

ALWAYS, SOMETIMES, OR NEVER TRUE (TEACHER'S GUIDE)

Directions

Read each statement and decide whether it is always, sometimes, or never true. In the space provided below each statement, add rationale to support your selection.

1. Waves are visible.

Always True

Sometimes True

Never True

Sound waves are not visible.

2. Waves can be used to describe the behavior of less obvious things like light, TV and radio signals, and cell phone data signals as they travel from one location to another.

Always True

Sometimes True

Never True

3. There are patterns in waves.

Always True

Sometimes True

Never True

4. Waves are not affected by their environment.

Always True

Sometimes True

Never True



5. A wave can be thought of as a disturbance that travels through something, accompanied by a transfer of energy.

Always True

Sometimes True

Never True

6. Waves travel through solids.

Always True

Sometimes True

Never True

Waves can be reflected off solids and, in this case, they do not penetrate. How far a wave travels depends on how much energy it carries.

7. Radio waves can travel through the vacuum of space.

Always True

Sometimes True

Never True

There is a special type of wave (electromagnetic) that does not need to travel through matter. Radio waves are a type of electromagnetic radiation.

8. Sound waves need to travel through a medium.

Always True

Sometimes True

Never True

9. Amplitude and frequency affect the energy of a wave.

Always True

Sometimes True

Never True

