Objectives:

1. Calculate pressure.
2. Identify the different units for pressure.
3. Describe what two variables affect pressure and how.
4. Describe the relationship between depth of fluid and the pressure it exerts.
5. Describe the relationship between type of fluid and the pressure it exerts.
6. Describe the relationship between altitude and air pressure.
7. Explain what causes boiling to occur and how boiling point can be manipulated.
8. Identify the relationship between temperature and pressure.
9. Describe how forces from pressure are distributed at a given level in a fluid.
10. Describe how pressure is transmitted in a fluid according to Pascal's principle.
11. Explain how a hydraulic system works to change a force.
12. Explain how speed and pressure of a fluid are related according to Bernoulli's principle.
13. Explain the effect of buoyancy on the apparent weight of an object.
14. Explain Archimedes's principle.
15. Describe relationship between object density, fluid density, and sink or float.
16. Describe relationship between object weight, buoyant force , and sink or float.
17. Use math to explain the relationships between pressure, force, and area when one is constant.
18. Connect manipulation of formulas to real life examples.
19. Calculate buoyancy force.
20. Draw force diagrams to explain buoyancy.
21. Define mechanical waves and relate to energy
22. Compare and contrast transverse, longitudinal, and water waves
23. Analyze the motion of a medium/particle as the wave passes through it
24. Identify examples of transverse and longitudinal waves
25. Define,calculate, and be able to label frequency, wavelength, trough, crest, and amplitude
26. Identify and describe relationships between frequency, wavelength, amplitude, and energy
27. Distinguish between constructive and destructive interference and be able to calculate resulting wave

Vocabulary:

1. pressure
2. fluid
3. boiling point
4. altitude
5. atmospheric pressure
6. Pascal's principle
7. Hydraulic system
8. Bernoulli's principle
9. buoyancy
10. buoyancy force

11. Archimedes' principle
12. mechanical wave
13. medium
14. trough
15. crest
16. transverse
17. compression
18. rarefaction
19. longitudinal wave
20. water wave
21. frequency
22. hertz
23. wavelength
24. amplitude
25. constructive interference
26. destructive interference