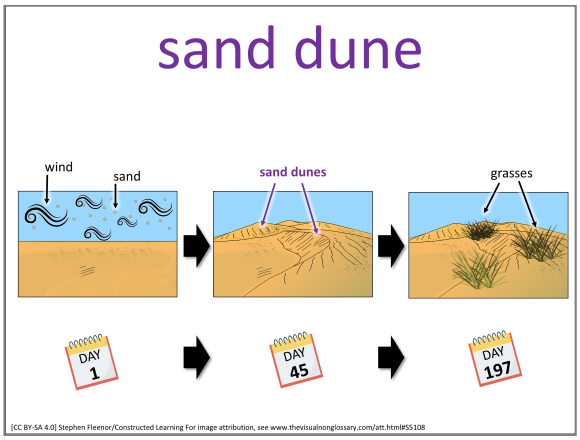
Teacher Guide for the Lesson on **sand dune**



Standard:
5.10(C)

Content Objective:
We can model and explain how wind changes Earth's surface to form **landforms** such as **sand dunes**.

Language Objective: Answer the following question in complete sentences using the sentence stem and the key vocabulary of the lesson:

> How might strong seasonal winds over a desert slowly change existing **sand dunes** or create new ones?
>
> *Strong seasonal winds might change the **sand dunes** by...*

Other key vocabularies: deposition, sand dunes

By studying this visual, students might:

Notice	Wonder
• Wind is blowing sand across the surface.	• Where did the sand originally come from?
• Over time, piles of sand begin to form hills.	• Why does the sand pile up in certain places?
• The sand changes shape from Day 1 to Day 197.	• How long does it take for a sand dune to fully form?
• The sand dunes get larger as more sand collects.	• What would happen if the wind stopped blowing?
• Grasses begin to grow on the sand dunes and help hold them in place.	• How do grasses keep the sand dunes from moving?

EXTENDING THE DISCUSSION

- After randomly calling on students, if there is anything from this list that was not mentioned, then ask the class, "Did anyone notice...?"
- After students have shared what they notice, ask the class, "Did anyone wonder...?" using the suggestions above or anything else you might think is interesting or relevant to the lesson.

Structured Conversation Prompts

OBSERVATIONAL	RELATIONAL	INFERENTIAL
How do **sand dunes** form? **Sand dunes** form by…	How is a **sand dune** related to **deposition**? A **sand dune** is related to **deposition** by…	How might strong seasonal winds over a desert slowly change existing **sand dunes** or create new ones? Strong seasonal winds might change the **sand dunes** by...

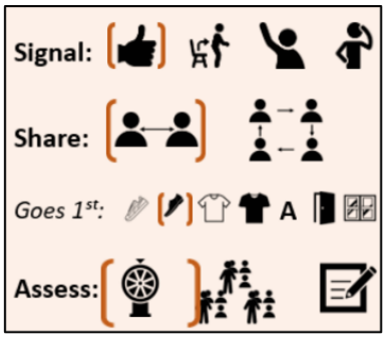
Example Student Responses to the Observational Question

Low-Level	High-Level
Sand dunes form by wind blowing sand into piles.	**Sand dunes** form by wind causing **erosion** that moves sand and **deposition** that builds it up into a **landform** over time.

RESPONDING TO RESPONSES

Emphasize and celebrate each student's use of the key vocabulary to support a culture of "no wrong answers."

STRUCTURING STUDENT CONVERSATIONS



Have students list observations from the visual as a warm-up, then use the Q-SSS-A process to guide small-group conversations. In the slide decks, brackets can be moved to prepare the structured conversation. In the example to the right, students will be instructed: Q-SSS-A.

- To put a thumb up, then lower their hand when they are ready to answer the question
- To share with their elbow/shoulder partner, and that the student with the darkest shoe will share first
- That they will be randomly called on after the conversation

Here is an example of structuring a conversation with Q-SSS-A.

Note: the inferential question is the same as the language objective. It is recommended that students answer the inferential question in a small-group discussion before answering it individually as the closure or exit ticket of the lesson.

Structured Reading

READING PURPOSE	PAT LIST	POST-READING DISCUSSION
*The purpose for reading is to explain how wind shapes Earth's surface by forming and changing **landforms** such as **sand dunes**.*	• How erosion moves sand • How deposition builds sand dunes • How wind changes the shape of a landform	How does wind shape Earth's surface by forming and changing **landforms** such as **sand dunes**? *Wind forms and changes **landforms** such as **sand dunes** by…*

STRUCTURING THE READING

Communicate the purpose of reading to the students and instruct them to make a note every time they see something on the PAT ("Pay Attention To") list. How you have students note items on the PAT list is up to you. This could include:

- Putting an asterisk in the margin
- Underlining text that supports the PAT list
- Putting a comment in the margin

Follow the reading with the post-reading discussion. Structure this discussion using the Q-SSS-A process just like the structured conversations in this lesson.

Note: you might find the relational question is better discussed before or after the reading. This depends on whether the relational question is directly related to the reading or might make connections across units.

DIFFERENTIATING THE READING

You will notice that three different reading passages are provided with this lesson. Look at the shapes in the top-left of each passage to determine the grade level.

BELOW GRADE LEVEL	ON GRADE LEVEL	ABOVE GRADE LEVEL
		
Triangle is bottom-left	*Square is bottom-left*	*Circle is bottom-left*

In a class with students at diverse reading level proficiencies, you can give the appropriate reading passage to different students, while having all students follow the same PAT list and post-reading discussion.