

Earth Changes Today

Compare weather, trace soil formation, and describe fast land changes.

3.10 "Earth and space. The student knows that there are recognizable processes that change Earth over time. The student is expected to: compare and describe day-to-day weather in different locations at the same time, including air temperature..."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline words or phrases about weather, circle the sentences that tell how soil forms, and number the three rapid surface changes 1, 2, and 3.

Weather, Soil, and Fast Changes

- ① At 9:00 a.m., two towns can have different weather. Air temperature tells how warm or cool the air is. Wind direction tells where the wind comes from. Precipitation is water that falls from clouds, such as rain. The weather report below compares Pine Hill and Lakeview at the same time.

WEATHER REPORT AT 9:00 A.M.

Location	Air Temperature	Wind Direction	Precipitation
Pine Hill	58°F	north	light rain
Lakeview	72°F	south	none

- ② Soil also changes over a long time. Rain, ice, wind, and plant roots can break rock into tiny pieces. This is weathering. Dead plants and animals decompose, or break down. Their remains can mix with rock pieces. Sandy soil has many large rock pieces. Clay soil has very tiny pieces that can hold water.
- ③ Some surface changes happen quickly. A volcanic eruption can send out lava, ash, and gases. An earthquake shakes the ground and may crack roads or move rocks. A landslide happens when rock and soil move quickly down a slope. These rapid events can change the shape of land in minutes or hours.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 Use the weather report. How are Pine Hill and Lakeview different in air temperature, wind direction, and precipitation?

2 What are two ways soil can form over a long time?

3 Why can clay soil hold water?

4 Name the three rapid surface changes in the passage. Tell one effect of each change.

3 YOUR TURN _____ Your own words

Make a weather table for two made-up locations at the same time. Include air temperature, wind direction, and precipitation, then write one difference between the locations in the last column.

LOCATION	AIR TEMPERATURE	WIND DIRECTION	PRECIPITATION	ONE DIFFERENCE

PART 1 • READ AND MARK

Underline words or phrases about weather, circle the sentences that tell how soil forms, and number the three rapid surface changes 1, 2, and 3. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	Use the weather report. How are Pine Hill and Lakeview different in air temperature, wind direction, and precipitation?	Pine Hill is 58°F with wind from the north and light rain. Lakeview is 72°F with wind from the south and no precipitation.
2	What are two ways soil can form over a long time?	Rock can be broken into tiny pieces by weathering. Dead plant and animal remains can decompose and mix with rock pieces.
3	Why can clay soil hold water?	Clay soil has very tiny pieces that can hold water.
4	Name the three rapid surface changes in the passage. Tell one effect of each change.	A volcanic eruption can send out lava, ash, and gases. An earthquake can shake the ground, crack roads, or move rocks. A landslide can move rock and soil quickly down a slope.

PART 3 • YOUR TURN (SAMPLE ANSWER)

LOCATION	AIR TEMPERATURE	WIND DIRECTION	PRECIPITATION	ONE DIFFERENCE
Harbor Town	64°F	east	drizzle	It is 11°F cooler than Mesa City.
Mesa City	75°F	south	none	It is 11°F warmer than Harbor Town.

Accept equivalent accurate wording for weathering, decomposition, and rapid surface changes. For the open table, accept realistic invented data as long as both locations are at the same time and the comparison matches the listed data.