

# Lessons 1–2

## Shelter at Mesa Verde

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### Prepare

Throughout this module, students view images of the cliff dwellings at Mesa Verde to investigate how the dwellings may have protected the Ancestral Pueblo people from the weather. In Lesson 1, students build a tent to explore how a shelter can protect people from the weather. In Lesson 2, students observe images of the cliff dwellings at Mesa Verde and listen to a read aloud of a Knowledge Deck™ poster about the cliff dwellings and the people who lived there. The class then develops an anchor model of a cliff dwelling to compare and describe how people inside or outside the dwelling may have experienced different kinds of weather. Students use the anchor model to help guide their learning throughout the module as they work to answer the Essential Question: **How did the cliff dwellings at Mesa Verde protect people from the weather?**

### Student Learning

#### Knowledge Statement

Shelters can protect people from the weather.

### Concept 1: Parts of Weather

#### Focus Question

What is weather?

#### Phenomenon Question

How could people who lived at Mesa Verde protect themselves from the weather?

## Objectives

- Lesson 1: Build a tent to explore the purpose of shelters.
- Lesson 2: Develop an anchor model of a Mesa Verde cliff dwelling.

## Texas Essential Knowledge and Skills Addressed

- K.2A **Ask questions about** organisms, **objects**, and events **observed in the natural world**. (Introduced)
- K.3C **Explore that scientists investigate different things in the natural world** and use tools to help in their investigations. (Introduced)
- K.8A **Observe and describe weather** changes from day to day and over seasons. (Introduced)

## English Language Proficiency Standards Addressed

- 3E **Share information in cooperative learning interactions.**
- 3J **Respond orally to information presented in a wide variety of** print, electronic, audio, and **visual media to build and reinforce concept and language attainment.**
- 4A **Learn relationships between sounds and letters of the English language** and decode (sound out) words **using** a combination of **skills such as** recognizing sound-letter relationships and **identifying cognates**, affixes, roots, and base words.



## Materials

		Lesson 1	Lesson 2
<b>Student</b>	Tent-building materials (1 set per group): materials will vary but may include blankets, cardboard boxes, poster boards, sheets, tarps, and towels	•	
	Mesa Verde Long Ago Knowledge Deck card (1)		•
	Sticky arrows (4 per student pair)		•
<b>Teacher</b>	Tent in Rain Photograph (Lesson 1 Resource A)	•	•
	Mesa Verde National Park Photograph (Lesson 2 Resource A)		•
	Mesa Verde Cliff Dwelling Photograph (Lesson 2 Resource B)		•
	Mesa Verde Long Ago Knowledge Deck poster		•
	Anchor model material preparation: 4" × 4" × 5" or smaller cardboard box or tissue box (1), 12" × 12" × 12" or larger cardboard box (1), 12" × 12" floor tiles with adhesive backing (2), chart paper (1 sheet), desk or table (1), permanent marker (1), scissors (1), sheet or blanket (1), tape, wooden dolls (3)		•
<b>Preparation</b>	Gather tent-building materials and identify indoor or outdoor areas where student groups can build their tents. (See Lesson 1 Resource B.)	•	
	Identify two corners or areas of the classroom to use for a Question Corners routine. Prepare a copy of the photographs in Lesson 1 Resource A and Lesson 2 Resource B. During the lesson, post one photograph in each corner.		•
	Collect materials for the anchor model and assemble boxes to use to develop the model during the lesson. (See Lesson 2 Resource C.)		•

# Lesson 2

**Objective:** Develop an anchor model of a Mesa Verde cliff dwelling.

## Launch 5 minutes

Display the photograph of Mesa Verde National Park (Lesson 2 Resource A). 



Tell students that the photograph shows a place called Mesa Verde.  Share with students that *mesa* and *verde* are Spanish words that mean table and green, respectively. Explain that a mesa is also a flat-topped mountain and point out the green trees on the mesa in the photograph. Direct students' attention to the cliff in the photograph and explain that a cliff is a high area of rock with a very steep side.

- If you were visiting Mesa Verde and it started to rain, where would you go?
  - *I would go under a tree.*
  - *It looks like there are big cracks in the rocks, but I don't know if I could get in them.*

## Agenda

Launch (5 minutes)

Learn (26 minutes)

- Notice and Wonder about Mesa Verde (13 minutes)
- Develop Anchor Model (13 minutes)

Land (4 minutes)

## Extension

If students completed the Optional Homework for Lesson 1, invite them to share their observations with the class before beginning Lesson 2. Record any related phenomena to add to the Related Phenomena section of the driving question board when it is developed in Lesson 3.



## Teacher Note

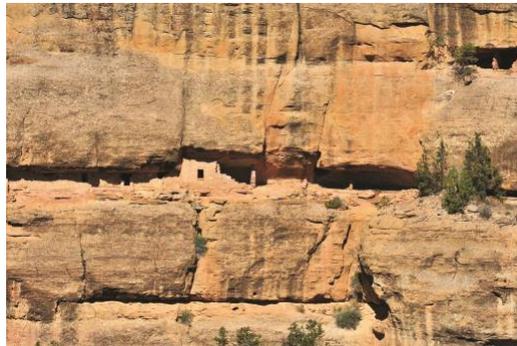
This photograph was taken at Mesa Verde National Park in Colorado. Consider showing students the location of Mesa Verde National Park on a map of the United States.

Acknowledge differences in student responses, and tell students that in this lesson they will learn about people who once lived at Mesa Verde as they explore the Phenomenon Question **How could people who lived at Mesa Verde protect themselves from the weather?**

## Learn 26 minutes

### Notice and Wonder about Mesa Verde (13 minutes)

Display the photograph of a cliff dwelling at Mesa Verde (Lesson 2 Resource B). 



- What do you notice about this picture?
  - *It looks a lot like the picture of Mesa Verde.*
  - *I see a building in the rocks.*
- What do you wonder about this picture?
  - *Is that a window?*
  - *Do people live there?*

Encourage students to point out details in the photograph as they respond. Use sticky notes to record relevant student questions.  Then display the two photographs of Mesa Verde (Lesson 2 Resources A



#### Teacher Note

In this module, *cliff dwelling* refers to an alcove in a cliffside and the rooms created by structures within the alcove. This term is introduced to students in this lesson when they interact with the Mesa Verde Long Ago Knowledge Deck poster.



#### Teacher Note

Save questions recorded on sticky notes to add to the driving question board when it is developed in Lesson 3.

and B) side-by-side. Reveal that the second photograph provides a closer view of the location shown in the first photograph, and help students locate the cliff dwelling in both photographs.

Tell students that they will now look at a different picture of Mesa Verde. Show them the painting on the front of the Mesa Verde Long Ago Knowledge Deck poster.   Instruct students to look silently at the painting. Then invite a few students to share with the class what they notice.

*Sample student responses:*

- *There are people on top of the mesa.* 
- *There is a building in the rocks.*

Place students in pairs and distribute one Mesa Verde Long Ago Knowledge Deck card and a sticky arrow to each pair. Instruct students to work with their partner to look closely at the painting on the front of the card. Tell them to place their sticky arrow on something they have a question about.  Provide students time to work. Then invite one student in each pair to describe where they placed their sticky arrow and to share their question.

*Sample student responses:*

- *We placed a sticky arrow on the person on the roof. Is this person fixing the roof?*
- *We put a sticky arrow on a building. Do people sleep inside of it?*

Acknowledge that there is still much more to learn about Mesa Verde. Explain that the painting shows how Mesa Verde may have looked hundreds of years ago when the people who lived there made their homes in cliff dwellings. Tell students that a dwelling is a place where someone lives. Display the back of the Knowledge Deck poster and read the text aloud.

Return students' attention to the painting on the front of the poster.

► What do you now know about how people lived at Mesa Verde?

- *People lived in cliff dwellings at Mesa Verde.*
- *Their homes were made of stone.*

Summarize that the painting shows what daily life may have been like for the Ancestral Pueblo people who lived in the cliff dwellings at Mesa Verde many years ago.  Tell students that much of what is known about the Ancestral Pueblo people and the cliff dwellings is because of the work of scientists. Explain that **scientists** are people who study the world around them.



### Teacher Note

For more information on how to use Knowledge Deck posters and cards, see the Implementation Guide.



### Teacher Note

The painting on the Mesa Verde Long Ago Knowledge Deck poster shows an artist's representation of life in a Mesa Verde cliff dwelling known as Spruce Tree House around the year 1250 CE. Spruce Tree House is one of approximately 600 cliff dwellings built by the Ancestral Pueblo people at Mesa Verde. The dwelling consists of about 130 rooms and 8 kivas, or ceremonial chambers, built into a natural alcove measuring 216 feet (66 meters) at its greatest width and 89 feet (27 meters) at its greatest depth. It is thought to have been home to between 60 and 80 people.



### Spotlight on Knowledge and Skills

Prompt students to describe the locations of the people in the painting on the poster using terms such as *above*, *below*, *beside*, *in front of*, *behind*, and *next to* (K.6C).



### Spotlight on Knowledge and Skills

Students ask questions based on their observations of the painting of Mesa Verde. Support students by encouraging them to use question words, such as *Who?*, *What?*, *When?*, and *Why?*, as they focus on details of the painting and generate questions (K.2A).



### English Language Development

Introduce the term *scientist* explicitly. Providing the Spanish cognate *científico* may be helpful. Discuss examples of what scientists do, such as study animals to find out how they live or study rocks to find out how they were made (4A).

Prompt student pairs to look again at the painting on the front of the poster and to discuss the following question.

► Imagine that you lived at Mesa Verde. Where would you go if it started to rain?

- *I would go inside the cliff dwelling.*
- *Maybe I would go into a building.*

Remind students about their tents from the previous lesson, and ask students to imagine the following scenario.

► Imagine that it is cool and rainy outside. Would you rather be in your tent or in a cliff dwelling? Why do you think so?

Use a Question Corners routine to elicit responses from all students. 📄 Post a photograph of a cliff dwelling (Lesson 2 Resource B) in one corner of the room and a photograph of a tent (Lesson 1 Resource A) in another corner. Invite students to move to the corner of the room where their answer to the question is displayed. Ask students to discuss with a classmate in the same corner why they picked the response they did. Then have a few students share their reasoning with the class.

*Sample student responses:*

- *I think the cliff dwelling would keep me drier than my tent would.*
- *I would want to be in my tent because I think it would be warmer than a cliff dwelling.*

Highlight differences among student responses to point out that there is still more to learn about the cliff dwellings and the weather at Mesa Verde.

## Develop Anchor Model (13 minutes)

Have students work with the same partner they worked with earlier in the lesson when they asked questions about the Knowledge Deck card. Ask each pair to bring their Knowledge Deck card and to sit in



### Teacher Note

To help students understand the magnitude of Spruce Tree House, show the class the Street View of the location on Google Maps™: <http://phdsci.link/1471>.



### Teacher Note

The Question Corners collaborative conversation routine allows students to express and support their opinions. During this routine, a debatable statement or question is presented. Students move to the corner where the response that best represents their opinion is posted. Students then discuss their reasons for joining that corner. After listening to their classmates' reasoning, students have the option of switching to a different corner, but they must explain their rationale for moving. For more information, see the Instructional Routines section of the Implementation Guide (3E).

a central location in the classroom. Collect the sticky arrows students placed on their cards earlier in the lesson.

Explain to students that they will develop an anchor model to learn more about the cliff dwellings and the weather at Mesa Verde.  Tell students that there are many kinds of models and that people, such as scientists, use models to figure out or explain how something works.

► Why do you think we need to use a model to find out more about the cliff dwellings?

- *The real cliff dwellings are far away.*
- *I don't think we can all go there.*

Confirm that students will use a model because they cannot visit the cliff dwellings during class. Explain that the first step in developing a model is to decide what parts are important to include. Distribute three sticky arrows to each student pair. Ask student pairs to look at the painting on the front of their Knowledge Deck card and to work together to place sticky arrows on three parts of the cliff dwelling that they think the class should include in the anchor model.

When students are finished, display the materials for the anchor model. Invite student pairs to share with the class what they think should be in the anchor model. As students share, ask the rest of the class to use nonverbal signals to show whether they agree that it is important to include the part in the model.  If most students agree with including a part, work with the class to identify which material they should use for that part.  

Anchor models will vary for each class but should include the following:

- a cliff and an alcove in the cliffside (represented by the large box and the floor tiles)
- a stone structure that creates a room in the alcove (represented by the small box)
- people (represented by the wooden dolls)

After the anchor model is developed, place one wooden doll on top of the large box and two wooden dolls next to the small box inside the large box.

► Imagine that it is cool and rainy outside. Which of the people do you think will be warmer? Which do you think will be drier?

- *I think the people inside will be warmer.*
- *The people inside the cliff dwelling will stay drier.*



### English Language Development

Students will encounter the term *model* throughout the module. Providing the Spanish cognate *modelo* may be helpful. Support students by sharing examples of models they may have seen, such as a model airplane or a model of the solar system (4A).



### Teacher Note

A nonverbal signal is a response technique that allows the class to engage in a quick, formative assessment. Students use a signal (e.g., thumbs-up, thumbs-down, American Sign Language) to respond to a question with a closed set of responses.



### Differentiation

Kindergarten students will likely need support to select materials that represent objects in the anchor model. Consider asking questions such as these to guide student thinking:

- Which object looks the most like the rock cliffs at Mesa Verde?
- Which object looks the most like a room of a cliff dwelling?
- Where should we put this object? Why should we put it there?



### Check for Understanding

In this lesson, students develop an anchor model that represents a Mesa Verde cliff dwelling. Students will update the model throughout the module and use it to help answer the Essential Question. Encourage students to distinguish between the model and an actual cliff dwelling by asking guiding questions such as these:

- How is the model like a cliff dwelling?
- How is the model different from a cliff dwelling?

On a sheet of chart paper, record a title for the anchor model. Below the title, write a sentence that summarizes what students have learned so far about how a cliff dwelling protects people from the weather. Post this sheet of chart paper near the anchor model.

*Sample anchor model:*



### Mesa Verde Cliff Dwellings

The cliff dwellings at Mesa Verde protected the Ancestral Pueblo people from the weather.

Use the anchor model to help guide students' learning throughout the module. Point out to students that although they think the cliff dwellings protected people from the weather, they are not yet sure how. Explain that they will explore the purpose of cliff dwellings as they work to answer the Essential Question: **How did the cliff dwellings at Mesa Verde protect people from the weather?**

## Land 4 minutes

Ask students to Think–Pair–Share in response to the following question. 📝

- Do you think the cliff dwellings at Mesa Verde were shelters?
  - *Yes, I think people could go inside the cliff dwellings to stay dry.*
  - *I don't know because cliff dwellings look a lot different from a tent or a house.*

Confirm that the cliff dwellings were shelters for the Ancestral Pueblo people. Tell students that, like scientists, they need to uncover more information to find out how the cliff dwellings may have protected people from the weather. 📝



#### Teacher Note

Think–Pair–Share is a collaborative conversation routine that gives students time to think individually about a question before sharing with the class. All students should share their responses with a partner, but only a few students will share their responses with the class (3E).



#### Teacher Note

Ensure that, by the end of the lesson, each student is in possession of one Mesa Verde Long Ago Knowledge Deck card. Students will collect more Knowledge Deck cards throughout the module.