Name_____ Period _____ Date _____

Trench Dive

STEM Sims

Lesson 4: Pressure

Pressure is defined as the amount of force pushing down on an object divided by how much space the force is acting upon. A larger force results in a larger pressure, while a larger area yields a smaller pressure. Pressure is often measured in units of newtons per square centimeter abbreviated as N/cm^2. No pressure, but you need to begin your investigation.

Doing the Science

1. Start the Trench Dive Simulation by clicking on the "Sim" tab.
2. Click on the "Pressure" button to sample the pressure at the surface. Record the water pressure in Table 1.
3. Next, click the green down arrow on the left side of the screen until the depth measurement reaches 200 m.
4. Click on the "Pressure" button to take another sample of the pressure at 200 m. Make sure to record your data in Table 1.
5. Repeat steps 3 and 4 in increments of 200 m until your table is complete.

Table 1.

Depth (m)	0	200	400	600	800	1,000	1,200
Pressure (N/cm^2)							

Do You Understand?

1. In the simulation, click on the blue "Graph" button. Next, click the "Pressure" button. Review the graph and then describe the relationship between pressure and water depth.

2. Using scientific reasoning and your data, explain why you think that water depth affects pressure.

3. Using the background information and your own data, predict the water pressure at 3,000 meters, and then take a sample. Were you correct? Please explain your response.