**Ch 1 Practice of Science**

Types of investigations

* Descriptive investigation: tells about phenomena
* Comparative investigation: tells how organisms, events, features, objects, or conditions are the same and different
* Experimental investigation: uses a hypothesis to compare two variables

The Scientific Method:

Observation Ask Questions Hypothesis Investigation Conclusion

Look closely What do I already know? A statement about Plan the test and Is the hypothesis correct?

How do I explain? observations that can choose equipment

be tested? *Incorrect* correct

“the hypothesis “the hypothesis is

Is NOT supported supported by the

By the evidence” evidence”

Modify hypothesis

Variables are the parts of the investigation

* + Independent variable (the part the scientists changes on purpose or that changes on its own)
    - Brand of popcorn
    - the amount of water given to a plant
  + Dependent variable ( the part that changes because of the what the scientist does: independent variable)
    - Number of popcorn kernels that pop
    - How tall a plant grows

1. Does the outside air temperature affect plant growth?

Independent Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dependent Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Will a chicken lay more eggs if I feed it more?

Independent Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dependent Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Will my lemon tree grow more if I water it everyday?

Independent Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dependent Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Will the brussel sprouts cook faster if I raise the temperature of the oven?

Independent Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Dependent Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_