



Identifying Variables

Directions: Read the following situations and determine what affect or change, the variables would have on the situation.

- **Variables** are factors or conditions that affect the results of a situation or concept and are often tested in an experiment.
 - A manipulated **variable** is a change that can be controlled by the experimenter when doing an experiment or scientific investigation.
 - A responding **variable** is a condition that has changed as a result of a change in the manipulated variable.
1. What variables can affect the taste of pizza? Underline the responding variable in this statement.
 2. What variables can affect the sprouting of a bean seed? Underline the responding variable in this statement.
 3. What variables can affect the number of fish in a lake? Underline the responding variable in this statement.
 4. What variables can affect the speed of a runner in a 100-yard dash race? Underline the responding variable in this statement.
 5. What variables can affect the taste of a soft drink? Underline the responding variable in this statement.

Answer Key *Answers listed are the most-likely, but other answers may also be acceptable.*

1. **What variables can affect the taste of pizza?**

How it is cooked, ingredients

2. **What variables can affect the sprouting of a bean seed?**

Amount of nutrients in the soil, amount of light and water, space to grow

3. **What variables can affect the number of fish in a lake?**

Predator-prey relationship existing in the lake, pollutants, oxygen levels, space to live

4. **What variables can affect the speed of a runner in a 100-yard dash race?**

Surface of the track, runner's health and fitness, weather conditions, running shoes and apparel

5. **What variables can affect the taste of a soft drink?**

Carbonation level, amount of syrup or flavoring, container