Name: _____ Date: _____

Mountain Staircases: Farming on Terraces

Circle group

Farmers like flat land. But in many mountain places, flat land is rare. So farmers in places like the Andes in South America and the highlands of Southeast Asia cut steps into the hills. The flat strips are called terraces. They look like giant green stairs.

Building a terrace is hard work. Workers dig into the slope and level a strip of ground. They build a wall on the outer edge, often from stacked stone or packed earth. Then they fill the flat part with soil, so roots have room to grow.

Terraces solve two problems. On a steep hill, heavy rain washes soil downhill. This is called erosion, and the rich topsoil goes first. A terrace slows the water, so it soaks in. The soil stays, and the plants get more water. Terraces also make it safer and easier to plant and pick crops.

Some terraces hold water. A level terrace can be flooded with a thin layer of water for rice. The walls keep the water in. Water can flow from one terrace down to the next in small channels, so one stream can serve a whole mountainside. Some terraces have been farmed for hundreds of years.

Questions

1. What are terraces?

_____

_____

2. What is a terrace wall often made from?

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3. What is erosion?

_____

_____

4. How does a terrace help keep the soil?

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5. Why do mountain farmers build terraces?

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6. What does it show that some terraces are hundreds of years old?

_____

_____

Words to know

terraces: flat steps cut into a hillside for planting
erosion: the washing or blowing away of soil
topsoil: the rich top layer of soil where plants grow
slope: ground that tilts up or down
channels: narrow paths that carry water

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: _____

Mountain Staircases: Farming on Terraces

Triangle group

Farmers prefer flat land, but in many mountainous regions flat land is rare. Rather than give up, farmers in places such as the Andes in South America and the highlands of Southeast Asia have carved steep hillsides into steps. These flat strips, called terraces, look like giant green staircases climbing the slopes.

Building a terrace is hard work. Workers dig into the slope, level a strip of ground, and build a wall along the outer edge, often from stacked stone or packed earth. The flat part is filled with soil, sometimes brought from elsewhere, so the plants have plenty of depth for roots.

The steps solve two problems. On a steep, unplanted slope, heavy rain washes soil downhill, a process called erosion, and the richest topsoil goes first. A terrace slows the water so that it soaks in rather than rushing away. This keeps the soil in place and gives plants more moisture. The steps also make planting, weeding, and harvesting safer and easier than working on a slant.

Some terraces are designed to hold water. In rice farming, a level terrace can be flooded with a shallow layer of water, and the walls keep it from draining away. Water often flows from the highest terrace to the next one down through small channels, so a single stream can serve a whole mountainside. Many terraces have been farmed and repaired for hundreds of years, which shows how well the design works.

Questions

1. What are terraces?

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_____

2. What is a terrace wall often made from?

_____

_____

3. What is erosion?

_____

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4. How does a terrace help keep the soil in place?

_____

_____

5. Why do farmers in the mountains need to build terraces?

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_____

6. What does it suggest that some terraces have been farmed for hundreds of years?

_____

_____

Words to know

terraces: flat steps cut into a hillside for planting
erosion: the washing or blowing away of soil
topsoil: the rich top layer of soil where plants grow
slope: ground that tilts up or down
channels: narrow paths that carry water

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: _____

Mountain Staircases: Farming on Terraces

Square group

Farmers generally prefer level ground, but in many mountainous regions it is scarce. Rather than abandon agriculture, farmers in places such as the Andes of South America and the highlands of Southeast Asia have carved steep hillsides into a series of steps. These flat strips, known as terraces, resemble enormous green staircases ascending the slopes.

Constructing a terrace demands considerable labor. Workers excavate the slope, level a strip of ground, and build a retaining wall along its outer edge, frequently from stacked stone or packed earth. The flat portion is then filled with soil, which is sometimes carried in from elsewhere, so that plants have ample depth for their roots.

The steps resolve two difficulties at once. On a steep, unplanted slope, heavy rain washes soil downhill in a process called erosion, and the richest topsoil is the first to disappear. A terrace slows the water so that it soaks into the ground rather than rushing away, which preserves the soil and supplies the plants with more moisture. The steps also make planting, weeding, and harvesting far safer and easier than working on a slant.

Certain terraces are designed to hold water. In rice farming, a level terrace can be flooded with a shallow layer of water, and the walls prevent it from draining away. Water frequently passes from the highest terrace to the next one below through small channels, so that a single stream can serve an entire mountainside. Many terraces have been farmed and repaired for hundreds of years, which demonstrates how well the design works.

Questions

1. What are terraces, and what do they look like?

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2. What materials are terrace walls often built from?

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3. What is erosion?

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4. How does a terrace help preserve the soil?

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_____

5. Why do farmers in mountain regions need to build terraces?

_____

_____

6. What does it suggest that some terraces have lasted for hundreds of years?

_____

_____

Words to know

terraces: flat steps cut into a hillside for planting
erosion: the washing or blowing away of soil
topsoil: the rich top layer of soil where plants grow
slope: ground that tilts up or down
channels: narrow paths that carry water

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: Mountain Staircases: Farming on Terraces

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

Circle: Mountain Staircases: Farming on Terraces

Easier · 199 words · Flesch-Kincaid grade 3.5

1. Flat strips cut into a hill that look like steps.
2. Stacked stone or packed earth.
3. Rain washing soil downhill.
4. It slows the water so it soaks in instead of rushing away.
5. Flat land is rare there, and the hills are too steep to farm well.
6. The design works well, and people have kept repairing it.

Triangle: Mountain Staircases: Farming on Terraces

This passage · 241 words · Flesch-Kincaid grade 6.8

1. Flat strips cut into a slope that look like steps.
2. Stacked stone or packed earth.
3. Heavy rain washing soil downhill.
4. It slows the water so it soaks in instead of rushing away.
5. Flat land is rare there, and the slopes are too steep to farm well.
6. The design works well, and people have kept repairing it.

Square: Mountain Staircases: Farming on Terraces

Harder · 258 words · Flesch-Kincaid grade 9.4

1. They are flat strips cut into a slope, and they look like giant green staircases.
2. Stacked stone or packed earth.
3. The washing of soil downhill by heavy rain.
4. It slows the water so that it soaks in rather than rushing away.
5. Level ground is scarce there, and steep slopes are hard to farm.
6. The design works well, and people have continued to repair them.