

Grade 8 Science – Fluids **Compressibility of Liquids and Gases**

Name: _____ Date: _____

Investigation of Compressibility

Properties of fluids must be understood in order to use them properly. How they behave under certain conditions lets us know how they can be used. Whether the fluid is a gas, or a liquid has different characteristics.

For this activity, we will be using a syringe as pictured here. It has no attached needle and must be used with care. Follow all instructions and if you fail to do so, your syringe will be taken away and you will have to only watch as others complete the activity. Listen carefully!



Step one

Fill the syringe about halfway with air.

Step two

Plug the open end with your finger and press in the plunger end.

What happens to the plunger when trying to compress the air?

What happens if you release the plunger end and keep the open end plugged?

What happens if you release the open end after compressing the air?

Step 3

Keep the open end plugged and pull the plunger out to create a negative pressure in the syringe.

What happens to the plunger when trying to create a vacuum?

Step four

Fill the syringe about halfway with water.

Step five

Plug the open end with your finger and press in the plunger end. (Caution- do not let go of the open end – your syringe will be taken away from you.)

What happens to the plunger when trying to compress the water?

What happens if you release the plunger end and keep the open end plugged?

Step 6

Keep the open end plugged and pull the plunger out to create a negative pressure in the syringe.

What happens to the plunger when trying to create a vacuum?

Summary

Which type of fluid is easier to compress? Explain how you came to that conclusion.
