Name: _____ Date: _____

The Slow March of a Sand Dune

Circle group

A sand dune may look like a hill that has always been there. But many dunes move. Over months and years, a dune can travel across the land, one grain at a time.

Wind does the work. It blows sand up the gentle side of the dune, the side that faces the wind. The grains hop and roll to the crest, the top edge. Just past the crest, the wind slows down. It can not carry the sand any farther. The grains drop onto the steep side. This side is called the slip face.

Sand piles up on the slip face until it is too steep. Then little slides of sand pour down the slope. More grains keep coming from the gentle side. Sand leaves the back of the dune and is added to the front.

So the whole dune moves the way the wind blows. Some dunes move only a few steps a year. Where dunes creep toward roads or farms, people plant grasses. The roots hold the sand in place.

Questions

1. What carries sand up the gentle side of a dune?

_____

_____

2. What is the steep side of a dune called?

_____

_____

3. Why do grains drop at the crest?

_____

_____

4. How does the whole dune move?

_____

_____

5. Why do people plant grasses near dunes?

_____

_____

6. What does crest mean here?

_____

_____

Words to know

dune: a hill of sand shaped by the wind
crest: the highest edge of a hill or wave
grains: tiny hard pieces, like bits of sand
steep: sloping sharply, almost straight up and down

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

The Slow March of a Sand Dune

Triangle group

A sand dune may look like a hill that has always been there, but many dunes are on the move. Over months and years, a dune can travel across the land, one grain at a time.

Wind does the work. It blows sand grains up the gentle side of the dune, the side that faces the wind. The grains hop and roll along the surface until they reach the crest, which is the top edge. Just beyond the crest the wind slows down, so there is nothing to carry the sand any farther. The grains drop onto the steep downwind side. This side is called the slip face.

As sand piles up on the slip face, it gets too steep to hold. Little slides of sand pour down the slope and settle at the bottom. Meanwhile, more grains keep arriving from the gentle side. Sand is always leaving the back of the dune and being added at the front.

The result is that the whole dune shifts forward in the direction the wind blows. Some dunes move only a few steps each year. In places where dunes creep toward roads or farms, people plant grasses to hold the sand in place, because roots can keep grains from blowing away.

Questions

1. What carries the sand grains up the gentle side of a dune?

_____

_____

2. What is the steep downwind side of a dune called?

_____

_____

3. Why do grains drop at the crest?

_____

_____

4. How does the whole dune move forward?

_____

_____

5. Why do people plant grasses near moving dunes?

_____

_____

6. What does the word crest mean in this passage?

_____

_____

Words to know

dune: a hill of sand shaped by the wind
crest: the highest edge of a hill or wave
grains: tiny hard pieces, like bits of sand
steep: sloping sharply, almost straight up and down
shifts: moves from one place to another

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

The Slow March of a Sand Dune

Square group

A sand dune may resemble a hill that has stood in place forever, but a great many dunes are constantly on the move. Over months and years, a dune can migrate across the landscape, carried forward one grain at a time.

The wind performs all of the labor. It drives sand grains up the gentle windward side of the dune, and the grains hop and roll along the surface until they reach the crest, which is the uppermost edge. Just beyond the crest, the wind loses its speed, so nothing remains to carry the sand any farther. The grains tumble onto the steep downwind side, which is known as the slip face.

As sand accumulates on the slip face, the slope eventually becomes too steep to hold. Small avalanches of sand pour down and settle at the base, while fresh grains continue to arrive from the gentle side. Sand is constantly departing from the back of the dune and being added to the front.

Consequently, the entire dune drifts forward in the direction the wind blows. Some dunes advance only a few steps each year. In places where dunes creep toward roads or farms, people plant grasses, because roots can anchor the grains and keep them from blowing away.

Questions

1. What carries the sand grains up the gentle side of a dune?

_____

_____

2. What is the steep downwind side of a dune called?

_____

_____

3. Why do the grains fall at the crest?

_____

_____

4. How does the entire dune advance?

_____

_____

5. Why do people plant grasses near advancing dunes?

_____

_____

6. What is the meaning of the word crest in this passage?

_____

_____

Words to know

dune: a hill of sand shaped by the wind
crest: the highest edge of a hill or wave
grains: tiny hard pieces, like bits of sand
steep: sloping sharply, almost straight up and down

Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

For the teacher: The Slow March of a Sand Dune

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

Circle: The Slow March of a Sand Dune

Easier · 172 words · Flesch-Kincaid grade 1.5

1. The wind.
2. The slip face.
3. The wind slows down and cannot carry them.
4. Sand leaves the back and is added to the front, so it moves the way the wind blows.
5. The roots hold the sand in place.
6. The top edge of the dune.

Triangle: The Slow March of a Sand Dune

This passage · 209 words · Flesch-Kincaid grade 4

1. The wind.
2. The slip face.
3. The wind slows down there and cannot carry them farther.
4. Sand leaves the back and piles on the front, so the dune shifts the way the wind blows.
5. The roots hold the sand so it does not blow away or bury roads and farms.
6. The top edge of the dune.

Square: The Slow March of a Sand Dune

Harder · 209 words · Flesch-Kincaid grade 7

1. The wind.
2. The slip face.
3. The wind loses its speed there and cannot carry them any farther.
4. Sand leaves the back and is added to the front, so it drifts the way the wind blows.
5. The roots anchor the sand so it cannot blow away or bury roads and farms.
6. The uppermost edge of the dune.