

Can You See Me Now?

Summary

Students will use a light meter to describe the spread of energy away from an energy-producing source (Core indicator IV, 3, c)

Time Frame

1 class periods of 60 minutes each

Group Size

Small Groups

Materials

- Light source
- light meter (TI 73 calculator, CBL and light intensity probe, available to Jordan School District Teachers through Barbara Gentry)
- meter stick
- [student page](#) (attached)

Background for Teachers

Waves carry energy and spread outward from a source. As they travel, the energy in them dissipates

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[Picture of activity](#) (attached).

Instructional Procedures

- Set up graphing calculators to measure light intensity. You may wish to use the "events with entry" display since this is not continuous data.
- Set 4-8 light sources up in your room, as far apart as possible. If you use flashlights or a less intense light, up to 8 lights can be used without too much interference.
- Demonstrate the movement of waves by using a glass pie plate with 2 cm of water in it. Place it on an overhead projector and make waves by disturbing the water. Discuss with students what happens to the waves as they spread out. Ask them what they think happens to the amount of energy in the wave as it spreads.
- Discuss introduction to activity with students and diagram the waves from a satellite and how cell phone coverage works.
- Identify materials and their location in the room.
- Allow students time to work. You will probably have to help them set up their graphs.
- Have students report their results by group. Allow time for students to complete analysis and conclusion.

Assessment Plan

Scoring Guide

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1. Students write hypothesis and collect data...4
2. Students analysis and report on data.....4
3. Student writes a thoughtful conclusion.....4

Bibliography

Lesson Design by Jordan School District Teachers and Staff.

Authors

[Utah LessonPlans](#)