Action research: Pascal's Principle

When we apply pressure anywhere to a fluid in a closed container, the force is transmitted equally in all directions. This happens throughout the fluid and onto the walls of the container. Pascal's Principle applies to fluids in a closed container. In physics, a fluid can be a liquid or a gas. Air is a type of gas.

In this activity, you will experience that pressure exerted on part of a container will transfer equally, in all directions, to other parts of the container. This will happen without losing any of the contents of the container.

1 You need a balloon, half filled with air.
2 Put the balloon on the floor.
3 Step lightly on the balloon. Do not let it burst. What happens to the flexible walls of the balloon?
4 Write your observation in your workbook. Mark your answer with ✓.
   a The pressure caused by your foot disperses the air:

only in one direction (linear)	
in two directions (from side to side)	
in all directions	

   b Did the balloon bulge:

equally in all directions?	
unequally in some directions?	

Question

1.What is the difference between a master (input) syringe and a slave (output) syringe?

2. Choose the correct answer:

The force transfer in a hydraulic system is more, less or equal to the force transfer in a pneumatic system?

3.When gas is compressed in a closed container, this system is called what type of system?

4.When liquid is compressed in a closed container, this system is called ?

5.Compressed liquid is compressible or incompressible?

6. Compressed air is compressible or incompressible?