

Waves

Lesson objectives

Students will be able to identify the characteristics of a wave.

1.1

Lesson objectives

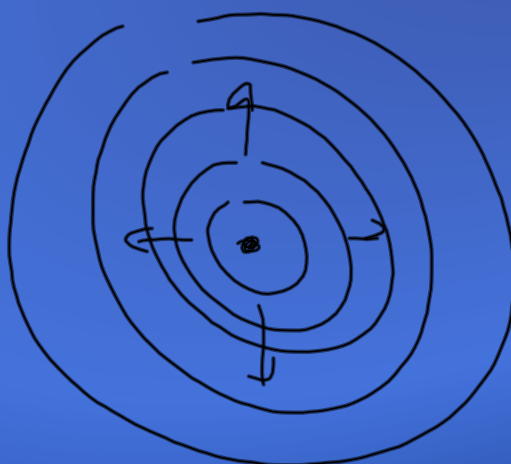
Teachers' notes

Lesson notes

8-1 Quicklab: Fundamental Properties of Wave Motion (p. 393)

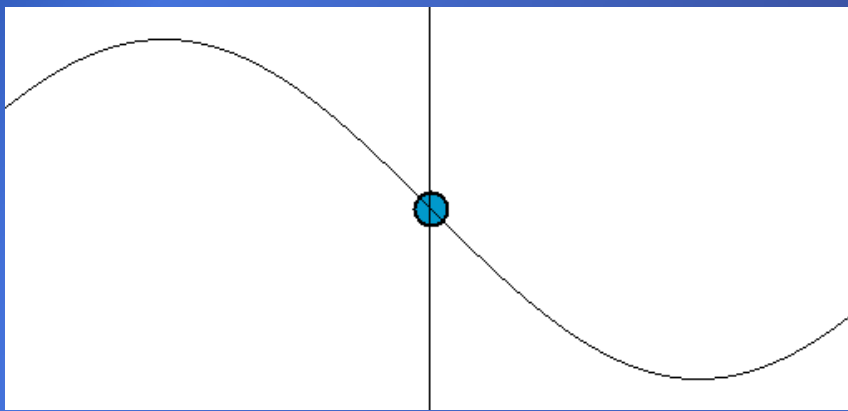
Complete the steps in the procedure and answer questions #1-3.

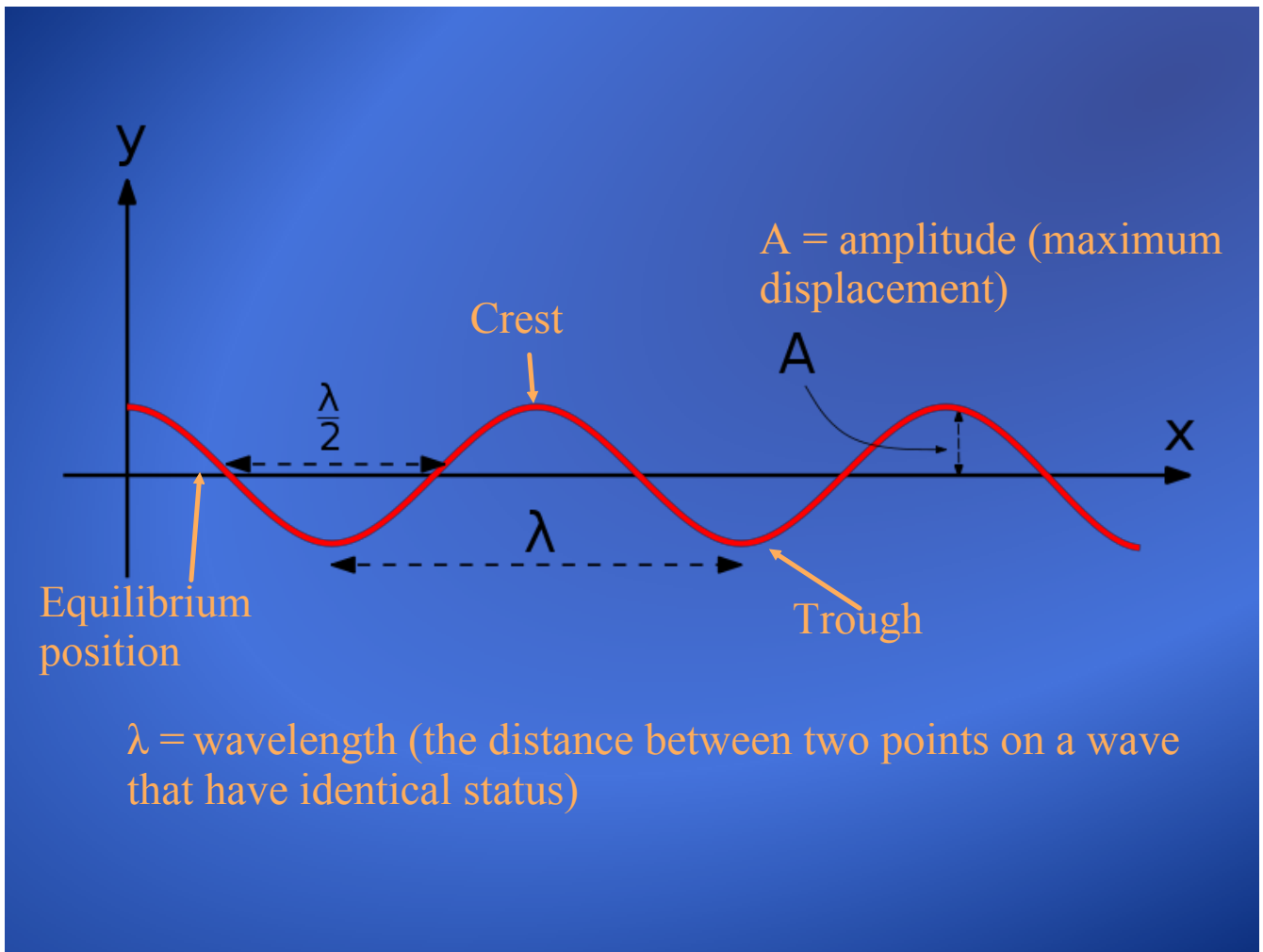
(2)

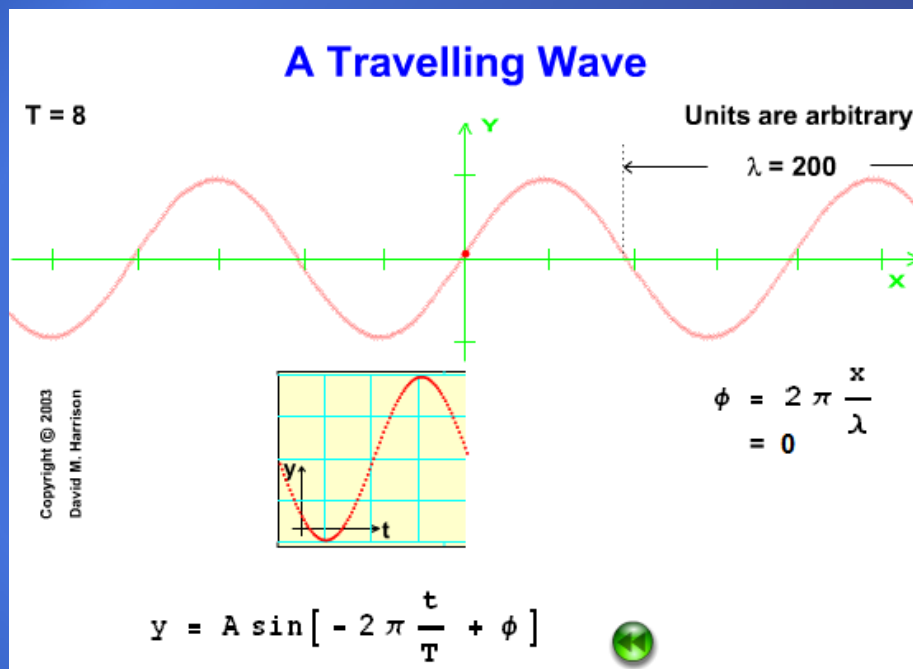


A wave is a disturbance that moves outward from its point of origin, transferring energy through a medium by means of vibrations.

The material through which a wave travels is the medium; the medium does not travel with the wave.







A wave front is an imaginary line that joins all points reached by the wave at the same instant.

A wave train is a series of waves forming a continuous series of crests and troughs.

A point source is a single point of disturbance that generates a circular wave.



8-2 Quicklab: Wave Trains in a Ripple Tank Part 1: Reflecting Waves (p. 396)

Problem: How do the incident and reflected wave trains interact when wave trains reflect from a straight barrier?

Reflection occurs such that angle of incidence equals angle of reflection

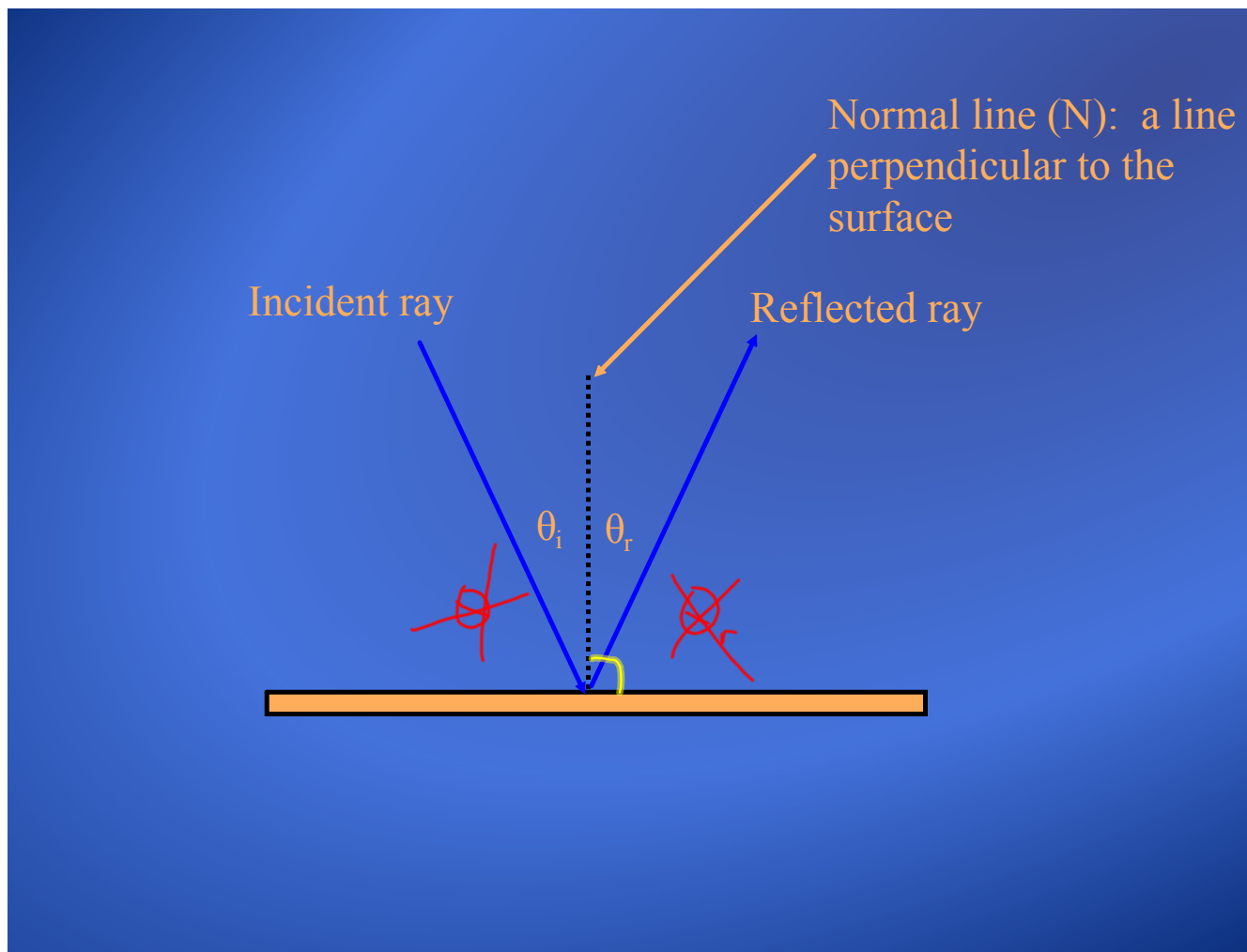
Follow the Procedure and answer Analysis questions #1-4

<http://www.absorblearning.com/media/item.action?quick=80>

LAW OF REFLECTION

Law of Reflection:

When a wave hits a surface it will reflect, such that
angle of incidence = angle of reflection



8-3 Inquiry Lab: Wave trains in a Ripple Tank Part 2: Wave speed and Wavelength (p. 399)

Question: What effect does a change in speed have on wave trains?

Slower waves \rightarrow shorter λ

Faster waves \rightarrow longer λ

Follow the procedure and answer Analysis questions 1-5.

<http://falstad.com/ripple/>



~~8.1 eTest~~

