



MEASURING LIGHT IN THE NIGHT

Help gather light pollution data.

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Seven out of 10 people in the US have never seen our Milky Way Galaxy arch across their night sky from where they live. Have you? If so, you're lucky! If not, it's probably because of light pollution (too much outdoor lighting).

Light pollution not only affects our view of the stars, but it also 1) wastes energy and money (about \$2 to \$10 billion a year!); 2) causes sleep disorders in people; and 3) disrupts the sleeping and breeding habits of animals like newly hatched sea turtles that try to find their way back into the moonlit ocean but get confused by streetlights and end up on streets instead. Light pollution may be a global problem, but the solutions are local and it starts with you.

To participate in this project, you will go outside more than an hour after sunset (8-10 pm local time). The Moon should not be up. Let your eyes become used to the dark for 10 minutes before your first observation. And then, compare how many stars you can see in a constellation to how many stars you should be able to see. You can collect required data by 1) using the Sky Quality Meter (SQM), which might be available at your local library or school; OR 2) without using the SQM.

After submitting your data, you can compare your light pollution levels to other reports around the world.

MATERIALS NEEDED

Computer or smartphone with internet access, GlobeAtNight.org on web. Optional: Sky Quality Meter, RED LED Flashlight, Planisphere

STEP 1

Go to scistarter.org/darksky and sign up for an account, or log in to your existing account. A SciStarter account helps you track your contributions and find relevant projects to participate in.

STEP 2

Click the "Measuring Light in the Night" icon at scistarter.org/darksky and follow the instructions to go to the Globe at Night website and watch a brief video about the project.

STEP 3

There are 6 questions in total on the Globe at Night submission form. You will need to answer 5 of them. You can choose to answer either Question 3 (if you don't use the SQM kit) or Question 5 (if you use the kit). Please remember you can always click on the "?" icon at each question for further guidance.

STEP 4

Get started with Question 1 "When did you make your observations?" by entering the date and the time. Then, to answer Question 2 "Where did you make your observations?", just click on the map to mark the location with a red balloon. Leaving location comments is optional.

(Continued on reverse)

STEP 5

If you don't use the SQM kit, answer Question 3. Otherwise, you can skip Q3 and answer Q5. Once your location is marked, in Question 3 "How dark was the sky that night?", you will see a large magnitude chart. Select one of the thumbnail images below the large chart for the right magnitude.

STEP 6

In Question 4 "What were sky conditions like that night?", select an image that best resembles your view of the night sky. Leaving sky condition comments is optional.

STEP 7

If you use the SQM kit, answer Question 5, You will need to enter the SQM reading and, optionally, the serial number of the kit.

STEP 8

For Question 6 "Ready to send us your data?", please remember to enter the email address you used to create your SciStarter account so that you will earn credit for your contribution to this project.

QUESTIONS?

Please visit scistarter.org/darksky-faq.

LOOKING FOR MORE?

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PROJECT MATERIALS: COMPUTER OR SMARTPHONE WITH INTERNET ACCESS, GLOBEATNIGHT.ORG ON WEB. OPTIONAL: SKY QUALITY METER, RED LED FLASHLIGHT, PLANISPHERE

