## Scientific Principle # 6

What do plants need to grow?

# Scientific Principle #'s 7 and 8

What is photosynthesis?

# Scientific Principle #9

What is cell respiration?

What chemical reaction (Ps or Rs or both) does your organism do?

### Matter:

In what form does carbon enter your organism (carbon dioxide, food--C6H12O6)?

In what form do carbon atoms leave the organism?

### **Energy:**

What forms of energy (CE in food, LE) can your organism use?

What forms of energy (CE, TE, KE) does your organism release?

## Algae

Use a blue color to show carbon entering and leaving, use an orange color to show what forms of energy your organism uses (CE, LE) and what forms it releases (CE, TE, KE, ATP).



What chemical reaction (Ps or Rs or both) does your organism do?

### Matter:

In what form does carbon enter your organism (carbon dioxide, food--C6H12O6)?

In what form do carbon atoms leave the organism?

### **Energy:**

What forms of energy (CE in food, LE) can your organism use?

What forms of energy (CE, TE, KE) does your organism release?

### Mouse

Use a blue color to show carbon entering and leaving, use an orange color to show what forms of energy your organisms uses (CE, LE) and what forms it releases (CE, TE, KE, ATP).



What chemical reaction (Ps or Rs or both) does your organism do?

#### Matter:

In what form does carbon enter your organism (carbon dioxide, food--C6H12O6)?

In what form do carbon atoms leave the organism?

### **Energy:**

What forms of energy (CE in food, LE) can your organism use?

What forms of energy (CE, TE, KE) does your organism release?

### **Foxes**

Use a blue color to show carbon entering and leaving, use an orange color to show what forms of energy your organisms uses (CE, LE) and what forms it releases (CE, TE, KE, ATP).



What chemical reaction (Ps or Rs or both) does your organism do?

#### Matter:

In what form does carbon enter your organism (carbon dioxide, food--C6H12O6)?

In what form do carbon atoms leave the organism?

### **Energy:**

What forms of energy (CE in food, LE) can your organism use?

What forms of energy (CE, TE, KE) does your organism release?

## Dandelions/Plants

Use a blue color to show carbon entering and leaving, use an orange different color to show what forms of energy your organisms uses (CE, LE) and what forms it releases (CE, TE, KE, ATP).



What chemical reaction (Ps or Rs or both) does your organism do?

#### Matter:

In what form does carbon enter your organism (carbon dioxide, food--C6H12O6)?

In what form do carbon atoms leave the organism?

### **Energy:**

What forms of energy (CE in food, LE) can your organism use?

What forms of energy (CE, TE, KE) does your organism release?

## **Aquatic Insects**

Use a blue color to show carbon entering and leaving, use an orange different color to show what forms of energy (CE, LE) your organisms uses and what forms it releases (CE, TE, KE, ATP).



# Carbon Cycling—Blue Color

Algae



**Aquatic Insects** 



Mice



Dandelion/land plants



Fox

# Energy Flow—Orange Color

Algae



**Aquatic Insects** 



Mice



Dandelion/land plants



Fox

## Model Carbon Cycling Energy Flow

How does this graphic show the difference between cycling of carbon and flow of energy?

