tree seeds with the dandelion seeds in the story *A Dandelion's Life*. After this discussion, the teacher announces that students will use a model to investigate trait variations in cottonwood-tree seeds that might help them survive.	• Cottonwood-tree seeds are similar to dandelion seeds because the wind carries both of them to different places, where some of them will have a better chance of surviving.
15 min	**Activity:** The teacher introduces the cottonwood-seed model and what each part represents. Then students consider whether bigger or smaller seeds will travel farther in the wind. After introducing the model, the teacher demonstrates how it works.	• The traits of individual cottonwood-tree seeds can vary, such as the size of the seeds. Scientists use models to help them answer questions about the things they're investigating. Like scientists, we can use a model to help us figure out whether larger or smaller cottonwood-tree seeds travel farther on the wind, and which seeds have a better chance of surviving. A fair test requires the same conditions for each trial, except for the trait variation being tested.
8 min	**Follow-up to activity:** The teacher reviews the focus questions and engages students in discussing the questions the cottonwood-seed model will help them answer. Students also consider how distance from the parent tree might affect which seeds have a better chance of surviving.	• The traits of individual cottonwood seeds can vary, such as the size of the seeds. These trait variations can affect which plants survive and which don't. Like scientists, we can use a model to help us figure out whether larger or smaller cottonwood seeds travel farther on the wind, and which seeds have a better chance of surviving.
8 min	**Synthesize/summarize today's lesson:** In a writing assignment, students predict whether the bigger or smaller cotton balls will travel farther when the wind blows them. Then they share their predictions and reasoning with the class.	
1 min	**Link to next lesson:** The teacher announces that in the next lesson, students will test their predictions about how far the cotton balls will travel. Then they'll use the data to figure out which cottonwood seeds are more likely to survive and grow.	

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6 min	**Link to Previous Lessons** **Synopsis:** The teacher engages students in reviewing what they learned about traits and variations in previous lessons. **Main science idea(s):** • Plants or animals of the same kind share many of the same traits that make them more alike than different. But these traits can vary from individual to individual. Variations in traits can help some individual plants or animals survive.	Make explicit links between science ideas and activities. Ask questions to elicit student ideas and predictions.	**Show slides 1 and 2.** Let's review what we learned from investigating traits and variations in sunflowers and snakes. What traits did we observe in sunflowers? How are all sunflowers alike? **NOTE TO TEACHER:** *Display the class chart of sunflower traits and variations for students to refer to during this review. Keep this discussion brief. You don't need to probe students' thinking at this time, but jot down any interesting ideas about traits, variations, and survival.* How are sunflowers different from each other? What variations in traits do they have? **NOTE TO TEACHER:** *If you taught the two*	Sunflowers have leaves. One trait sunflowers have is leaves. Sunflowers have flowers and seeds. Sunflowers have stems. They have different flower colors. Sunflowers have variations in the flower-color trait. Some sunflowers are tall, and some are short.	Can you use the word *trait* in your answer? Can you use the word *variations* in your answer?

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			supplemental math lessons, remind students that in these lessons, they compared variations in sunflower seeds and measured variations in sunflower plants. Then they displayed their data on a chart and a bar graph. Discuss the results of this investigation with students and ask the following questions: • *What variations in sunflower traits did we measure?* • *Do you think taller sunflowers are more likely to survive than shorter sunflowers?* • *Do you think yellow sunflowers are more*	*We looked at the size and colors of sunflower seeds.* *We measured how tall the sunflower plants were.* *I think taller sunflowers will survive because they can get more sunlight and air.* *I think the wind will blow down the tall sunflowers, and the shorter ones won't get blown down, so they'll survive longer.*	*Does anyone have a different idea?*

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			likely to survive than orange ones? Why? • *Why might some variations in sunflowers help them survive and grow?* **Show slide 3.** Now let's think about the traits and variations in snakes that we observed. How are all snakes alike? What traits do they share? **NOTE TO TEACHER:** *Display the class chart of snake traits and variations for students to refer to during this review. Keep the discussion brief. You don't need to probe students' thinking at this time, but jot down any interesting ideas about traits, variations, and survival.*	*I think yellow sunflowers get more sun, so they'll survive longer.* *I don't think the color really matters.* Snakes have long, curvy bodies. One trait that snakes share is a long, curvy body. Snakes don't have any arms or legs! They have heads and eyes. They have skin with	*Why do you think the color doesn't matter?* Can you use the word *trait* in your sentence?

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			Do you think that all snakes have these traits?	scales. Yes.	Why do you think so?
			How are snakes different from each other? What variations in traits do they have?	Snakes are different colors. One variation snakes have is different colors. Some snakes are small, and some are big. Some snakes are longer than others. Some snakes have different-shaped heads. Some snakes have rattles on their tails.	Can you use the word *variation* in your sentence?
			So we observed that snakes have differences or variations in some traits. How might some variations in snakes help them survive and grow?	Some variations in their color can help	

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			Do you think a green snake is more likely to survive than a brown snake? Why?	snakes blend into their surroundings better, and that can give them a better chance of surviving. I think it depends on whether the snake is the same color as its surroundings. If the brown snake is on a brown rock, it will blend in better so an eagle won't see it and eat it. The green snake will survive better in green grass than the brown one. Because the green	Tell me more about the color of the snake and the color of its surroundings. What about a green snake? Why will the green snake survive better in the green grass than the brown one?

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			How might the size of a snake help it survive? Great review, everyone! In today's lesson, we'll look at a new kind of plant called a *cottonwood tree* and think about how differences or variations in one of its traits might help it survive.	snake will blend in with the grass, but the brown snake won't. So an eagle will see the brown snake and eat it. If a snake is small, it might be able to hide better from birds or animals that would eat it.	
1 min	**Lesson Focus Questions** **Synopsis:** The teacher introduces the focus questions, *Will bigger or smaller cottonwood-tree seeds be more likely to survive after the wind carries them away? Why do you think so?*	Set the purpose with a focus question or goal statement.	**Show slide 4.** Today's focus questions give us some new ideas to think about: *Will bigger or smaller cottonwood-tree seeds be more likely to survive and grow after the wind carries them away? Why do you think so?* Write these questions in your science notebooks and draw a box around them. **NOTE TO TEACHER:** *Write the focus questions on the board for students to refer to*		

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			throughout the lesson. In this lesson, we'll think about what might happen to cottonwood seeds when the wind blows them away from the tree. I wonder whether bigger seeds or smaller seeds will have a better chance of surviving.		
6 min	**Setup for Activity** **Synopsis:** The teacher elicits ideas from students about the "white stuff" on a cottonwood tree and then compares the cottonwood-tree seeds with the dandelion seeds in the story *A Dandelion's Life*. After this discussion, the teacher announces that students will use a model to investigate trait variations in cottonwood-tree seeds that might help them survive. **Main science idea(s):** • Cottonwood-tree seeds are similar to dandelion seeds because the wind carries both of them to different places, where some of them will have a better chance of	Ask questions to elicit student ideas and predictions.	**Show slide 5.** The tree on this slide is a cottonwood tree. Why do you think it's called a *cottonwood tree*? Who can describe what this tree looks like? What are some of its traits? **NOTE TO TEACHER:** *As students share their ideas, record them on chart paper.* Now look carefully at the fluffy, white stuff on the leaves. What do you think it is? **NOTE TO TEACHER:** *Direct students' attention to the "white stuff" on the cottonwood-tree leaves and elicit ideas about what it might be. Students will likely say it's cotton. After they share their ideas, explain that the white stuff isn't cotton but is actually where the seeds are located.* Do the cottonwood tree seeds remind you of other	Because it makes cotton? It's really big and tall! It has leaves. It has a trunk and branches. It looks like cotton.	

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	surviving.		kinds of seeds we read about before we began this lesson? Yes, the seeds of a cottonwood tree are similar to dandelion seeds. **NOTE TO TEACHER:** *At this point, refer briefly to the story about a dandelion's life to make sure students understand that cottonwood trees go through the same life cycle as the dandelion in the story, but the adult plant is a large tree that produces seeds.* **CONTENT NOTE:** *Similar to the dandelion seeds' "parachutes," cottonwood seeds are attached to structures that resemble tufts of cotton. These tufts, which are actually the* fruit *of the tree, allow the seeds to travel long distances on wind currents before landing on the ground. In other words, the fruit contains or holds the seeds in cottonwood trees and dandelions. This entire structure is called a "seed" because it's easier for 1st graders to understand, even though the term isn't technically correct. Feel free to share this information with students if you feel they can make the distinction easily.* **Show slide 6.** At the end of our story *A Dandelion's Life*, we talked about two of our science words: *survive*	They look a little like dandelion seeds because they're fluffy and white.	

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			and *survival*. What helped the dandelion seed *survive* or live and grow in the story? How do you think variations in the traits of a dandelion seed, such as its color, its size, or its shape, might help a new plant survive and grow? Think about the dandelion in the story.  Listen to students' ideas. What's visible about student thinking? **ELL support:** Encourage ELL students to listen and respond to each other's ideas. Probe students' thinking and note any comments that are surprising or indicate confusion about the science ideas.	The seed landed in the dirt. The seed grew into a dandelion. The rain fell on the seed. Dandelion seeds are kind of pointy, like a spear, so they can stick in the dirt, and that helps them survive. The shape of the seeds. Dandelion seeds have parachutes that help them fly on the wind to new places.	What trait are you talking about when you say the seeds are pointy? Any other ideas? Tell me more about the seeds

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		Make explicit links between science ideas and activities **before** the activity.	In the dandelion story, the wind blew the dandelion seeds to other places, and that helped them survive. The wind scatters cottonwood-tree seeds too, so the wind also helps them survive. Today we'll learn about a model that will help us explore how certain variations in a trait can help cottonwood tree seeds survive when the wind blows them to different places. **NOTE TO TEACHER:** *Throughout this lesson, emphasize that variations in traits are important for the survival of plants or animals of the same kind. Otherwise, students might think that dropping cotton balls in front of a fan is just a fun activity with no connection to science ideas like traits, variations, and survival.* *If time allows, show the 30-second YouTube video of cottonwood seeds blowing in the wind (https://youtu.be/9Cgvjm04EVg). This will give students a real-life perspective of the model they'll be using to represent real cottonwood seeds.*	The size or weight of the seeds.	flying on the wind. What trait is that? How does the size or weight of the dandelion seeds help them survive?

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15 min	**Activity** **Synopsis:** The teacher introduces the cottonwood-seed model and what each part represents. Then students consider whether bigger or smaller seeds will travel farther in the wind. After introducing the model, the teacher demonstrates how it works. **Main science idea(s):** • The traits of individual cottonwood-tree seeds can vary, such as the size of the seeds. Scientists use models to help them answer questions about the things they're investigating. Like scientists, we can use a model to help us figure out whether larger or smaller cottonwood-tree seeds travel farther on the wind, and which seeds have a better chance of surviving. A fair test requires the same conditions for	Select content representations and models matched to the learning goal and engage students in their use. Make explicit links between science ideas and activities **during** the activity. Engage students in analyzing and interpreting data and observations.	**NOTE TO TEACHER:** *Introduce the cottonwood-seed model and follow the protocol in handout 3.2 (Protocol for the Cottonwood-Seed Demonstration). You should already have set up the materials in advance.* So we know that the wind blows cottonwood seeds away from the tree. But how far do the seeds fly? **Show slide 7.** I've set up a model of a cottonwood tree that we'll use to find out how far cottonwood seeds travel on the wind and where they land. What do you see when you look at this model? Let's talk about what each part of this model stands for or represents. What do you think the fan is supposed to be? What does it represent? That's right! The fan represents the wind that blows the cottonwood seeds. Now look at this line on the paper marked "Tree." What do you think that's supposed to be? What do you think the paper on the floor is supposed to be? What could it represent?	I see a fan. The wind? The tree. The ground?	

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	each trial, except for the trait variation being tested.	Summarize key science ideas.	Now look at these cotton balls. **NOTE TO TEACHER:** *Hold up the large and small cotton balls so everyone can see them.* What do you think these cotton balls are supposed to be? What do they represent? So the fan represents the wind blowing the cottonwood seeds. The line on the paper represents the cottonwood tree. The paper represents the ground where the seeds will land, and the cotton balls represent the seeds. How are these cotton balls alike? Yes, both cotton balls are white and round, so the traits of *color* and *shape* are the same. These traits won't change at all in our investigation. How are the cotton balls or cottonwood seeds different? What is our science word for differences in a trait? What trait of the cotton balls shows variations? Right! The cotton balls show *variations* in the *trait* of size.	The cottonwood seeds. They're both white. They're both round. One cotton ball is big, and one is small. Variations. The trait of size.	

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		Ask questions to elicit student ideas and predictions.	**NOTE TO TEACHER:** *Hold up the big cotton ball again.* What do you think this *big* cotton ball represents in our model? Yes, the big cotton ball represents a big cottonwood seed. **NOTE TO TEACHER:** *Now hold up the small cotton ball.* What do you think this small cotton ball represents in our model? Yes! The small cotton ball represents a small cottonwood seed. When I turn on the fan and drop each cotton ball in front of it, what do you think will happen? Which cotton ball will travel farther in the breeze? Who can remind us what the fan and the cotton balls represent?	A big cottonwood seed. A small cottonwood seed. I think the bigger cotton ball will go farther. The smaller cotton ball is lighter, so it won't go very far. The fan is the wind,	What makes you think the bigger cotton ball will go farther?

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			So what do you think will happen to the cottonwood seeds when the wind blows them? **NOTE TO TEACHER:** *Record students' ideas and predictions on chart paper. If time allows, have students record their predictions in their notebooks by drawing a small seed and a large seed and circling the one they think will travel farther on the wind. Alternatively, you could ask for a show of hands and record on chart paper how many students think the small or large seeds will go farther.* *Make sure students understand that the word* Tree *on the paper near the fan indicates where the real cottonwood tree would be standing. Emphasize that they're using cotton balls to model what happens when the wind blows cottonwood seeds away.* In a moment, I'll show you how we'll use our model to investigate how far different-sized cotton balls will travel when wind from the fan blows them. But first, let's talk about why we're using a model to investigate cottonwood seeds. Why do you think scientists use models?	and the cotton balls are cottonwood seeds. I think the bigger cottonwood seed will go farther than the smaller seed. Because the things they want to study are too far away or too hard to study up	

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		Summarize key science ideas.	That's right. Scientists often use models when the things they want to investigate are too far away or too big or small or maybe too dangerous to study up close. Why do you think we're using a model to find out how far the wind blows cottonwood seeds? **NOTE TO TEACHER:** *This might also be a good place to introduce the idea of a fair test (controlling all variables except for the one that's being tested). In this case, a fair test requires that cotton balls are always placed in exactly the same location in front of the fan and dropped in the same way. Explain why a fair test is important and contrast it with an unfair test in which the cotton balls are too low or high or too close or far away from the fan. Emphasize that if any of these conditions change each time the test is conducted, it could give them the wrong results.* Now I'll demonstrate how our model works so	close. It would be hard to use the wind outdoors. A fan. We can't control the wind. The wind might not be blowing when we need it to. It would be hard to find our cotton balls outside if the wind blew them away. We don't have a cottonwood tree in our schoolyard.	What are we using instead of the wind? What do you mean by "we can't control the wind"?

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			you can see what you'll do in our next lesson. To make sure everyone can see, I'll divide the class into table groups and have one group at a time come up and sit around the paper on the floor. **NOTE TO TEACHER:** *If everyone can fit around the paper and see the demonstration clearly, you don't need to divide the class into groups. Otherwise, have one group at a time gather around the butcher paper for the demo.* **SAFETY NOTE:** *Remind students to keep their hands and fingers and any loose clothing away from the fan during the demonstration!* Pay close attention to how careful I am about keeping my fingers away from the fan. Also look carefully at what I do with each cotton ball. First, I'll drop the big cotton ball in front of the fan, and we'll watch how far the wind carries it before it lands on the paper. Then I'll drop the small cotton ball in front of the fan, and we'll see how far it travels. **NOTE TO TEACHER:** *Perform the demonstration for each group of students, making sure to follow the procedure in handout 3.2 (Protocol for the Cottonwood-Seed Demonstration). Following the demonstration, invite students to share their observations about what happened to each cotton ball when you dropped it in front of the fan and how far it traveled before landing on the paper. Ask students*		

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			which cotton ball traveled farther in this trial and emphasize that scientists often conduct several trials to make sure they're results are accurate. **Whole-class discussion:** So what happened to the big cotton ball when I dropped it in front of the fan? How far did the wind carry it before it landed on the paper? Is that what you thought would happen? What about the small cotton ball? Did it travel farther than the big cotton ball or not as far? Is that what you thought would happen? Do you think the cotton balls would land in the same places if I dropped them in front of the fan again? Why or why not? In our next lesson, each of you will get a chance to drop a big cotton ball and a small cotton ball in front of the fan the same way I did. Then we'll see how far the wind blows them and mark where they land so we can collect data to help us figure out whether the big or small cotton balls travel farther.		
8 min	**Follow-Up to Activity** **Synopsis:** The teacher reviews the focus questions and engages	Highlight key science ideas and focus question	**Show slide 8.** Let's talk a little more about models. When scientists set up a model to study something in the real world, they always talk to other scientists		

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	students in discussing the questions the cottonwood-seed model will help them answer. Students also consider how distance from the parent tree might affect which seeds have a better chance of surviving. **Main science idea(s):** • The traits of individual cottonwood seeds can vary, such as the size of the seeds. These trait variations can affect which plants survive and which don't. Like scientists, we can use a model to help us figure out whether larger or smaller cottonwood seeds travel farther on the wind, and which seeds have a better chance of surviving.	throughout. Ask questions to elicit student ideas and predictions.	about how the model will work and how the results will help answer a question. **NOTE TO TEACHER:** *Ask students what the cottonwood-seed model can't simulate, such as different wind speeds and the distances seeds can actually travel.* What real-life things will our model help us study? What trait of cottonwood seeds are we looking at? Yes, we're looking at the size trait of cottonwood seeds. What variations in the size of the seeds are we testing with our model? And what do we want to find out about these variations? What important questions are we trying to answer? And why do we want to know that? What else are we trying to figure out in today's focus question? **NOTE TO TEACHER:** *Point to the focus*	Cottonwood seeds. The size of the seeds. We're testing big and small seeds. We want to find out whether the big seeds or the small seeds fly farther away when the wind blows them. We want to know which seeds will be more likely to	

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			question on the board. That's right! We want to know whether the big seeds or the small seeds have a better chance of surviving and growing so they can make new cottonwood trees. **Show slide 9.** So our model can help us find out which cottonwood seeds will travel farther when the wind blows them. It can also help us figure out which seeds will be more likely to survive and grow. **Show slide 10.** Will a cottonwood seed have a better chance of surviving if it travels farther from the tree? What are your ideas?  Listen to students' ideas. What's visible about student thinking? What does a seed need to survive and grow? Do you think a cottonwood seed would get more	survive and grow. It might have more space to grow. It might land in a better place to grow. It needs dirt. It needs sunlight. It needs rain.	

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			or less sunlight if it flies farther away from the tree? Why or why not? Would a seed get more or less rain if it flies farther away from the tree? Now let's think about a cottonwood seed that lands closer to the tree. Do you think this seed would get what it needs to survive grow? Why or why not?	It might get more sunlight if it lands in a field. It might get less sunlight if it blows under someone's porch! It might get more rain if it lands in the middle of someone's yard where there aren't any other trees nearby. If the seed is too close to the tree, it might not get enough sunlight or rain to grow.	
8 min	**Synthesize/Summarize Today's Lesson** **Synopsis:** In a writing assignment, students predict whether the bigger	Highlight key science ideas and focus question	**Show slide 11.** We've been talking about how our model will help us answer our focus question, *Will bigger or smaller cottonwood-tree seeds be more likely to*		

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	or smaller cotton balls will travel farther when the wind blows them. Then they share their predictions and reasoning with the class. **Main science idea(s):** • The traits of individual cottonwood seeds can vary, such as the size of the seeds. These variations can affect which plants survive and which don't. Like scientists, we can use a model to help us figure out whether larger or smaller cottonwood seeds travel farther on the wind, and which seeds have a better chance of surviving.	throughout. Make explicit links between science ideas and activities.	*survive and grow after the wind carries them away? Why do you think so?* Let's make some predictions about what will happen next time when we use our model to show what happens to bigger and smaller cottonwood seeds when the wind blows them. **NOTE TO TEACHER:** *Distribute handout 3.3 (Cottonwood-Seed Model: Your Predictions) and go over the instructions with students. You may want to have students paste the handout in their notebooks before completing it.* **Show slide 12.** On your handout, write down whether you think the bigger or smaller cotton balls will travel farther when the wind blows them. Use the sentence starter on the slide to write your predictions: *I predict the [**bigger** or **smaller**] cotton balls will travel farther on the wind because …* Try to include the words from the word bank in your explanation. **ELL support:** Encourage ELL students to draw pictures to illustrate their predictions. Provide a word bank of comparative words for students to refer to as needed.		

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			NOTE TO TEACHER: *As students work on their predictions, circulate around the room and assist them if needed. Encourage them to use the words* wind, farther, parent tree, seed, and cotton ball *in their explanations*. **Whole-class share-out:** Who would like to share your predictions about the cotton balls and why you think the bigger or smaller balls will travel farther on the wind? **NOTE TO TEACHER:** *As students share their predictions, record them on chart paper. Try to elicit a variety of predictions from students.*		
1 min	**Link to Next Lesson** **Synopsis:** The teacher announces that in the next lesson, students will test their predictions about how far the cotton balls will travel. Then they'll use the data to figure out which cottonwood seeds are more likely to survive and grow.	Link science ideas to other science ideas.	**Show slide 13.** In our next lesson, we'll use our model to test our predictions about which cotton balls will travel farther when the wind blows them. Then we'll use the data we gather from our investigation to help us figure out which cottonwood seeds are more likely to survive and grow.		