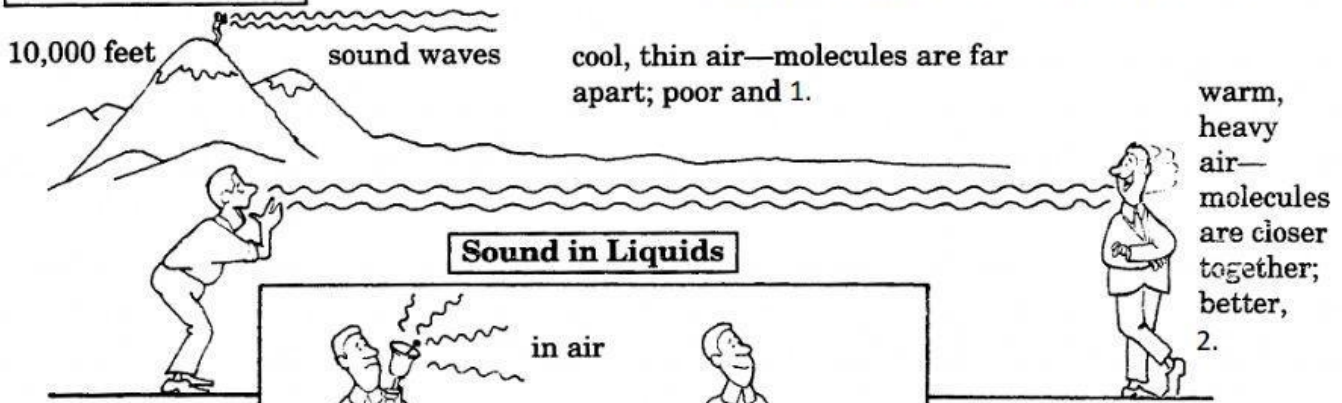


Sound and Materials

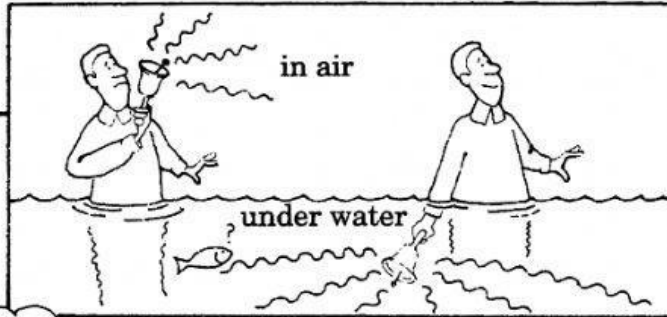
Sound waves travel best in materials when the molecules are close together.

Sound in Gas (Air)

Drag and drop faster sound slow sound

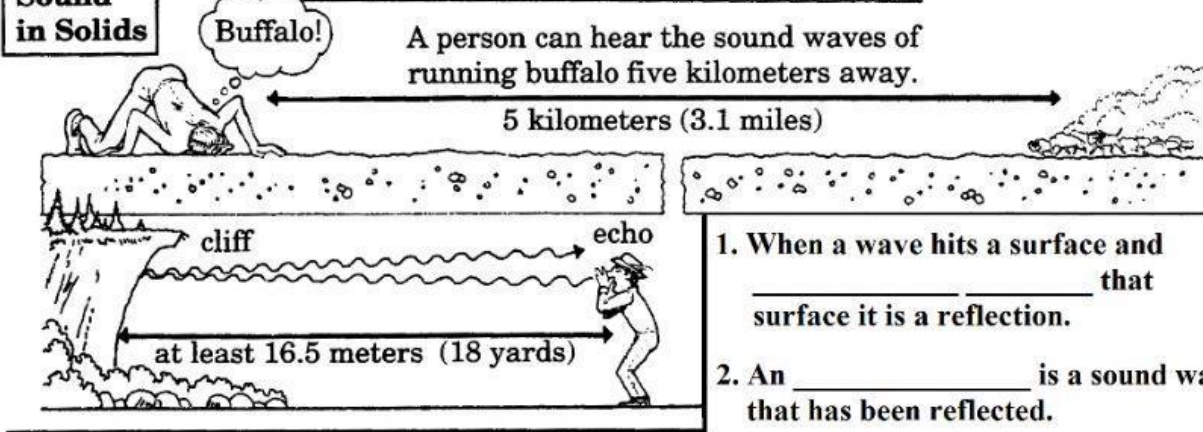


Sound in Liquids



molecules are closer together; better, faster sound

Sound in Solids



A person can hear the sound waves of running buffalo five kilometers away.

5 kilometers (3.1 miles)

Buffalo!

cliff

echo

at least 16.5 meters (18 yards)

1. When a wave hits a surface and _____ that surface it is a reflection.
2. An _____ is a sound wave that has been reflected.

3. Better and faster sound waves are carried by materials when their _____ are closer together.
4. A boy clicks two rocks together underwater. Two friends are two meters (6.56 feet) away. One has his head out of the water; the other has his head underwater. Which one can hear the clicking sound? the one with is head out of the water the one with his head under the water
5. In stories of the Old West, what did people do to find out if a train was coming soon? Why? People would listen **standing up put their ear on the track**. This is because sound travels faster in a **solid liquid gas**. This means the person listening through the **solid liquid gas** would hear the train first.
6. Why aren't sounds heard in a vacuum?
Sound is **is not** a mechanical wave, which means it **needs does not need** a medium to travel.
7. Through which medium would sound travel fastest, water, a steel bar, or nitrogen gas?