

The Volcano That Changed Weather Around the World

Use the broad explanation and focused answers after the child checks the reading.

USE AFTER THE SOURCE CHECK

Tick the ideas you can find. Drawings and own words count.

01

Magma withdrawal changed the mountain

What to look for in your child's explanation

- ☐ The eruption pushed out a huge amount of material.
- ☐ Rock above the emptying magma chamber lost support and fell inward.
- ☐ That collapse left a wide bowl called a caldera.

THE LEARNER MIGHT WRITE OR DRAW

"So much magma left that the rock above it lost support. The top fell inward and left a wide bowl."

WHERE TO CHECK Passage 1, 1.1-1.7

- ☐ Clear ☐ Partly there ☐ Missing ☐ Needs correction

02

Connected local systems failed together

What to look for in your child's explanation

- ☐ Hot flows, ash, and tsunamis destroyed nearby places.
- ☐ People lost food, clean water, homes, and ways to travel.
- ☐ Hunger and illness continued after the eruption ended.

THE LEARNER MIGHT WRITE OR DRAW

"The hot flows and ash destroyed places first. Then people still lacked clean water, food, roads, and trade, so the emergency kept going."

WHERE TO CHECK Passage 2, 2.1-2.7

- ☐ Clear ☐ Partly there ☐ Missing ☐ Needs correction

03

A delayed atmospheric change caused uneven consequences

What to look for in your child's explanation

- ☐ Ash fell sooner, but a gas from the eruption rose high and made tiny particles.
- ☐ Those particles reflected some sunlight and affected the next year's weather.
- ☐ Some crops were damaged, and the effects differed from place to place.

THE LEARNER MIGHT WRITE OR DRAW

"The gas went higher than most weather and became tiny droplets. They reflected some sunlight into the next year. A frost at the wrong time could then ruin crops, but not every place had the same result."

WHERE TO CHECK Passage 3, 3.1-3.7; Passage 4, 4.1-4.7

- ☐ Clear ☐ Partly there ☐ Missing ☐ Needs correction

Answers to the three questions

After your child's source check, use the key for each question they answered. Own words count.

QUESTION 1

Why did Tambora's danger continue after the mountain stopped erupting?

A clear answer includes

Pyroclastic flows, ash, pumice, and tsunamis caused immediate destruction. Damage to settlements, crops, livestock, clean water, shelter, roads, transport, trade, and communication removed several connected survival supports. Hunger, disease, and displacement therefore continued after the main eruption; tens of thousands died through direct and indirect consequences.

WHERE TO CHECK Passage 2, 2.1-2.7

QUESTION 2

How did one eruption in Indonesia change weather on the other side of the world?

A clear answer includes

Larger ash particles fell relatively quickly, but sulfur dioxide reached the stratosphere and formed sulfate aerosols. Enormous numbers of these particles or droplets spread and reflected some sunlight, leaving less energy to warm Earth's surface. They stayed aloft long enough to influence average conditions and weather risks into 1816. Tambora was a major cause, not necessarily the only influence on each event.

WHERE TO CHECK Passage 3, 3.1-3.7; Passage 4, 4.1-4.7

QUESTION 3

How could damaged harvests turn unusual weather into a larger human crisis?

A clear answer includes

Plants respond to timing and thresholds. Frost after sprouting or repeated cold and wet weather can ruin crops or prevent ripening. Smaller harvests reduce food supply, which can raise prices and contribute to hunger, migration, illness, and unrest. The chain was serious but differed by region.

WHERE TO CHECK Passage 4, 4.1-4.7