

Work Along Notes: Independent & Dependent Variables, Writing a Hypothesis, Controls and Constants

This worksheet is NOT intended to be a substitute for your own notes: instead, it is meant to be filled out along side your notes!

Determining Independent and Dependent Variables

Example 1: What is the effect of a lack of sleep on weight gain by an individual?

Two factors involved:

1.

2.

Arrange the factors into two different questions:

1.

2.

Independent variable:

Dependent variable:

Example 2: What effect does being raised on a fish farm have on a salmon's length?

Two factors involved:

1.

2.

Arrange the factors into two different questions:

1.

2.

Independent variable:

Dependent variable:

Example 3: Do tomato plants raised with music grow more tomatoes?

Two factors involved:

1.

2.

Independent variable:

Dependent variable:

Example 4: Do people that use cell phones while driving have more accidents?

Two factors involved:

1.

2.

Independent variable:

Dependent variable:

Writing a Hypothesis

Example 1: What effect does salt have on the boiling point of water?

Independent variable:

Dependent variable:

Hypothesis:

If

then

because

Example 2: What is the effect of wing size on the falling speed of a rotocopter?

Independent variable:

Dependent variable:

Hypothesis:

If

then

because

Determining the control group

Example 1: Does eating chocolate cause pimples?

Independent Variable:

Dependent Variable:

Control Group:

Conditions to keep constant:

Example 2: Is bacterial growth related to temperature?

Independent Variable:

Dependent Variable:

Control Group:

Conditions to keep constant:

Example 3: Does salt in the soil affect plant growth?

Independent Variable:

Dependent Variable:

Control Group:

Conditions to keep constant: