

UP AND DOWN, SIDE TO SIDE



DART ACTIVITY

Move up, move down, then pass the movement around,
Move side to side, spread the movement out wide. x2

Chorus

Up and down or side to side,

1. _____ are how vibrations spread, whether seismic, 2. _____, or light,

Up and down or to and fro,

Transferring 3. _____ and information as they go.

Verse 1:

If you want to send energy, without 4. _____ being sent too,

Get a substance 5. _____ and watch the ripple spread through,

6. _____ waves go through the Earth, sound can ripple through air,

Light don't need no 7. _____, that's why it's everywhere.

Move up, move down, then pass the movement around,

Move side to side, spread the movement out wide.

Verse 2:

Vibrations in a 8. _____ wave are perpendicular to the,

Direction that the wave will go, peaks and 9. _____ occur,

Seismic s waves, light and water waves are examples

But sound waves and seismic p are 10. _____,

They have vibrations parallel to the direction they go,

11. _____, rarefactions form as they're shaking to and fro.

Chorus

Move up, move down, spread the movement around,

Verse 3:

The period's the 12. _____ for one vibration to complete,

And the number of waves that pass a point each second's, 13. _____,

The 14. _____ is the middle to the vibration's maximum,

Wavelength is the 15. _____ moved when a period is done,

16. _____ times by frequency will give the ripple's speed,

And if you are describing waves, they're all the words you need.

Chorus

Make the frequency high, make the frequency low,

Turn up the amplitude, now take it down low.

When a wave hits a boundary, what's it gonna do?

It might 17. _____ and get transmitted yeah, it bends, then goes right through?

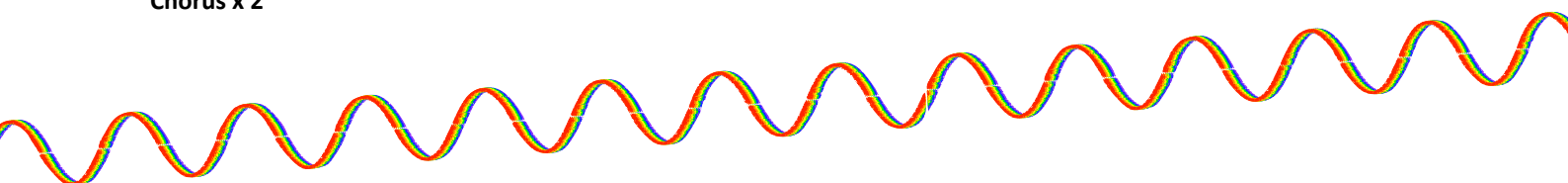
It might be 18. _____; bats use 19. _____ to locate

It might be 20. _____, and then the temperature will escalate.

Chorus x 2

Complete the following tasks

1. Fill in the blank keywords - if you are not sure, there are clues on the next page.
2. Circle sections in **red** that describe **uses** of waves.
3. Circle sections in **green** that are describing the **properties** of waves.
4. Circle sections in **blue** that describe **how** waves behave.



Each of these words is used once.

sound longitudinal amplitude seismic troughs compressions vibrating
waves frequency energy echoes transverse distance time
medium reflected wavelength matter refract

Definitions

1. The way that energy spreads through substances as vibrations.
2. A wave that can be detected with a microphone or ear.
3. The ability to do work on another object.
4. Anything that has mass.
5. Moving backward and forward or up and down around a central position.
6. Waves that travel through the ground and can be detected as earthquakes.
7. A substance that a wave travels through.
8. A wave in which the vibration is perpendicular to the direction the energy is going.
9. The lowest point in the vibration of a transverse wave.
10. A wave in which the vibration is parallel to the direction the energy is going.
11. The part of a longitudinal wave in which particles are closer together.
12. A quantity measured in seconds.
13. A quantity that describes how often waves occur, measured in hertz.
14. A quantity that describes the maximum distance a the particles in the medium move from their central position. In a sound wave, it determines the volume.
15. A quantity that represents anything measured in metres.
16. The distance between two peaks or compressions, or the distance travelled in one period.
17. Bend at a boundary between mediums due to the different wave speed in the new medium.
18. When a wave bounced off a boundary.
19. The name for the reflection of a sound wave.
20. When the energy from a wave is transferred to an object.

