

Unit 4

Transmitters and Receiving Devices

Lesson #4.4

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Lesson Title How Antennas Work

Curriculum Area Math, Science

Grades 6 – 8

Duration 1 to 2 class periods

Content Standard M – 2, SC - 3

Benchmark M – 2.1, SC – 3.1, SC – 3.2, SC – 3.3

Goal

- Develop student understanding of antenna fundamentals.

Objective

- Students will identify different types of antennas including: dipole, beam, vertical and Quad.
- Students will construct and test a half-wave dipole antenna.

Resource Materials

Now You're Talking

ARRL Antenna Book

300 ft. roll of 14 gage insulated copper wire

Wire cutters

Measuring tape

Plastic/ceramic insulators

Sharp knife

Instructional Content

Antenna Theory

Wavelength

Feed lines

Characteristic Impedance

Half-wave dipole antenna

Quarter-wave vertical antenna

Beam antenna

Antenna Safety

