Senior High School

DepED
DEPARTMENT OF EDUCATION

Learning Activity Sheet for General Science

Quarter 1
Lesson
6

Learning Activity Sheet for Science Grade 11
Quarter 1: Lesson 7

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LEARNING ACTIVITY SHEET

Learning Area:	General Science	**Quarter:**	1
Lesson No.:	1	**Date:**	
Lesson Title/ Topic:	Where does the pressure go?		
Name:		**Grade & Section:**	**11**

I. Activity No. 1: Where does the pressure go?

II. Objective(s): At the end of the activity, you should be able to:

1. explain what happens to the pressure applied in a close container.
2. compare the effect of the size of the contact area (finger vs. palm) to pressure felt or transmitted.

III. Materials Needed:

1 sturdy resealable plastic bag (such as Ziploc)/ or clear plastic bag
Water (enough to fill the bag about halfway)
A flat table or desk surface
Paper towels or tray (for cleanup, just in case)

IV. Instructions:

1. Fill the resealable plastic bag halfway with water, then seal it tightly. Make sure there are no air bubbles trapped inside.
2. Set the sealed bag on the table and gently spread the water so it settles evenly throughout the bag.
3. Lightly press down on the top of the bag with one finger. What do you notice about the water's movement? Does the bag bulge in certain areas?
4. Now try pressing down on the bag with your whole palm. Do you notice a difference in how the water moves? Does the bulging seem less or more spread? Is the bulging easier or harder to see?

V. Synthesis:

1. When you pressed down on the bag did the pressure stay only beneath your finger or palm, or did it spread through the entire bag?

_____
_____

2. Why do you think the water shifted or bulged in some spots? What caused that to happen?

_____
_____

3. What does this show you about how fluids act inside a closed container when pressure is applied?

_____
_____

LEARNING ACTIVITY SHEET

Learning Area:	General Science	**Quarter:**	1
Lesson No.:	2	**Date:**	
Lesson Title/ Topic:	Hydraulic System Model (Syringe Experiment)		
Name:		**Grade & Section:**	**11**

I. Activity No. 2: Hydraulic System Model (Syringe Experiment)

II. Objective(s): At the end of the activity, you should be able to model how pressure is transmitted in a confined fluid and observe how it causes movement.

III. Materials Needed:

2 plastic syringes (one small, one large — e.g., 10 mL and 30 mL)
Clear plastic tubing (must fit tightly on syringe tips)
Water (for filling the system)
Container or tray (to catch spills)
Towel or paper towels (for cleanup)
Optional: food coloring (to see water movement clearly)

IV. Instructions:

1. Remove the plungers from both syringes.
2. Connect the two syringes using the plastic tubing. Make sure the tubing fits snugly over the tips.
3. Fill one syringe with water. If using food coloring, add a few drops for visibility.
4. Tilt the tubing and gently push the water through to the other syringe until the entire system is full and there are no air bubbles.
5. Reinsert the plungers while keeping the tubing and syringes filled (do this slowly to avoid drawing in air).
6. Place the syringes on a tray to prevent spills.
7. Push the small syringe plunger. Observe the movement of the plunger in the large syringe.
8. Then push the large syringe. Now observe the movement in the small syringe.
9. Repeat using equal-sized syringes (if available) and compare the motion.

Draw a diagram of your setup and label how pressure moves through the system.

V. Synthesis:

1. What happens when you push the plunger of one syringe?

_____

_____

2. How does the movement of the other plunger compare in size and speed?

_____

_____

3. Which syringe moves more easily, and why?

_____

_____

4. How does the size of the syringe affect the force or movement?

_____

_____

LEARNING ACTIVITY SHEET

Learning Area:	General Science	**Quarter:**	1
Lesson No.:	3	**Date:**	
Lesson Title/ Topic:	Archimedes Principle Activity		
Name:		**Grade & Section:**	**11**

I. Activity No. 2: Hydraulic System Model (Syringe Experiment)

II. Objective(s): At the end of the activity, you should be able to explore and verify Archimedes' Principle by comparing the weight loss of a submerged object with the weight of the displaced water.

III. Materials Needed:

Spring balance
Overflow can
Measuring container or beaker
Water
Metal block (or any solid object)

IV. Instructions:

1. Measure the object's weight in air using the spring balance. Record the reading below in the table below.
2. Fill the overflow can with water until it just starts to drip from the spout.
3. Gently submerge the object in the overflow can using the spring balance.
4. Catch the displaced water in the container below.
5. Weigh the displaced water using the spring balance or scale. Record and compare the weight loss of the object and the weight of the displaced water.

Data Table:

Measurement	**Value (g or N)**
Weight of object in air	
Apparent weight of object in water	
Weight loss (in air-in water)	
Weight of displaced water	

V. Synthesis:

1. What do you observe about the weight loss and the displaced water's weight?

_____
_____

2. What force is responsible for the weight loss underwater?

_____
_____

3. How does this activity demonstrate Archimedes' Principle?

_____
_____