Name: _____ Date: _____

When the Moon Turns Coppery Red

Circle group

Sometimes the full Moon does something odd. It gets dim and turns orange-red. This is a lunar eclipse.

The Moon has no light of its own. It shines because sunlight bounces off it. In a lunar eclipse, Earth moves between the Sun and the Moon. Earth's shadow falls on the Moon. The Moon gets less sunlight.

You may think the Moon will vanish. It does not. Some sunlight bends as it goes through the air around Earth. The blue light scatters away. The red light bends on and lands on the Moon. So the Moon glows red like copper.

A lunar eclipse only happens at full Moon. It takes a few hours. The shadow creeps in. The Moon turns red. Then the shadow slides off.

You can watch with your own eyes. You do not need special glasses. You just need a clear sky.

Questions

1. What color does the Moon turn in a lunar eclipse?

_____

_____

2. What moves between the Sun and the Moon?

_____

_____

3. Why does the Moon shine?

_____

_____

4. What light reaches the Moon after it bends through Earth's air?

_____

_____

5. When does a lunar eclipse happen?

_____

_____

6. Why does the Moon not vanish in Earth's shadow?

_____

_____

Words to know

eclipse: when one object in space blocks light from another
shadow: a dark shape made when something blocks light
bends: turns from a straight path
scatters: flies apart in many directions

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: _____

When the Moon Turns Coppery Red

Triangle group

Sometimes the full Moon does something strange. It slowly dims and turns a soft orange-red color. This is called a lunar eclipse.

The Moon makes no light itself. It shines because the Sun lights it up and the light comes back to us. In a lunar eclipse, Earth moves right between the Sun and the Moon. Earth's shadow falls across the Moon, and the Moon gets less sunlight.

You might think the Moon would vanish in the dark shadow. It does not. A little sunlight bends as it passes through the air around Earth. The blue light scatters away, and the red light bends onward and lands on the Moon. That is why the Moon glows a coppery red.

A lunar eclipse only happens at full Moon. The whole show can take a few hours. First the shadow creeps in, then the Moon turns red, and then the shadow slowly slides off.

Best of all, you can watch a lunar eclipse with your own eyes. You do not need any special glasses. You just need a clear sky and some patience.

Questions

1. What color does the Moon turn during a lunar eclipse?

_____

_____

2. What moves between the Sun and the Moon in a lunar eclipse?

_____

_____

3. Why does the Moon shine?

_____

_____

4. What kind of light reaches the Moon after bending through Earth's air?

_____

_____

5. When can a lunar eclipse happen?

_____

_____

6. Why does the Moon not vanish when it is in Earth's shadow?

_____

_____

Words to know

eclipse: when one object in space blocks light from another
shadow: a dark shape made when something blocks light
bends: turns from a straight path
scatters: flies apart in many directions
coppery: having the reddish color of a shiny penny

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: _____

When the Moon Turns Coppery Red

Square group

Occasionally the full Moon does something remarkable. It gradually dims and takes on a soft, orange-red glow. Astronomers call this event a lunar eclipse.

The Moon produces no light of its own; it shines only because sunlight reflects off its surface. During a lunar eclipse, Earth passes directly between the Sun and the Moon, and Earth's shadow sweeps across the Moon, so that it receives far less sunlight than usual.

You might expect the Moon to disappear completely inside that dark shadow, but it does not. A small amount of sunlight bends as it travels through the air surrounding Earth. The blue light scatters away, while the red light curves onward and reaches the Moon. That is why the Moon glows a coppery red.

A lunar eclipse can only occur at full Moon, and the entire event may last several hours. First the shadow creeps across the surface, then the Moon turns red, and finally the shadow slowly slides away.

Best of all, you can watch a lunar eclipse with your own eyes, without any special glasses. All you need is a clear sky and a little patience.

Questions

1. What color does the Moon become during a lunar eclipse?

_____

_____

2. What passes between the Sun and the Moon in a lunar eclipse?

_____

_____

3. Why does the Moon shine at all?

_____

_____

4. What color of light reaches the Moon after bending through Earth's air?

_____

_____

5. When can a lunar eclipse occur?

_____

_____

6. Why does the Moon not disappear while inside Earth's shadow?

_____

_____

Words to know

eclipse: when one object in space blocks light from another
shadow: a dark shape made when something blocks light
bends: turns from a straight path
scatters: flies apart in many directions
coppery: having the reddish color of a shiny penny

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: When the Moon Turns Coppery Red

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

Circle: When the Moon Turns Coppery Red

Easier · 145 words · Flesch-Kincaid grade 1.2

1. Orange-red, like copper.
2. Earth.
3. Sunlight bounces off it.
4. Red light.
5. Only at full Moon.
6. A little sunlight bends through Earth's air and still lands on it.

Triangle: When the Moon Turns Coppery Red

This passage · 182 words · Flesch-Kincaid grade 2.9

1. A soft orange-red, like copper.
2. Earth.
3. Sunlight bounces off it.
4. Red light.
5. Only at full Moon.
6. A little sunlight bends through Earth's air and still lands on it.

Square: When the Moon Turns Coppery Red

Harder · 189 words · Flesch-Kincaid grade 7.1

1. A soft orange-red, like copper.
2. Earth.
3. Sunlight reflects off its surface.
4. Red light.
5. Only at full Moon.
6. A small amount of sunlight bends through Earth's air and still reaches it.