Name:_____

Period:_____

Oxygen Chemical Reactions

There are four basic chemical reactions that involve atmospheric oxygen. You will investigate 3 of these reactions in this lab.

Materials:

2- 400 mL beakers

Salt

nail

Plastic spoon

Candle

Bromothymol Blue Solution

straw

Procedures:

1-Rust:

- Fill a 400 mL beaker to 100 mL of water. Add salt and stir until no more salt will dissolve.
- Place your nail in the salt water and let it sit for at least 10 minutes.

---while your experiment is sitting, complete the following experiments---

2-Combustion:

- Raise your hand and ask your teacher to light your candle
- Watch the candle for 1 minute.
- Cover the candle with the beaker.

Watch what happens and record: _____

_____

3-Cellular Respiration:

- Fill a beaker with 50 mL tap water.
- Add a dropper full of Bromothymol Blue solution. (Bromothymol Blue Solution is an indicator that is **Blue** in the presence of **Oxygen gas** and turns **Green** in the presence of **Carbon Dioxide Gas**).
- Blow into the water solution with a straw for about 30 seconds to a minute.

Watch what happens and record:

_____

_____

*******Take your nail out of the salt water and sit it on a paper towel. Clean up your lab station and return to class.**

-------return to the lab to observe your nail-------

Record your observations of the nail:

_____

_____

questions:

1. The absence of what element made your flame go out?

2. The presence of what compound made your indicator change color?

The chemical equation for rust is: $4\ Fe\ (s) + 3\ O_2\ (g) \Longrightarrow 2\ Fe_2O_3\ (s)$

3. What are the reactants?

4. What are the products?

5. What was the purpose in adding SALT to your water?