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Date: _____

Unit VII
Mechanical Waves & Sound
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VII

The Doppler Effect

The Doppler Effect is a way to explain the changes that occur to waves when the source of the wave is moving. It can also occur if the source of the wave remains stationary but the observer is in motion. Remember that waves are energy in motion. The energy moves but the medium through which it is moving remains in place.

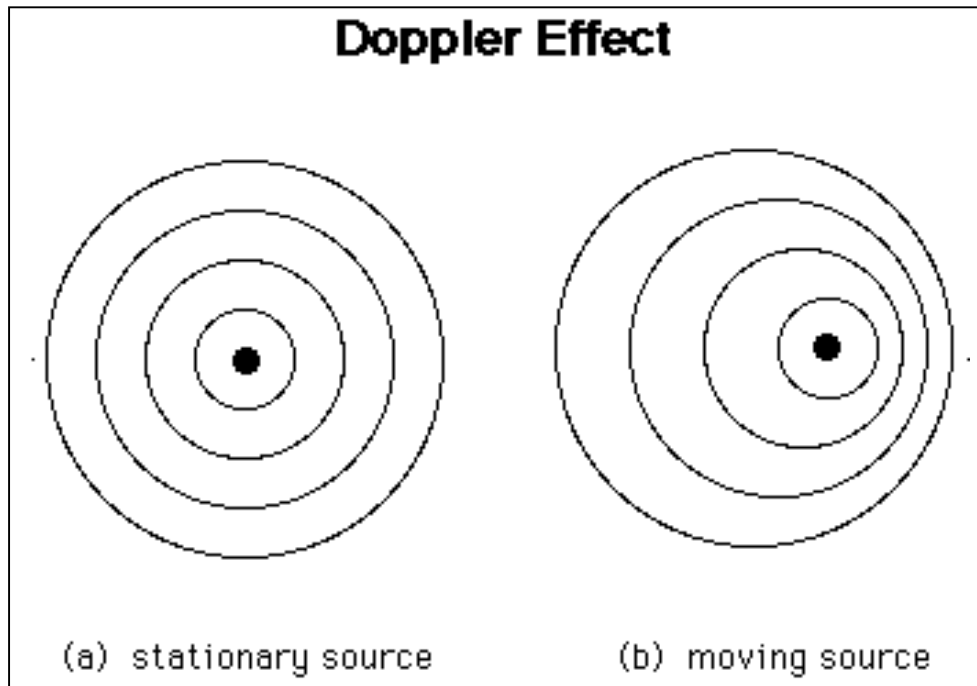


Figure A represents a wave in which the source is staying in one place. Compare that image to the image in Figure B where the source of the wave is in motion. Which way is the source moving in Figure B? _____ . How do you know? _____

As the source increases its speed the waves on the forward edge (the direction that the wave is moving) get pressed closer and closer together. What do you think would happen if the source of the wave was moving faster than the wave itself? _____

Can you think of an example of a wave source that actually moves faster than the wave itself? _____

What is the result when the source of the wave is a jet plane moving through the air at a speed greater than the speed of sound? _____
