Name: _____ Date: _____

The Metal Path That Guides Lightning Down

Circle group

Look at the roof of a tall building. You may see a thin metal rod pointing at the sky. A thick wire runs from it down the wall and into the ground. This is a lightning rod. It protects the building.

Lightning is a giant spark of electricity. Electric charge builds up in a storm cloud. Then it leaps toward the ground. A bolt takes the easiest path it can find. Wood, brick and plaster are poor at carrying electricity. A bolt that hits them can heat them fast and start a fire. Metal is very good at carrying electricity. A bolt that hits a metal rod can flow down the thick wire and into the earth.

A lightning rod does not pull storms toward a building. It just gives the electricity a safe road if a strike happens. Benjamin Franklin lived in the 1700s. He was a scientist and inventor. He was one of the first to suggest the idea.

Rods protect buildings, but people need to be safe too. In a thunderstorm, the safest places are inside a strong building or a car with a hard top. Stay away from open fields and tall, lonely trees.

Questions

1. Where does the thick wire from a lightning rod go?

_____

_____

2. What is lightning?

_____

_____

3. Why is metal good for a lightning rod?

_____

_____

4. What can happen when a bolt hits wood or brick?

_____

_____

5. Why does the wire need to reach the ground?

_____

_____

6. Where are people safest in a thunderstorm?

_____

_____

Words to know

lightning: a huge flash of electricity in the sky
charge: a tiny amount of electricity that can build up
bolt: one flash of lightning from the sky to the ground
plaster: a smooth paste that hardens to cover walls

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 Metal Path That Guides Lightning Down

Triangle group

Look at the roof of a tall building and you may spot a thin metal rod pointing at the sky. Thick wire runs from it down the side of the building and into the ground. This is a lightning rod, and its job is to protect the building.

Lightning is a giant spark of electricity. It happens when electric charge builds up inside a storm cloud, and then it leaps toward the ground. A bolt takes the easiest path it can find. Wood, brick, and plaster are poor at carrying electricity, so a bolt that strikes them can heat them quickly and start a fire. Metal is excellent at carrying electricity. A bolt that hits a metal rod can flow along the thick wire and slip safely into the earth.

A lightning rod does not pull storms toward a building. It simply offers a safe road for the electricity if a strike happens. Benjamin Franklin, a scientist and inventor in the 1700s, was among the first to suggest the idea.

Rods protect buildings, but people need protection too. During a thunderstorm, the safest places are inside a sturdy building or a car with a hard top. Stay away from open fields and tall, lonely trees.

Questions

1. Where does the thick wire from a lightning rod go?

_____

_____

2. What is lightning?

_____

_____

3. Why is metal a good material for a lightning rod?

_____

_____

4. What can happen when a bolt strikes wood or brick?

_____

_____

5. Why must the wire reach all the way into the ground?

_____

_____

6. Where are people safest during a thunderstorm?

_____

_____

Words to know

lightning: a huge flash of electricity in the sky
charge: a tiny amount of electricity that can build up
bolt: one flash of lightning from the sky to the ground
plaster: a smooth paste that hardens to cover walls
sturdy: strong and not easily damaged

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 Metal Path That Guides Lightning Down

Square group

Glance at the roof of a tall building and you may notice a slender metal rod pointing toward the sky. A thick cable runs from the rod down the outside of the building and deep into the ground. This device is a lightning rod, and its purpose is to protect the structure beneath it.

Lightning is a colossal spark of electricity. It occurs when electric charge accumulates inside a storm cloud and then leaps toward the ground. A bolt follows the easiest route it can find. Wood, brick, and plaster are poor conductors of electricity, so a bolt that strikes them can heat them almost instantly and ignite a fire. Metal, by contrast, carries electricity exceptionally well. A bolt that hits a metal rod can travel along the thick cable and slip harmlessly into the earth.

A lightning rod does not draw storms toward a building. It merely offers a safe road for the electricity should a strike occur. Benjamin Franklin, a scientist and inventor who lived in the 1700s, was among the first people to propose the idea.

Rods and cables protect buildings, but people require protection as well. During a thunderstorm, the safest places are inside a sturdy building or a car with a hard top. It is wise to keep away from open fields and tall, solitary trees.

Questions

1. Where does the thick cable from a lightning rod lead?

_____

_____

2. What is lightning, according to the passage?

_____

_____

3. Why is metal a suitable material for a lightning rod?

_____

_____

4. What can happen when a bolt strikes wood, brick, or plaster?

_____

_____

5. Why must the cable reach all the way into the earth?

_____

_____

6. Where should people shelter during a thunderstorm?

_____

_____

Words to know

lightning: a huge flash of electricity in the sky
charge: a tiny amount of electricity that can build up
bolt: one flash of lightning from the sky to the ground
plaster: a smooth paste that hardens to cover walls
sturdy: strong and not easily damaged

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 Metal Path That Guides Lightning Down

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

Circle: The Metal Path That Guides Lightning Down

Easier · 198 words · Flesch-Kincaid grade 3.6

1. Down the wall and into the ground.
2. A giant spark of electricity.
3. It is very good at carrying electricity.
4. It can heat them fast and start a fire.
5. The electricity can then flow into the earth, away from the building.
6. Inside a strong building or a car with a hard top.

Triangle: The Metal Path That Guides Lightning Down

This passage · 205 words · Flesch-Kincaid grade 6

1. Down the side of the building and into the ground.
2. A giant spark of electricity.
3. It is excellent at carrying electricity.
4. It can heat them quickly and start a fire.
5. The electricity can then flow safely into the earth, away from the building.
6. Inside a sturdy building or a car with a hard top.

Square: The Metal Path That Guides Lightning Down

Harder · 221 words · Flesch-Kincaid grade 7.6

1. Down the outside of the building and deep into the ground.
2. A colossal spark of electricity.
3. It carries electricity exceptionally well.
4. It can heat them almost instantly and ignite a fire.
5. So the electricity can slip harmlessly into the ground, away from the building.
6. Inside a sturdy building or a car with a hard top.