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: High temperature
Responding/Dependent variable: Radish germination

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

Manipulated/Independent variable: Studying with music
Responding/Dependent variable: Student test scores

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

Manipulated/Independent variable: Food color
Responding/Dependent variable: Amount of food fish eat

9. What effect does light have on plant growth?
_______________________________________________________________________________________________
_______________________________________________________________________________________________

Manipulated/Independent variable: Light
Responding/Dependent variable: Plant growth

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

Manipulated/Independent variable: Smiling
Responding/Dependent variable: Teacher giving no homework