Name: _____ Date: _____

Why City Kids See So Few Stars

Circle group

On a clear night far from any town, thousands of stars fill the sky. A pale band called the Milky Way stretches across it. In a big city, the same sky may show only a few stars. The stars have not gone anywhere. The problem is the glow of our own lights.

Street lamps, signs, and office windows send light up. This light bounces off tiny bits of dust and water in the air. It spreads out into a haze over the city. People call it skyglow. It acts like a bright curtain, and faint stars behind it are lost. Only the brightest stars and planets shine through.

This extra light is called light pollution. It does more than hide the stars. Lights that shine the wrong way waste energy. Bright lights at night can also confuse some animals, such as birds that fly after dark.

There are easy fixes. Shields on lamps can point the light down to the ground, where people need it. Lights can be turned off when no one is using them. Some towns even have rules about outdoor lights. To see the stars well, go to a place with few lights. Give your eyes about twenty minutes to adjust to the dark.

Questions

1. What can you see on a clear night far from any town?

_____

_____

2. What is skyglow?

_____

_____

3. Why do city people see only the brightest stars?

_____

_____

4. What is this extra light called?

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5. Why do lamp shields that point light down help?

_____

_____

6. How long should your eyes adjust to the dark?

_____

_____

Words to know

haze: a thin cloud that makes the air look blurry
skyglow: the bright glow over a city caused by its lights
pollution: something that makes the air, water, or land less clean or healthy
adjust: to change slowly so that you fit a new situation
shields: covers that protect something or keep something out

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: _____

Why City Kids See So Few Stars

Triangle group

On a clear night far from any town, thousands of stars can fill the sky, and a pale band called the Milky Way stretches across it. In a big city, the same sky may show only a handful of stars. The stars have not gone anywhere. The problem is the glow of our own lights.

Street lamps, signs, and office windows all send light upward. This light bounces off tiny bits of dust and water in the air, and it spreads out into a haze over the whole city. People call it skyglow. It acts like a bright curtain, and the faint stars behind it are lost. Only the brightest stars and planets can shine through.

This kind of overlight is called light pollution. It does more than hide the stars. Lights that shine in the wrong direction waste energy, and bright lights at night can confuse some animals, such as birds that travel after dark.

There are easy fixes. Shields on lamps can point the light down toward the ground, where people need it. Lights can be turned off when no one is using them. Some towns have even made rules about outdoor lights so that people can enjoy dark skies. To see the stars well, travel to a place with few lights and give your eyes about twenty minutes to adjust to the dark.

Questions

1. What can you see on a clear night far from any town?

_____

_____

2. What is skyglow?

_____

_____

3. Why can city dwellers see only the brightest stars?

_____

_____

4. What is this kind of overlight called?

_____

_____

5. Why do lamp shields that point light down help?

_____

_____

6. How long should your eyes adjust to the dark?

_____

_____

Words to know

haze: a thin cloud that makes the air look blurry
skyglow: the bright glow over a city caused by its lights
pollution: something that makes the air, water, or land less clean or healthy
adjust: to change slowly so that you fit a new situation
shields: covers that protect something or keep something out

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: _____

Why City Kids See So Few Stars

Square group

On a clear night far from any town, thousands of stars can blanket the sky, and a pale band known as the Milky Way stretches from one horizon to the other. In a large city, that very same sky may reveal only a handful of stars. The stars have not gone anywhere. The difficulty is the glow of our own lights.

Street lamps, glowing signs, and office windows all send light upward. This light bounces off countless tiny bits of dust and water in the air and spreads out into a haze that covers the entire city. People call it skyglow. It behaves like a bright curtain, and the faint stars that lie behind it are lost from view. Only the brightest stars and planets are strong enough to shine through.

This kind of excessive lighting is known as light pollution, and it does more than hide the stars. Lights that shine in the wrong direction squander energy, and bright lights at night can confuse certain animals, such as birds that migrate after dark.

Fortunately, there are simple remedies. Shields on lamps can aim the light down toward the ground, where people actually need it, and lights can be switched off when nobody is using them. Some towns have even established rules about outdoor lighting so that residents can enjoy dark skies. To see the stars at their best, travel to a place with few lights and allow your eyes about twenty minutes to adjust to the darkness.

Questions

1. What can you see on a clear night far from any town?

_____

_____

2. What is skyglow?

_____

_____

3. Why can people in a large city see only the brightest stars?

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_____

4. What is this kind of excessive lighting called?

_____

_____

5. Why do lamp shields that aim light downward help?

_____

_____

6. How long should you allow your eyes to adjust to the dark?

_____

_____

Words to know

haze: a thin cloud that makes the air look blurry
skyglow: the bright glow over a city caused by its lights
pollution: something that makes the air, water, or land less clean or healthy
adjust: to change slowly so that you fit a new situation
shields: covers that protect something or keep something out

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: Why City Kids See So Few Stars

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

Circle: Why City Kids See So Few Stars

Easier · 207 words · Flesch-Kincaid grade 2.9

1. Thousands of stars and a pale band called the Milky Way.
2. A haze of light over a city, made when lamplight bounces off dust and water in the air.
3. Skyglow hides the faint stars, so only the brightest shine through.
4. Light pollution.
5. They send light to the ground where people need it, so less is wasted and less goes up.
6. About twenty minutes.

Triangle: Why City Kids See So Few Stars

This passage · 226 words · Flesch-Kincaid grade 4.5

1. Thousands of stars and a pale band called the Milky Way.
2. A haze of light that spreads over a city when lamplight bounces off dust and water in the air.
3. The skyglow hides the faint stars, so only the brightest ones shine through.
4. Light pollution.
5. They send the light to the ground where people need it, so less is wasted and less goes up into the sky.
6. About twenty minutes.

Square: Why City Kids See So Few Stars

Harder · 248 words · Flesch-Kincaid grade 6.9

1. Thousands of stars and a pale band known as the Milky Way.
2. A haze of light over a city, created when lamplight bounces off dust and water in the air.
3. Skyglow hides the faint stars, so only the brightest ones are strong enough to shine through.
4. Light pollution.
5. They send light to the ground where people need it, so less energy is squandered and less light goes upward.
6. About twenty minutes.