Chemistry Name: _____

Section _____ Sci Method Density WS Date: _____

Scientific Method

Number the following steps of the scientific method in the proper order.

_____ Research the problem.

_____ Observe and record.

_____ Make a hypothesis.

_____ Identify the problem.

_____ Arrive at a conclusion.

_____ Report the experiment for peer review.

_____ Test the hypothesis.

Match the following terms with the correct definition.

_____	hypothesis	a)	organized process used to test a hypothesis
_____	control	b)	an educated guess about the solution to a problem
_____	variable	c)	observations and measurements recorded during an experiment
_____	experiment	d)	a judgement based on the results of an experiment
_____	conclusion	e)	a logical explanation for events that occur in nature
_____	theory	f)	factor that changes in an experiment
_____	data	g)	used to show that the result of an experiment is really due to the condition being tested

Density

Solve the following problems. Show set-up, substitutions, and units.

1. What is the density of carbon dioxide gas if 0.196 g occupies a volume of 100 mL?

2. A cubic block of wood 3.0 cm on a side has a mass of 27g. What is the density of the block?

3. A stone was lowered into a graduated cylinder holding 22.0 mL of water. The height of the water rose to 27.0 mL. If the mass of the stone was 25g, what was its density?

4. Silver has a density of 10.5 g/cm^3, and gold has a density of 19.3 g/ cm^3. Which would have a greater mass, 7.0 cm^3 of silver or 4.2 cm^3 of gold?

5. 5.0 milliliters of ethanol has a mass of 3.9 grams and 5.0 milliliters of benzene has a mass of 4.4 grams. Which liquid has the higher density?