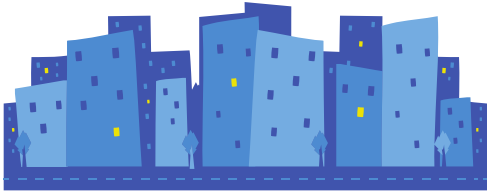




# My nature connection

## LIGHT POLLUTION

GRADES: K-8  
TIME: 30 MINS



### DID YOU KNOW:

The east coast, stretching from D.C. all the way to Boston, has the most amount of light pollution in the country.

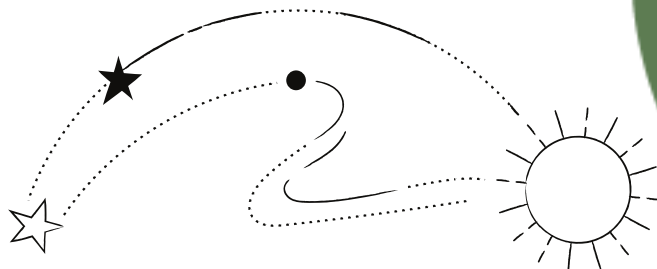
### WHAT IS LIGHT POLLUTION?



Just over 100 years ago, you could walk outside and see the Milky Way galaxy clearly. With recent innovations in light, now you can't even see stars in the sky in big cities. Light pollution is defined as excessive, misdirected, or obtrusive artificial outdoor light. Lighting makes up about one-fourth of all electricity consumption worldwide.

Since over half the world's population lives in a big city, 3 out of 4 people have never seen the night sky clearly. That means over 80% of the country's population lives under polluted skies.

When was the last time you saw stars? What about the Milky Way galaxy? Most times, the only way you can spot stars is in the remote wilderness of northern Minnesota. Look up at night and see what you're able to find where you live.



### WHAT YOU'LL NEED

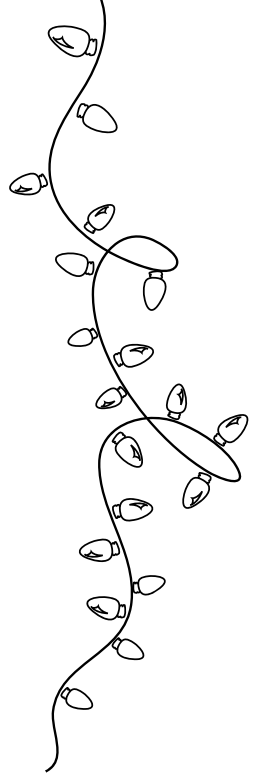
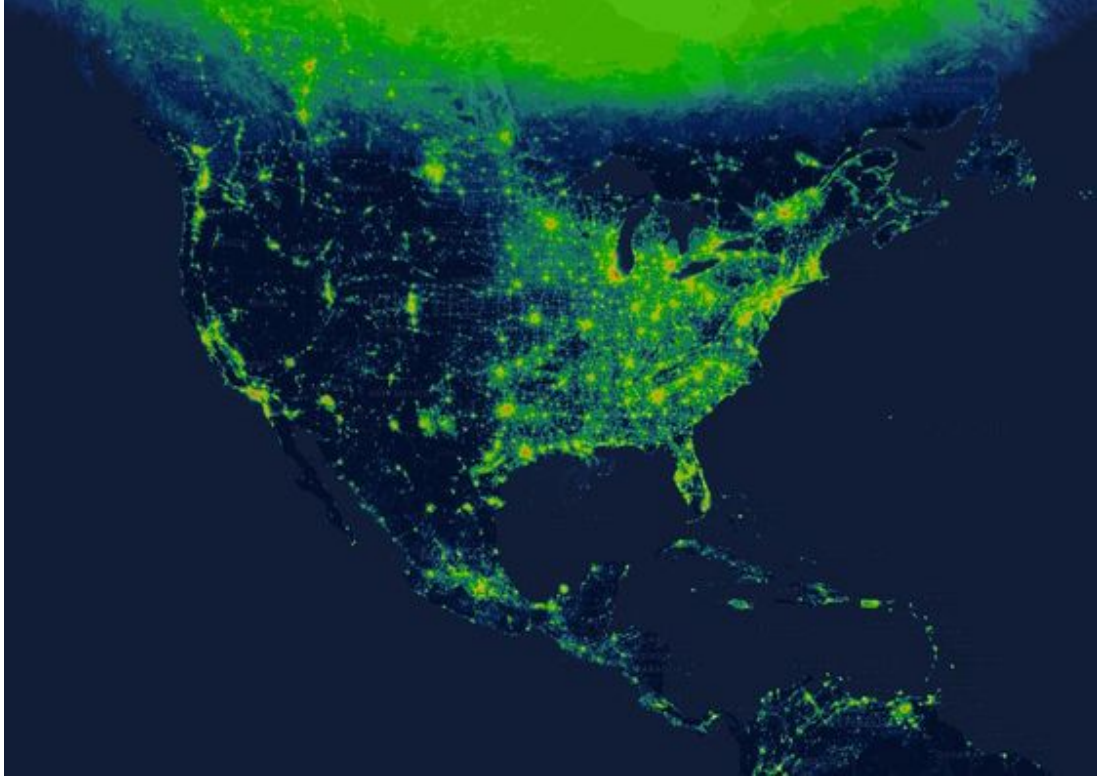
- coloring materials
- print out of page 4

### FUN FACT:

MINNESOTA HAS TWO AREAS THAT ARE DESIGNATED DARK SKIES! THERE ARE ONLY 130 IN THE WORLD. KEEP READING TO FIND OUT WHERE THEY ARE LOCATED.

## LIGHT POLLUTION MAP

What parts of the country are darker than others? Do you know why that is? States out west are a lot more spread out and thin because of mountains and desert land, whereas states to the east are more populated due to more flat and liveable land.



## HOW IS LIGHT POLLUTION HARMFUL TO PEOPLE AND WILDLIFE?

To some, light pollution seems very simple. It lights up the sky, making it hard to see stars. What's the harm in a little bit of light?

Bright lights tend to keep people awake, causing a change in sleeping patterns, affecting overall health. Humans rely on darkness to produce a chemical called melatonin. Without darkness, that chemical's function is reduced. If you can't get a good night's rest, your body won't go through a natural sleep and wake cycle and then can't perform the daily functions of life.

For wildlife, some rely on the stars and moon to navigate home. For example, when sea turtles are born on the beach, they use the moon's light to find their way to the ocean. With light pollution, it's harder to see the glow of the moon, and only about 10% of turtles make it to the ocean.



## DESIGNATED DARK SKY SPOTS IN MINNESOTA

The International Dark-Sky Places (IDSP) program was founded in 2001. It was created to encourage communities, parks, national land, and other areas worldwide to preserve and protect the sky from further light pollution. Minnesota is lucky enough to have 2 out of 133 designated dark sky places in the world.



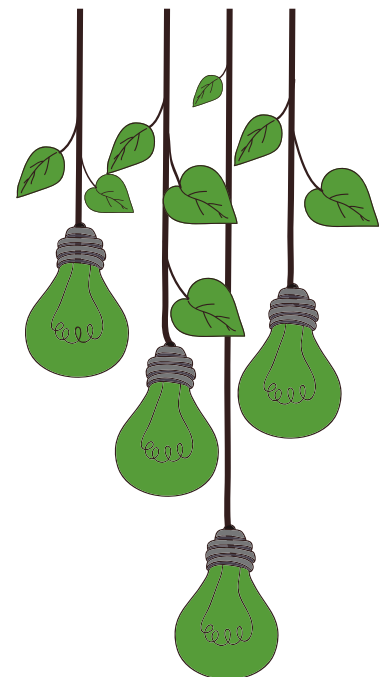
The first dark sky was given its award in September of 2020. The Boundary Waters Canoe Area Wilderness was named the largest designated dark sky place in the world. Sitting at 1,098,000 acres, it's home to many wildlife and plenty of recreation for the whole family to have fun.

The second dark sky in Minnesota is Voyageurs National Park. This park is particularly noted for travelers to see the northern lights and the ample water sources throughout. If you're fortunate, you could catch a meteor shower or two while you stay there!

## HOW CAN YOU CONSERVE ON LIGHT USE?

According to the IDSP website, "Artificial light at night has revolutionized the way we live and work outdoors, but it has come at a price. When used indiscriminately, outdoor lighting can disrupt wildlife, impact human health, waste money, and energy, contribute to climate change, and block our view of the universe." It's important to be conscious of how we use light so that we can protect and keep our planet healthy and happy. Here are some ways you can reduce your consumption on light use:

- Turn off lights when leaving a room.
- Use energy-efficient light bulbs, such as LED's.
- Unplug anything that you're not using at the moment.
- As old as it sounds, use candles to light a room.



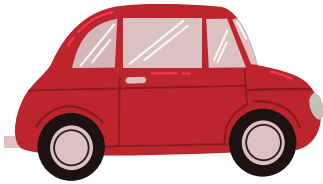
For more information about International Dark Skies, visit:  
<https://www.darksky.org/our-work/conservation/idsp/>

## ACTIVITY: DRAW ALL OF THE BRIGHT LIGHT SOURCES!

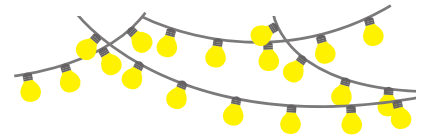
See how many light sources you can draw and Identify. Look at some examples below!



Big Cities



Car Head Lights



String Lights

EXTENSION FOR OLDER YOUTH: LOOKUP YOUR CITY AND SEE WHAT LEVEL LIGHT POLLUTION IS. HOW DO YOU THINK THIS AFFECTS YOUR PERSONAL HEALTH AND WILDLIFE AROUND YOU?

## CONNECTING WITH QUESTIONS

- What can you do to lower your light use?
- Where are some places that you can go to see stars and the Milky Way?
- What are some ways that you have felt the effects of light?
- Does your household use LED lights?



## ADDITIONAL RESOURCES

[https://www.globeatnight.org/light-pollution.](https://www.globeatnight.org/light-pollution)

[https://www.youtube.com/watch?v=V\\_A78zDBwYE](https://www.youtube.com/watch?v=V_A78zDBwYE)

[https://www.bellmuseum.umn.edu/blog/shaw/#:~:text=Minnesota%20has%20a%20lot%20of,better%20view%20of%20the%20stars.](https://www.bellmuseum.umn.edu/blog/shaw/#:~:text=Minnesota%20has%20a%20lot%20of,better%20view%20of%20the%20stars)

## SURVEY FEEDBACK

Take a short survey at: [campfiremn.org/mynatureconnection](http://campfiremn.org/mynatureconnection)

or here: Kids Survey - [click here](#) | Teachers/Parents Survey - [click here](#)