

19.1 Lesson Plans

KEY
 SE = Student Edition, TWE = Teacher Wraparound Edition, TCR = Teacher Classroom Resources, STVS = Science and Technology Videodisc Series, PCA = Physics for the Computer Age


When Light Waves Interfere

Section Objectives




- _____ **Relate** the diffraction of light to its wave characteristics.
- _____ **Explain** how light falling on two closely spaced slits produces an interference pattern, and use measurements to **calculate** wavelengths of light.
- _____ **Apply** geometrical models to **explain** single-slit diffraction and two-slit interference patterns.

National Science Content Standards UCP.2, UCP.3, A.1, A.2, B.4, B.6, E.1, E.2, G.3
Georgia QCC 1, 1.1, 1.2, 1.3, 1.4, 12.2, 12.4, 14.9, 24, 24.1, 24.3, 24.4, 24.5, 24.6, 24.7, 24.9, 24.10
Schedule
 Block schedule: 1 session
 Single-period schedule: 2 sessions




Focus

-  Activity, TWE p. 444

Teach

-  Physics Lab, SE p. 446
-  Pocket Labs, SE pp. 447, 450
-  Quick Demos, TWE pp. 443, 445, 448
- _____ Physics Journal, TWE p. 445
- _____ Connections to Biology, TWE p. 447
- _____ Applying Physics, TWE p. 448
-  Demonstration 19-1, TWE pp. 448–449
-  Transparencies 31, 32 Masters and Worksheets, pp. 65–69, TCR
-  Physics Lab and Pocket Lab Worksheets, pp. 101–104, TCR
-  Laboratory Manual, Lab 19.1, TCR
- _____ Spanish Resources, TCR

Assess/Reteach

-  Section Review, SE p. 451
- _____ Checking for Understanding, TWE p. 450
-  Reteaching, TWE p. 451
-  Study Guide, pp. 109–112, TCR
- _____ Supplemental Problems, TCR

Enrichment/Application

- _____ Cultural Diversity, TWE p. 445
- _____ Enrichment, TWE p. 449
-  Extension, TWE p. 451
- _____ Enrichment, pp. 37–38, TCR
-  Tech Prep Applications, pp. 31–32, TCR
- _____ Critical Thinking, p. 25, TCR

Close

-  Closing Strategy, TWE p. 451

Chapter Assessment

- _____ Assessment, TWE p. 449
- _____ Alternate Assessment in the Science Classroom
- _____ Performance Assessment in the Science Classroom

Multimedia Options

-  CD-ROM: Waves, PCA
-  Videotape: MindJogger Videoquizzes
-  Videotape: The Mechanical Universe, Quad 7
- _____ TestCheck Software