HYPOTHESIS and VARIABLES

Directions: Identify the manipulated (independent) variable and responding (dependent) variable for each hypothesis.

HINT: If (fill in manipulated/independent variable), then (fill in responding/dependent variable)

Example:

If dogs are fed treats, then they will bark less.
Manipulated/Independent variable: Treats fed to dogs.
Responding/Dependent variable: Less barking.

1. If plants are watered, then growth height will increase.

Manipulated/Independent variable: _____

Responding/Dependent variable: _____

2. If chocolate is given to teachers, then amount of homework will decrease.

Manipulated Independent variable: _____

Responding/Dependent variable: _____

3. If trees have leaves, then bird nests will increase.

Manipulated Independent variable: _____

Responding/Dependent variable: _____

4. If acid rain is in water, then fish population will increase.

Manipulated Independent variable: _____

Responding/Dependent variable: _____

5. If foods with calcium are eaten, then bone strength will increase.

Manipulated Independent variable: _____

Responding/Dependent variable: _____

Directions: Write a testable hypothesis in if…then…format for each of the following research problems. Identify the manipulated variable and the responding variable for each.

HINT: If (fill in manipulated/independent variable), then (fill in responding/dependent variable)

Example: What effect does someone high-fiving have on running speed?
If a person high-fives, then he/she will run faster.
Manipulated/Independent variable: High-fiving
Responding/Dependent variable: Running speed

6. What effect does high temperature have on radish germination?

_____

_____

Manipulated/Independent variable: _____

Responding/Dependent variable: _____

7. What effect does studying with music have on student test scores?

_____

_____

Manipulated/Independent variable: _____

Responding/Dependent variable: _____

8. What effect does food color have on the amount of food fish eat?

_____

_____

Manipulated/Independent variable: _____

Responding/Dependent variable: _____

9. What effect does light have on plant growth?

_____

_____

Manipulated/Independent variable: _____

Responding/Dependent variable: _____

10. What effect does smiling have on teacher giving no homework?

_____

_____

Manipulated/Independent variable: _____

Responding/Dependent variable: _____