Climate Clue Hunt

Trace how location shapes temperature and precipitation.

SC.5.E.7.6 "Describe characteristics (temperature and precipitation) of different climate zones as they relate to latitude, elevation, and proximity to bodies of water."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline words or phrases that tell about temperature or precipitation. Number each underlined clue: 1 for latitude, 2 for elevation, or 3 for nearby water.

Why Climates Differ

1. Climate is the usual pattern of temperature and precipitation in a place over many years. Latitude is distance north or south of the equator. Places near the equator receive more direct sunlight, so tropical climates are usually warm all year. Many tropical places also receive heavy rainfall during a wet season. Farther from the equator, polar climates are colder and often have little precipitation because cold air holds less water vapor.

2. Elevation, or height above sea level, can change climate. As air rises up a mountain, it cools. Higher places are usually cooler than nearby lowlands at the same latitude. Rising air can cool enough to form clouds and precipitation on one side of a mountain. The other side may be drier after much moisture falls.

3. Large bodies of water affect nearby land because water warms and cools more slowly than land. A coastal place often has cooler summers and warmer winters than an inland place at the same latitude. Water also supplies moisture to the air. When winds carry that moisture over land, coastal areas can receive more precipitation. Inland areas, especially far from oceans or lakes, may have wider temperature changes and less precipitation.

2 ANSWER WITH EVIDENCE

Use the passage

1. According to the passage, how does moving farther from the equator usually affect temperature and precipitation?

2. Two places are at the same latitude. One is high on a mountain, and one is in a lowland. Which place is usually cooler, and why?

3. How can living near a large body of water affect both temperature and precipitation?

4. What can happen to precipitation when air rises over a mountain, and what may happen on the other side?

3 YOUR TURN

Your own words

Create three imaginary places. Complete one row for latitude, one for elevation, and one for proximity to a body of water, predicting the temperature and precipitation for each place.

PLACE AND CONDITION	MAIN FACTOR	EXPECTED TEMPERATURE	EXPECTED PRECIPITATION	WHY

ANSWER KEY

Climate Clue Hunt

GRADE 5 · SC.5.E.7.6

PART 1 · READ AND MARK

Underline words or phrases that tell about temperature or precipitation. Number each underlined clue: 1 for latitude, 2 for elevation, or 3 for nearby water. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	According to the passage, how does moving farther from the equator usually affect temperature and precipitation?	**Places become colder, and polar climates often have less precipitation.**
2	Two places are at the same latitude. One is high on a mountain, and one is in a lowland. Which place is usually cooler, and why?	**The high mountain place is usually cooler because air cools as it rises and higher elevations are cooler.**
3	How can living near a large body of water affect both temperature and precipitation?	**Coastal places often have cooler summers and warmer winters than inland places. Nearby water adds moisture to the air, so coastal areas can receive more precipitation.**
4	What can happen to precipitation when air rises over a mountain, and what may happen on the other side?	**The rising air cools and can form clouds and precipitation on one side. The other side may be drier after much moisture falls.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

PLACE AND CONDITION	MAIN FACTOR	EXPECTED TEMPERATURE	EXPECTED PRECIPITATION	WHY
Ocean Bay, beside an ocean	Proximity to water	Cooler summers and warmer winters than inland places	Often more precipitation than inland places	The ocean changes temperature slowly and adds moisture to the air.
High Ridge, above nearby lowlands	Elevation	Cooler than the lowlands	Can receive precipitation where rising air forms clouds	Air cools as it rises.
North Plain, far from the equator	Latitude	Cold	Often little precipitation	It receives less direct sunlight, and cold air holds less water vapor.

Accept equivalent descriptions of climate patterns that correctly connect temperature and precipitation to the named factor. For the open table, each row should use a different factor and include a reasonable cause-and-effect explanation.