

Wave concepts for lab: You will need to draw some diagrams

1. Transverse- (diagram and description)

2. Longitudinal- (diagram and description)

3. Mechanical wave – must travel through _____

4. Mechanical waves CAN NOT flow through _____

5. Energy of a mechanical wave depends on _____ (diagram and description)

6. Wavelength - one complete _____
7. Wavelength - from any point to another point in _____. (diagram and description)

8. Frequency (diagram and description of high and low)

9. Period (diagram and description of high and low)

10. Speed of any wave (diagram and description of a pulse)

11. Open end reflection of a pulse (show pulse before and after reflection)

12. Closed end reflection of a pulse (show pulse before and after reflection)

13. Make Transverse longitudinal and torsional waves on a spring. which is fastest and which is slowest wave in the same medium? (draw a diagram of the torsional wave)

14. An earthquake produces p , s and torsional Rayleigh – R waves. Which of these arrives fastest and which is slowest? Why are they called p and s?

15. Constructive interference(diagram of pulses on your spring)

16. Destructive interference (diagram of pulses on your spring)

17. Show the positions of crossing pulses after they pass each other. What has happened to the size and shape of each pulse?

18. Standing waves appear when wave traveling on one direction meets waves traveling in the opposite direction. As they pass, the combination goes from constructive to destructive. IF the waves are the same but traveling in the other direction, the waves appears to be standing still. In fact, it is 2 waves traveling in both directions. Draw a diagram of this action before the waves meet, and as the waves pass through each other.

19. A “fundamental” is the least number of standing waves possible on the medium. Draw a diagram of the fundamental standing wave.

20. What happens when the frequency of the standing waves is increased?