

Unit 2

Radio Phenomena

Lesson 2.4

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Lesson Title Radio Wave Propagation

Curriculum Area(s) Science

Grades 6 – 8

Duration 2 class periods

Content Area SC-2

Benchmarks SC-.1
SC-2.2
SC-2.3

Goal

- Develop student understanding of the fundamentals of radio wave propagation and how it is utilized in today's technological world.

Objectives

- To identify the fundamentals of Ground-Wave Propagation
- To identify the fundamentals of Sky-Wave Propagation
- To identify the role of the Ionosphere in Propagation
- To explain the phenomena of Scatter Mode Propagation

Resource Materials

Now You're Talking

Radio Wave Propagation, pages 3.1-3.9

ARRL Operating Manual, page 4.4

ARRL Instructors Manual, pages 5.5-5.6

Instructional Content

Ground-Wave Propagation

Sky-Wave Propagation

The Ionosphere

The Scatter Mode

Suggested Activities

AM Radio Ionosphere Station – NASA Activity Sheet

<http://image.gsfc.nasa.gov/poetry/activity/s10.pdf>

Radio Waves and the Ionosphere – NASA Activity Sheet

<http://image.gsfc.nasa.gov/poetry/activity/s11.pdf>

The Aurora – NASA Activity Sheet

<http://image.gsfc.nasa.gov/poetry/activity/s12pdf>