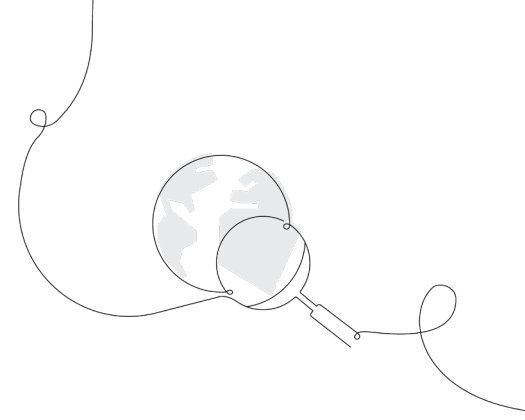


Grade 1 Classroom Slides sampler



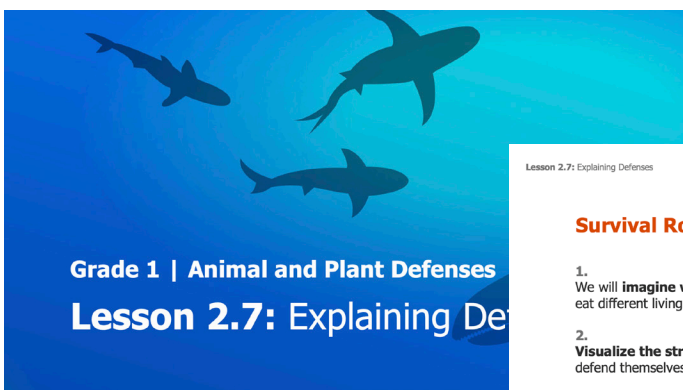
Meet your new hands-free TG!

Science time just got a whole lot easier. With our new Classroom Slides, you can put down the Teacher's Guide and focus on what matters most—your students. Plus, with Classroom Slides, lesson prep is as quick as a click!

Classroom Slides are:

- **Available offline**, which means no more sweating unreliable internet connections.
- **Streamlined for easy lesson delivery**, including lesson visuals, activity instructions and transitions, animations, investigation setup videos, technology support, and more.
- **Fully editable**, allowing you to incorporate your own flavor, flair, and favorite resources, such as Mystery Science.


This sampler includes slides from one lesson from the Animal and Plant Defenses unit.



Lesson 2.7: Explaining Defenses Activity 2

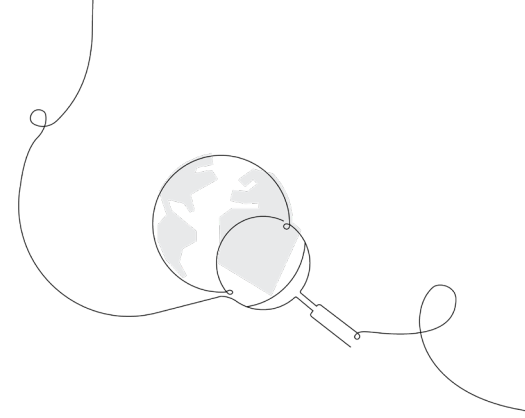
Survival Role-Play Movement Routine

1. We will **imagine we are hungry animals** trying to eat different living things.
2. **Visualize the structures** those living things use to defend themselves.
3. **Use your body** to act out **trying to eat** a living thing with that defense.



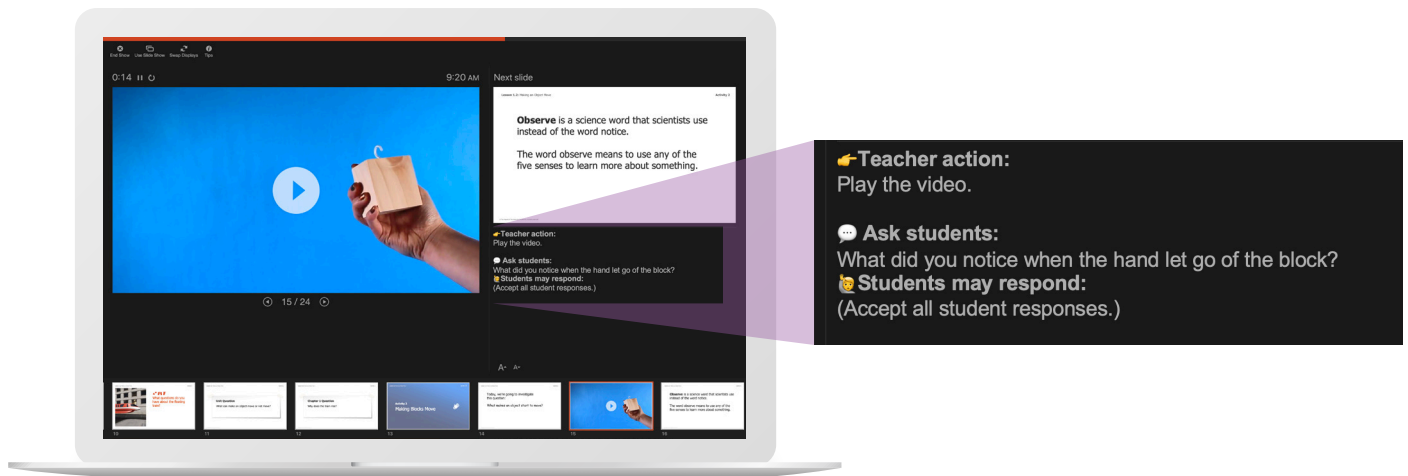
© The Regents of the University of California. All rights reserved.

Presenter view

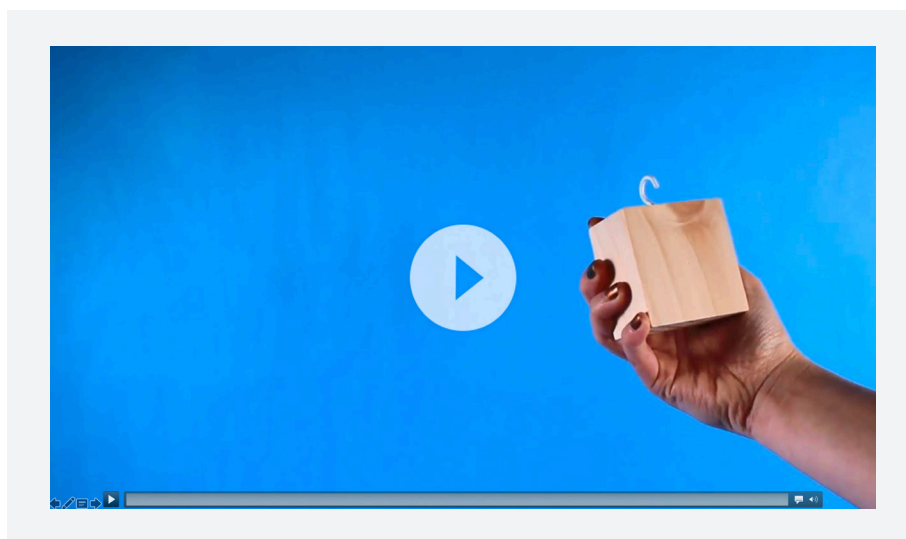


When using presenter view you can:

- **Project the student-facing content** and
- **View your teacher notes**, including teacher talk, teacher actions, and potential student responses and
- **Preview the next slide.**



Teacher view



Student view



Grade 1 | Animal and Plant Defenses

Lesson 2.3: Introducing Modeling

AmplifyScience

Lesson purpose: To provide a foundational modeling experience on which students can build as they learn more about animal and plant defenses throughout Chapter 2

Please refer to this lesson's Materials & Preparation section in the digital Teacher's Guide or the Print Teacher's Guide for information about preparing to teach this lesson, including any applicable safety notes

Activity 1

Exploring Defenses in Spikes, Spines, and Shells





Chapter 2 Question

How can Spruce the Sea Turtle survive where there are sharks?



Teacher action:

Point out the Chapter 2 Question posted on the classroom wall.



Suggested teacher talk:

We have been working as aquarium scientists to answer this question.



© The Regents of the University of California. All rights reserved.

Just like other predators, sharks eat animals by finding them and using sharp structures, such as their teeth, to catch them or break them into smaller pieces.



© The Regents of the University of California. All rights reserved.

We want to figure out how Spruce the Sea Turtle can **defend** herself from sharks.



Suggested teacher talk:

To help us figure out how Spruce can defend herself, we need to learn about the ways different living things defend themselves. Then, we can use what we learn to think about how Spruce might defend herself in some of the same ways.

Investigation Question:

How do animals and plants defend themselves?



Teacher action:


Point out the Investigation Question written on the board.

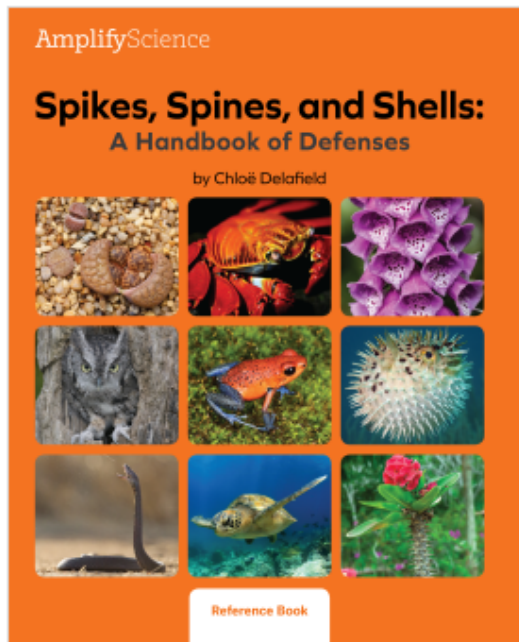
Vocabulary



defend

to protect or keep safe

 **Teacher action:**
Hold up the *defend* vocabulary card.



We read this **reference book** before.

Now, we will use this book to help answer our question about how animals and plants **defend** themselves.

👉 **Teacher action:**

Display the *Spikes, Spines, and Shells* big book.

Partner Reading



1.
Sit **next** to your partner.



2.
Put the **book** between you.



3.
Work together to read and understand.

👉 **Teacher action:**

Invite a volunteer to be your reading partner. Read each guideline out loud and model the corresponding behavior with your partner.

Crown of Thorns



What Are They?

This is a type of thorny plant that grows in hot places where it rains a lot. It is called the crown of thorns plant.

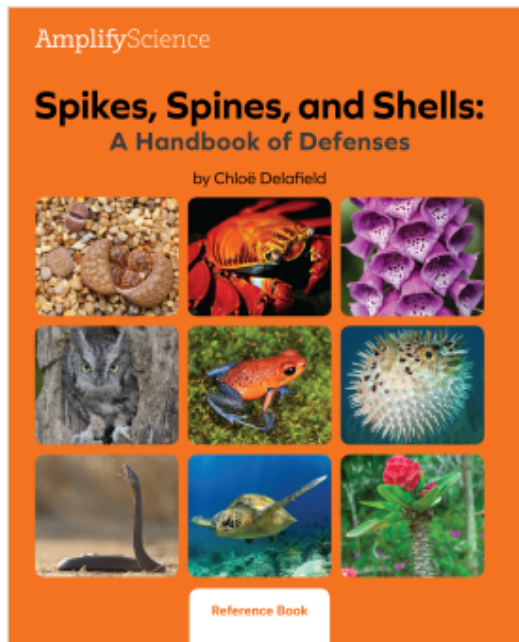
30 Spines and Spines.

© The Regents of the University of California. All rights reserved.

I will show you how partners can work together to **visualize**.

👉 Teacher action:

Sitting next to your student volunteer partner, model observing, visualizing, and identifying a possible defense. Turn to page 30, and point to the crown of thorns picture on this page.



Look through the book and **visualize** how animals and plants use their **structures** to keep from being eaten.

 **Teacher action:**

Distribute one copy of the book to each pair of students and have partners begin browsing. Circulate and observe as partners browse and discuss the images in the book. Then, call on volunteers to share.

 **Teacher action:**

Collect the books.

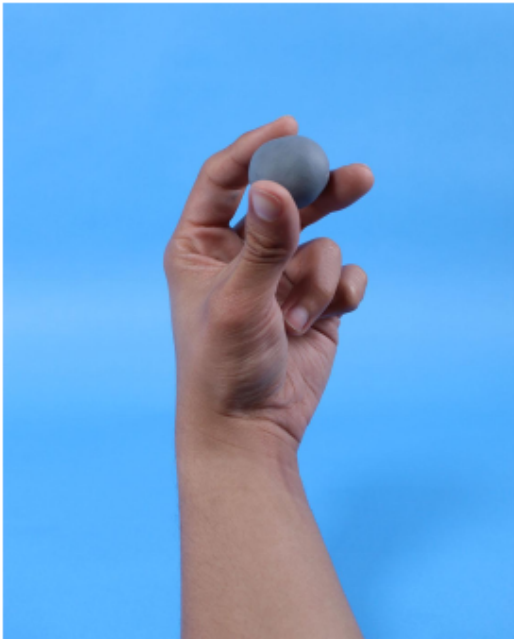
Activity 2

Modeling Defenses






We will **use these materials** to explore and find out more about how living things might use their structures to not be eaten.



This **ball of clay** is like the soft body of an animal or plant.

© The Regents of the University of California. All rights reserved.

 **Teacher action:**
Display a ball of clay.



© The Regents of the University of California. All rights reserved.

This **comb** has sharp points like the sharp structures of an animal, such as the claws or teeth.

👉 **Teacher action:**
Display a comb.



© The Regents of the University of California. All rights reserved.

The **comb poking the clay** is like an animal using its sharp structures to catch another living thing and break it into smaller pieces.

 **Teacher action:**

Demonstrate using the comb to break apart the clay.

If an animal or plant does not have **structures to defend itself**, it is easy for another animal to catch it and eat it.



© The Regents of the University of California. All rights reserved.



We are going to make structures to **defend** the clay from being poked by the comb.

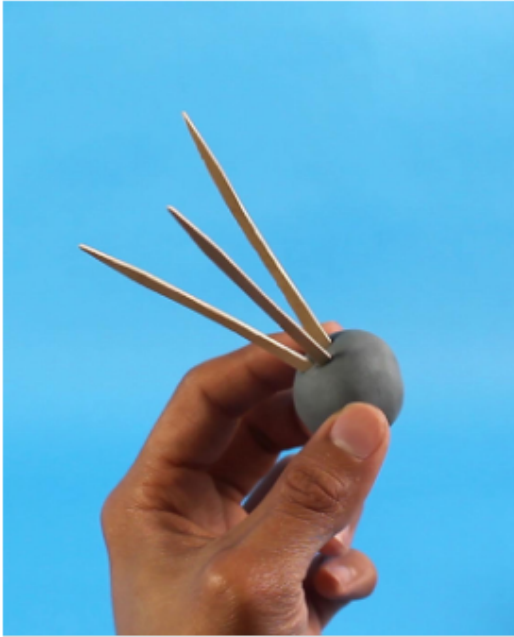
These are the materials we will use.

👉 **Teacher action:**

Display a tray of materials.

SAFETY NOTE: Toothpicks

Caution students about how to safely use the toothpicks. Point out that students should never poke themselves or others with the pointy end of the toothpicks, and they should not break the toothpicks into smaller pieces because the toothpicks will splinter. To prevent students from poking their fingers as they work, demonstrate how to gently use the investigation materials, such as the hair comb, when creating the defense models. In subsequent lessons in which students use toothpicks with their defense models, remind them to handle the toothpicks safely.



© The Regents of the University of California. All rights reserved.

I will show you a **demonstration** of how you can choose a material, make a structure, and check how well it works.

👏 Teacher demo options:


Play the video on the next slide OR conduct the live demonstration described below.

Model choosing a material, using the material to add a structure to the clay, and then testing the structure with the comb, as follows:

- Hold up several toothpicks.
- Say: We observed sharp thorns on the crown of thorns plant in the reference book. I think these toothpicks might defend the clay animal or plant in the same way that the sharp thorns defended the crown of thorns plant.
- Place two or three toothpicks on one side of the ball of clay. Mime poking yourself as you try to get the comb past the toothpicks.
- Say: The comb cannot get through to the clay on this side because the sharp toothpicks block the way and get to the clay and I do not want to poke my fingers! The toothpicks are defending the ball of clay.
- Poke the comb on the other side of the ball of clay without toothpicks.
- Say: The comb can still poke the clay on this side. There are no structures to defend the ball of clay on this side.

These toothpicks
might **defend**
the clay animal
or plant.



 **Teacher action:**
Play the video.

Making Structures to Defend a Clay Animal or Plant

1. **Choose a material** to make your structures. Think about the kinds of structures you saw in the book.
2. **Make structures** to defend your clay animal or plant.
3. **Test your structures** by poking with the comb. Do they keep the clay from being broken apart?



© The Regents of the University of California. All rights reserved.

👉 Teacher action:

Have students move to the workstations with trays of materials. Give students time to explore the materials. Caution students to be very careful with the toothpicks because they are somewhat pointy. Explain that students are not to break the toothpicks into smaller parts—they must use the whole toothpick. Encourage students to talk to their partners about how they might use the materials to make structures to defend the clay animal or plant.

👉 Teacher action:

Distribute one ball of clay per pair of students and give students time to explore the materials with the clay and the comb.

👉 Teacher action:

As students work, circulate and observe their models, asking them what they are figuring out: *Why do these materials help defend the clay from the comb? How might this be like a structure on a real animal or plant?*

View your online Teacher's Guide for more resources

Activity 3
**Recording Model
Explorations**



Name: _____ Date: _____

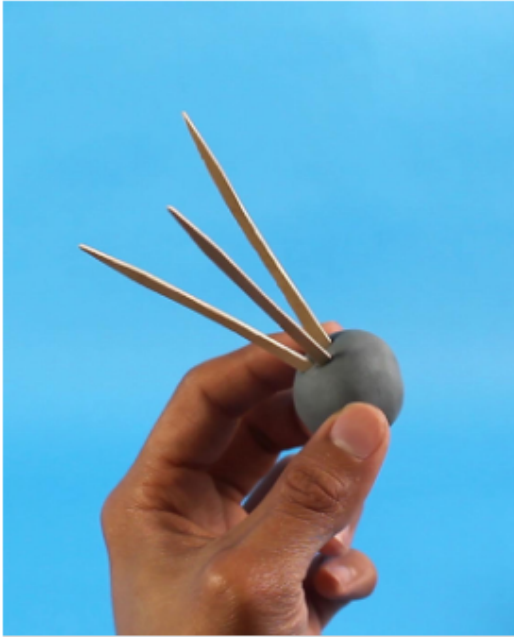
Exploring Structures Used to Defend

Directions:

1. Draw a structure that worked to defend the clay.
2. Label your drawing.



I will **show you how** to record ideas about your best structure for defending the clay.



© The Regents of the University of California. All rights reserved.

I am choosing this structure to **record** in the notebook.

 **Teacher action:**

Show your example of the clay ball with toothpicks.



We have two **new words** on our word ring: **defend** and **predator**.

We can use these to help us record our ideas.

© The Regents of the University of California. All rights reserved.

 **Teacher action:**

Hold up a word ring, and let students know that you have added the words *defend* and *predator* to their word rings.

Name: _____ Date: _____

Exploring Structures Used to Defend

Directions:

1. Draw a structure that worked to defend the clay.
2. Label your drawing.



4

Animal and Plant Defenses—Lesson 2.3

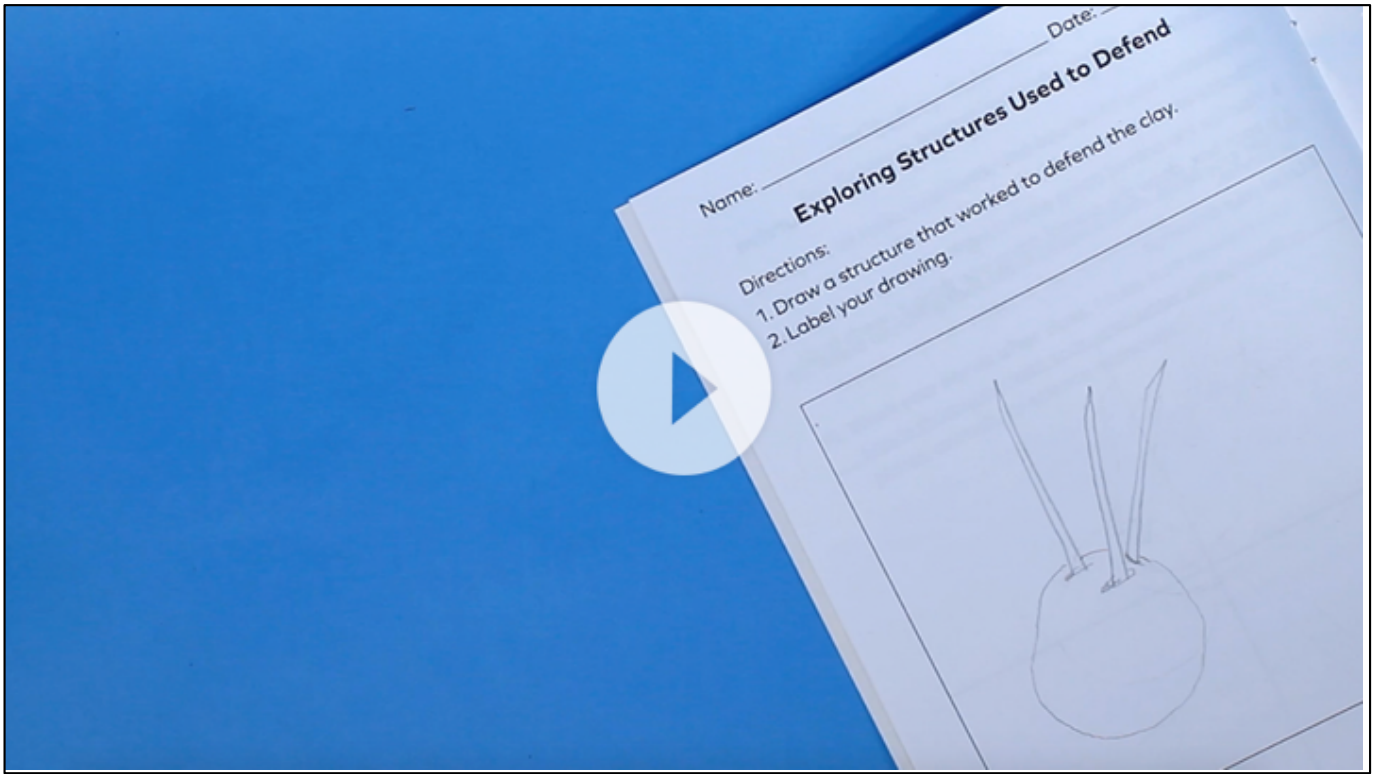
© 2019 The Regents of the University of California. All rights reserved.


First, I will **draw** my
structure here.

 **Teacher demo options (to model completing the notebook page):**

Play the video on the next slide OR conduct the live demonstration described below.

- Demonstrate drawing the clay ball with toothpicks in the box on the projected page.
- Say “Now I can label what I drew. The clay uses the toothpicks to defend itself. The toothpicks are the structure the clay uses to defend itself.”
- Model writing “structure to defend” next to the toothpicks you have drawn. As you write, model looking for the *defend* and *structure* cards on the word ring. Show students how you can use the Word Ring Cards to help write these words in the notebook.



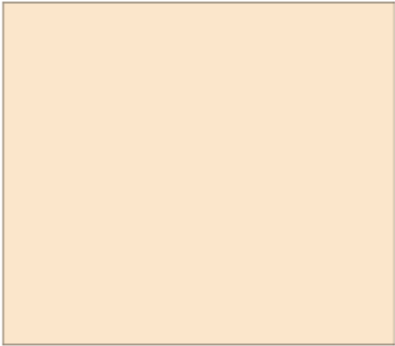
 **Teacher action:**
Play the video.

Name: _____ Date: _____

Exploring Structures Used to Defend

Directions:

1. Draw a structure that worked to defend the clay.
2. Label your drawing.



4 Animal and Plant Defenses—Lesson 2.3
© 2019 The Regents of the University of California. All rights reserved.

Turn to page 4 in your notebooks.



Draw your best structure.

Use your **word ring** to help you write a label.

 **Teacher action:**

Distribute Investigation Notebooks and word rings. Assist students in finding page 4 in the notebook, as needed.

 **Teacher action:**

Allow time for students to draw their model and label it.

 **Teacher action:**

Gather students back together in the discussion area. Have students set their models and materials on the tray and bring their Investigation Notebooks with them to the discussion area.



How did you use the materials to make **structures** that defended the clay well?

Did you try any materials that did **not** defend the clay well?



Students may respond:

(Accept all responses to both questions.)



Teacher action:

Encourage students to share their labeled drawings as they answer the questions.



Teacher action:

Summarize any themes that surfaced in what students figured out about structures that did or did not work well to defend the clay. Things that likely worked well include using hard or thick materials, using long or sharp materials, and covering the entire clay “body.”

Vocabulary



defense

what a living thing has or does to protect itself

Activity 4
**Discussing Models in
Science**



You and your partner just made a **model** of how animals and plants use their structures to defend themselves from being eaten.

Vocabulary



something scientists make to answer questions
about the real world

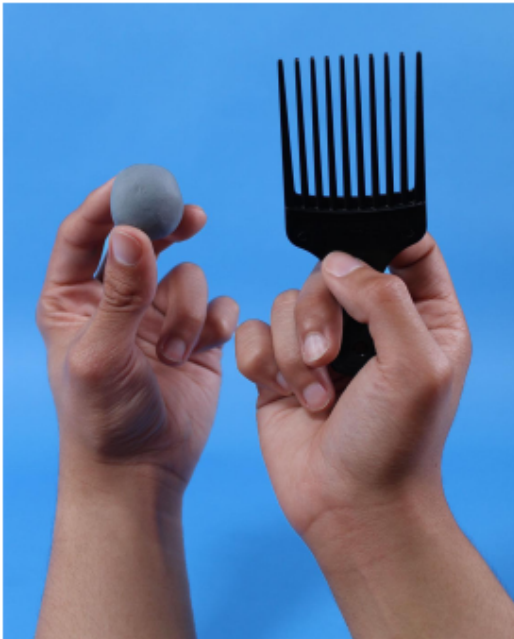


Teacher action:

Hold up the *model* vocabulary card.

Scientists make models to answer questions about the real world.

A model is not the real thing, but it is **like the real thing** in important ways.

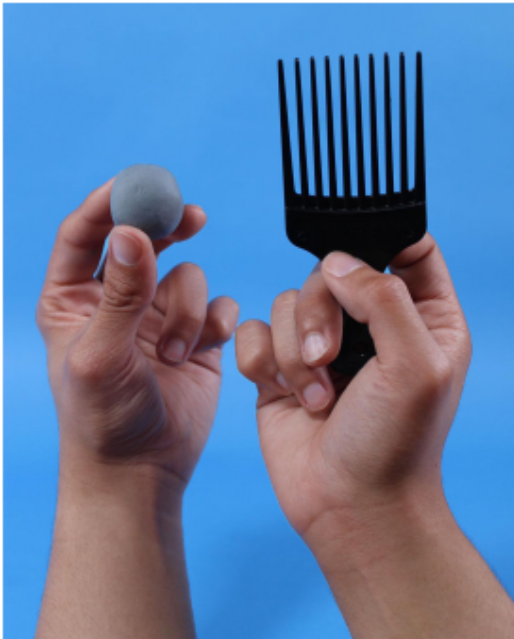


© The Regents of the University of California. All rights reserved.

The **clay** and the **comb**
are two parts of model.

👉 **Teacher action:**

Display a ball of clay and a comb.



Our model is **like real animals and plants** in ways that help us understand the real thing.



Our model is **different**
from real animals and
plants in some ways, too.

Models of Animal and Plant Defenses


Model We Used	What the Model Shows Us

We will use this **chart** to record the models we make and what they help us explain.

**Teacher action:**

Point out the Models of Animal and Plant Defenses chart on the classroom wall and read the title out loud.

Models of Animal and Plant Defenses

Model We Used	What the Model Shows Us
	

We will use the first column to show the model we made.



Let's add the drawing of our **Clay and Comb model.**

© The Regents of the University of California. All rights reserved.

 **Teacher action:**

Post the drawing of the Clay and Comb Model you prepared to the first column of the chart.

Models of Animal and Plant Defenses

Model We Used	What the Model Shows Us
	

We will use the second column to record what each model shows us.



What did using the comb to poke and break apart the clay show us?

**Students may respond:**

- Animals have sharp parts.
- Animals and plants get broken into smaller pieces when animals eat them.

**Teacher action:**

Synthesize students' ideas into several bullet points about what the model shows, and write these ideas on the chart.

End of Lesson



Amplify.

Published and Distributed by Amplify. www.amplify.com