The Quietest Place in New York: NYSSLS Alignment

Teacher guide for the one-page student worksheet at mrsajdak.com/maps/quiet. Environmental Science or Physics, grades 9 to 12. The worksheet is low-write: tick boxes, short blanks and one or two written lines. The answer key is kept off the website; write to rsajdak@buffaloschools.org for it. © 2026 Ryan Sajdak. Free to use, share and change under CC BY-NC-SA 4.0 (creativecommons.org/licenses/by-nc-sa/4.0): give credit, do not sell it, share your version the same way.

What it is

A map of how loud every part of New York State is, from the National Park Service geospatial sound model: the sound level in A-weighted decibels (dBA) that is exceeded half the time on a typical summer day, on 270 m cells. It is a model, not a microphone, with a typical miss of about 3 dB. Clicking anywhere reads the level there.

Objectives

Printed on the worksheet, each with a box to tick.

I can	Questions
I can read sound levels from a map and use the decibel rule to compare them.	1 to 4
I can explain what makes a place loud or quiet.	5 and 6

Standards

Core idea touched: ESS3.C Human impacts on Earth systems (noise as a pollutant), with a link to **PS4.A** wave properties through the decibel scale. The sheet does not assess a performance expectation by itself.

The science and engineering practices and crosscutting concepts below are named in New York State P-12 Science Learning Standards language, and each one is printed on the worksheet at the part where students use it.

Part by part

Part	Practice (SEP)	Concept (CCC)	What students do
1. Read the map	SEP 4 Analyzing and interpreting data		Read the sound level at four places, including the quietest spot in the state.
2. Use the numbers	SEP 5 Using mathematics and computational thinking		Apply the rule that every 10 dBA is 10 times the sound energy.
3. Cause and effect		Cause and Effect	Decide what makes a place louder, then explain why the quietest place is where it is.

Running it

About 15 minutes. The decibel rule is the hard part: 20 dBA more is 10 × 10 = 100 times the energy, not 20 times. Because the model can miss by about 3 dB, do not let students rank places that are within a few dB of each other (Buffalo, Rochester and Times Square are a tie).