

Wednesday/Thursday

8/15-8/16

****Turn in your signed syllabus to the black tray****

Answer the following prompt with 3-4 sentences:

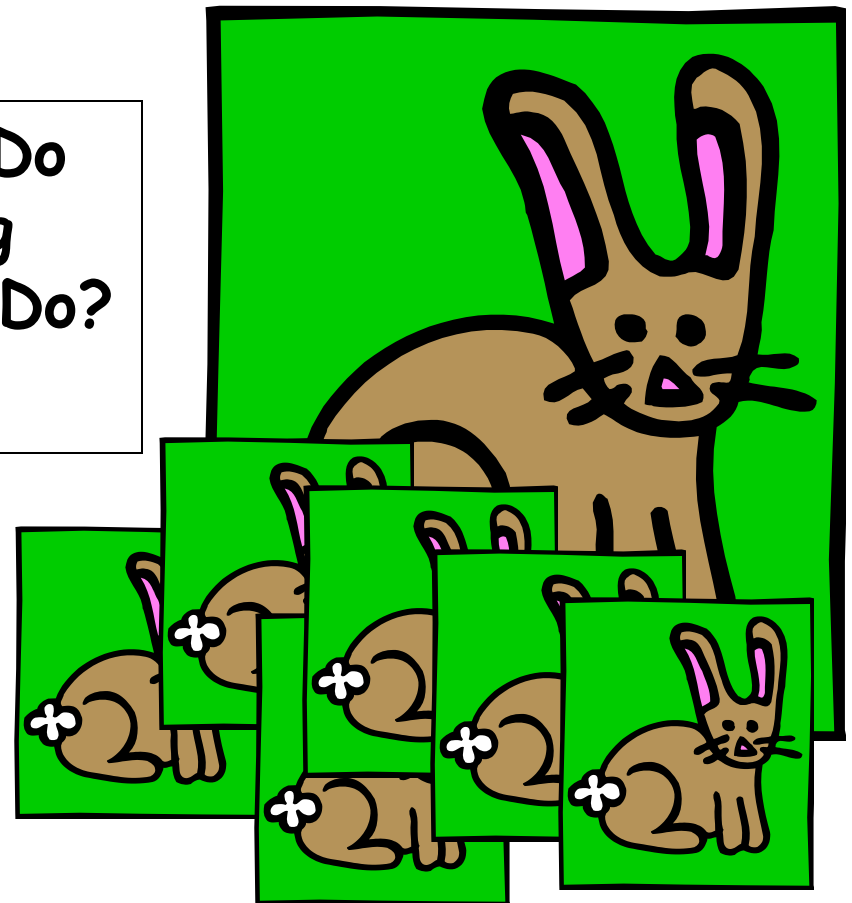
Imagine you are walking through a forest and you find a strange object. You consider that it may be some type of living organism. What signs would you look for to determine if it were living?

Characteristics of Living Things

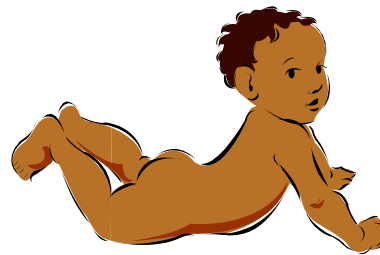
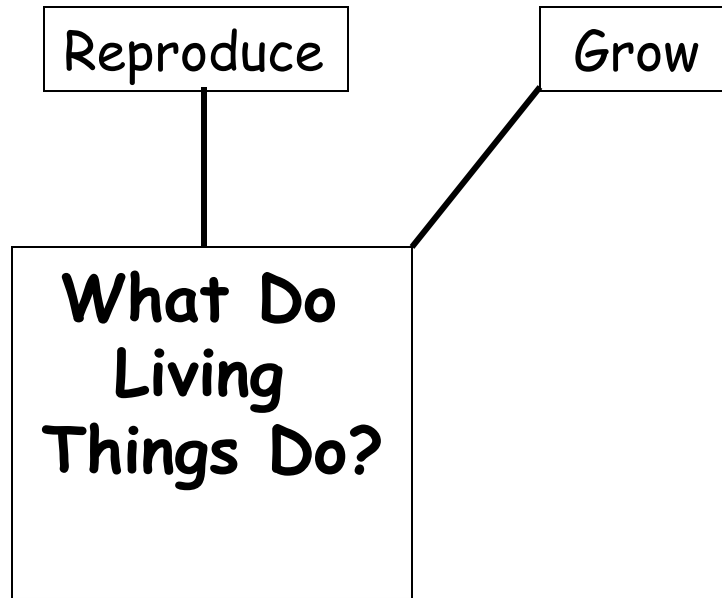
Characteristics of Living Things

Reproduce

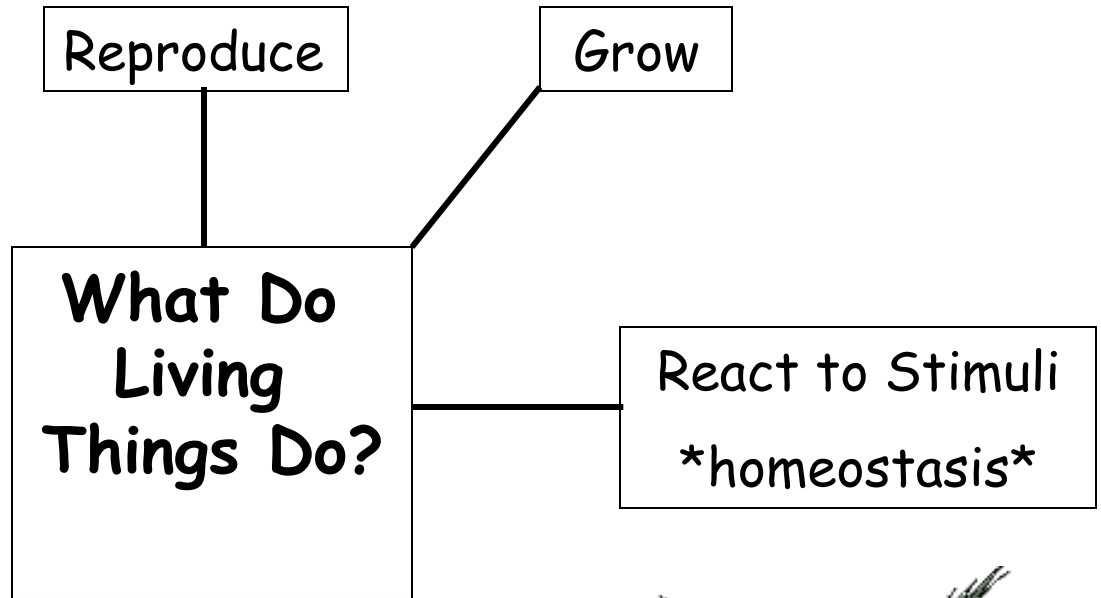
What Do
Living
Things Do?



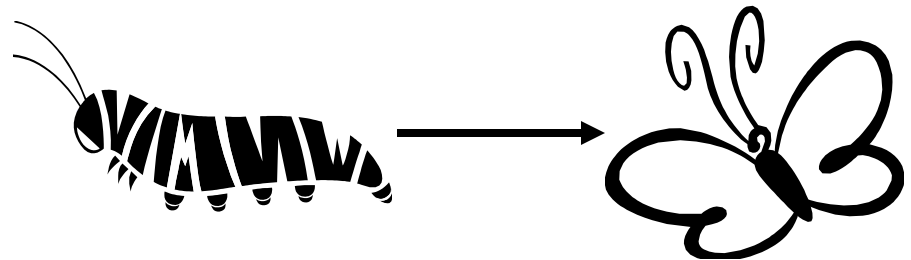
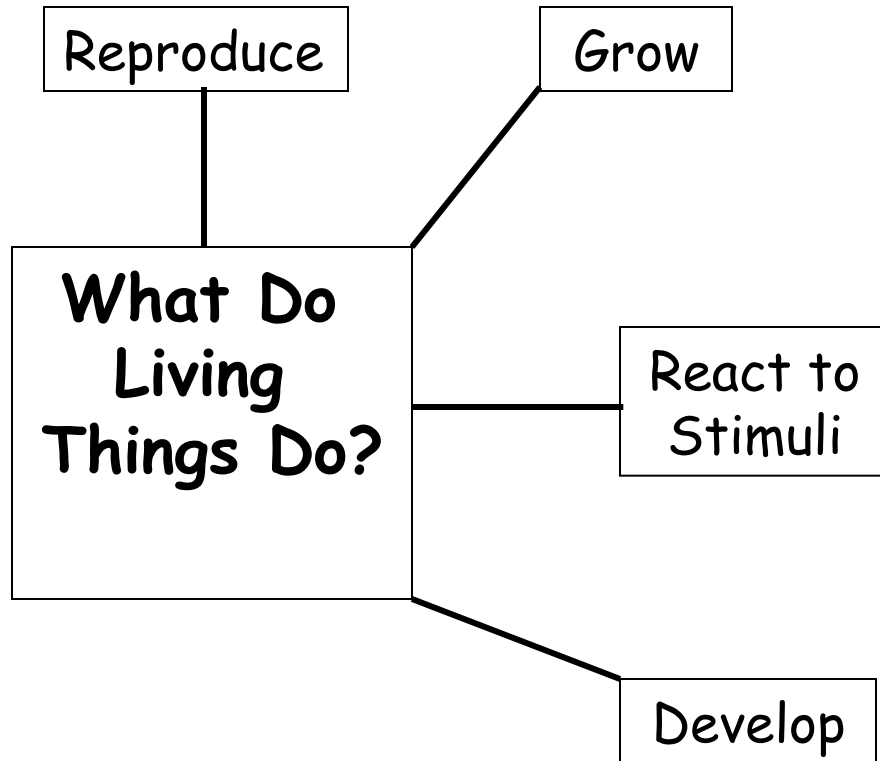
Characteristics of Living Things



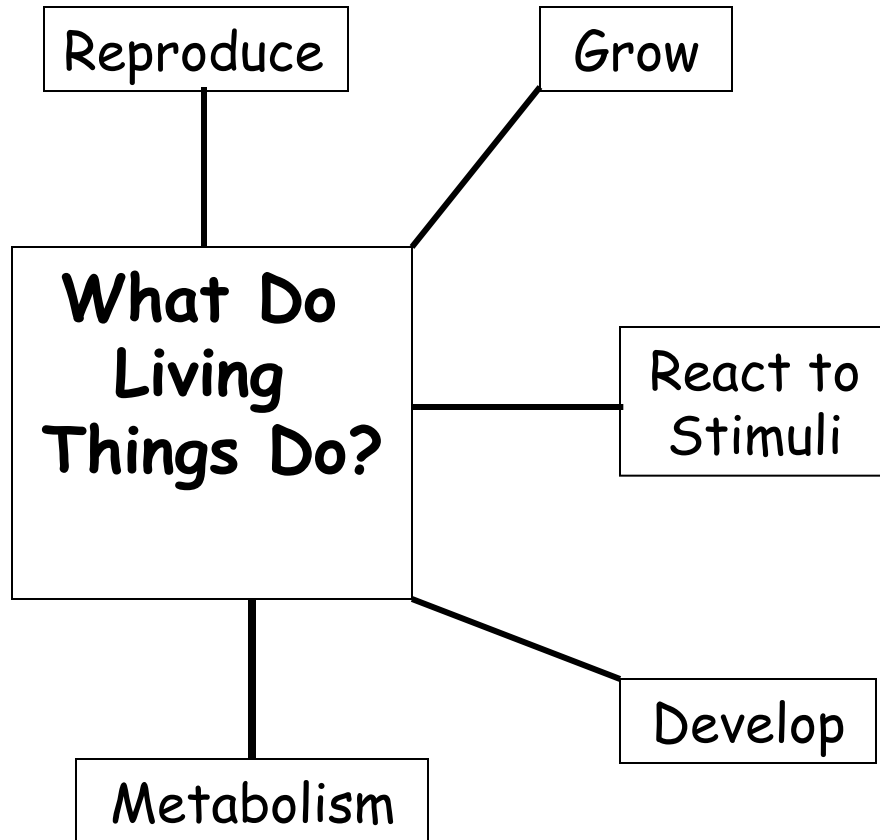
Characteristics of Living Things



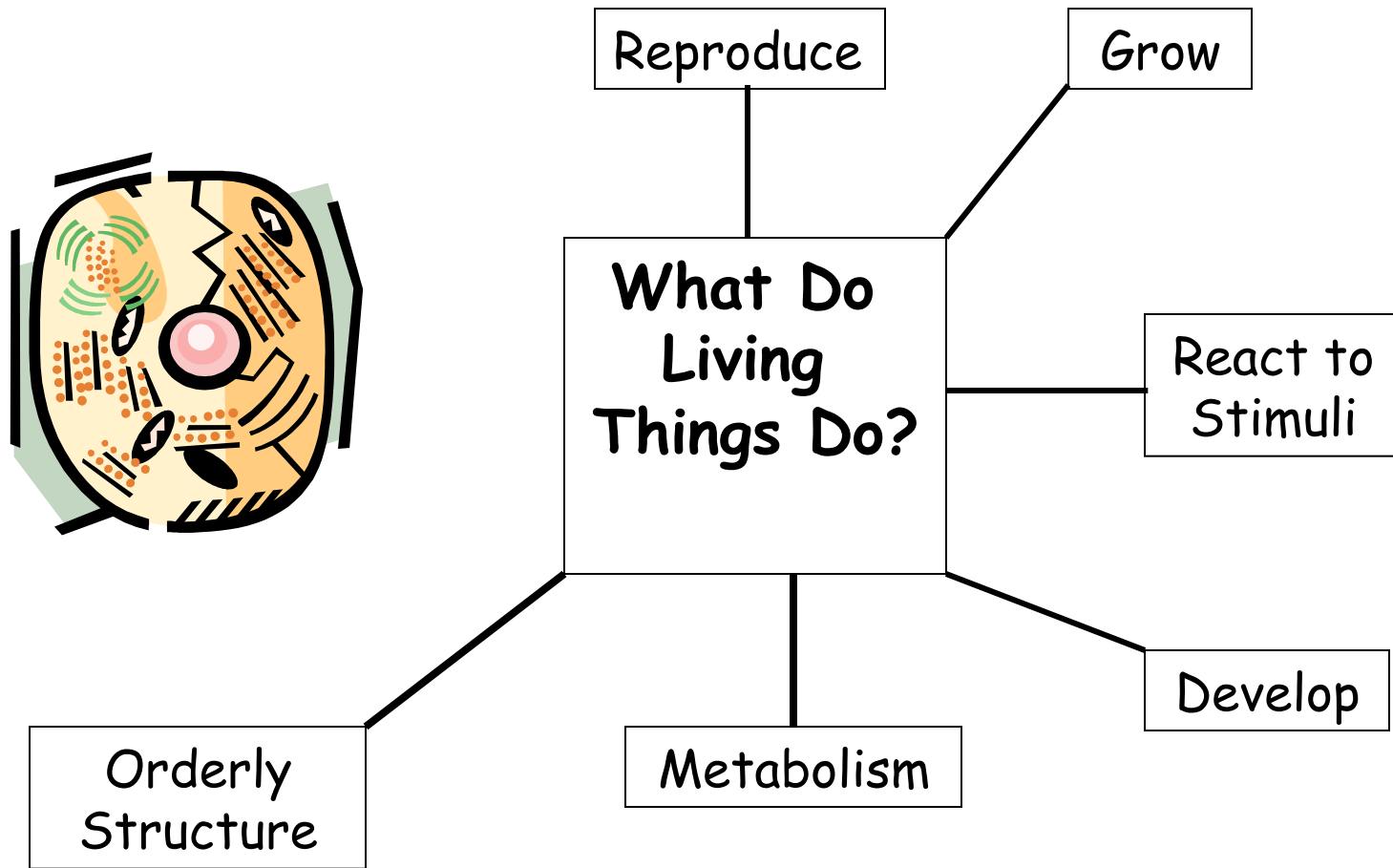
Characteristics of Living Things

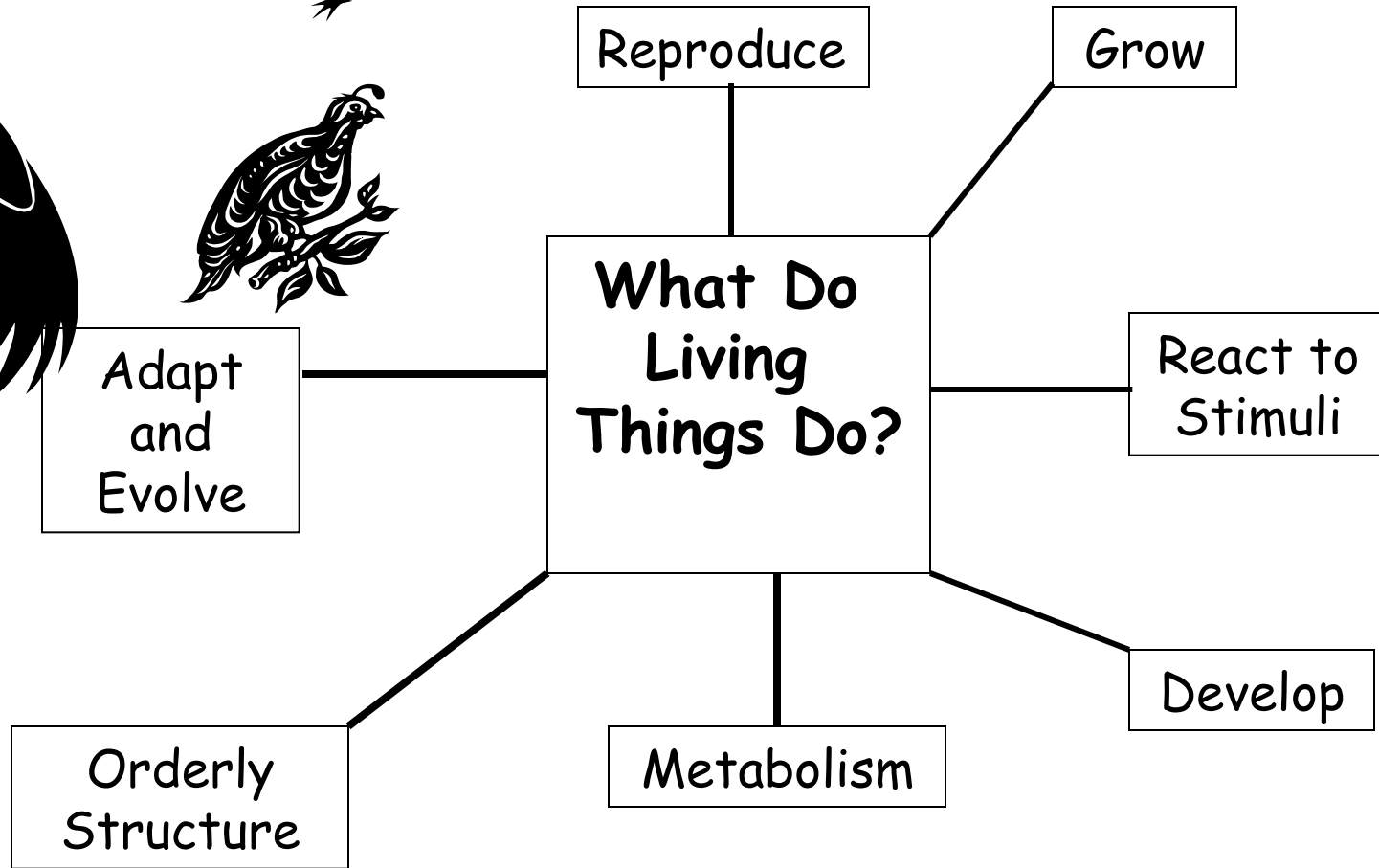
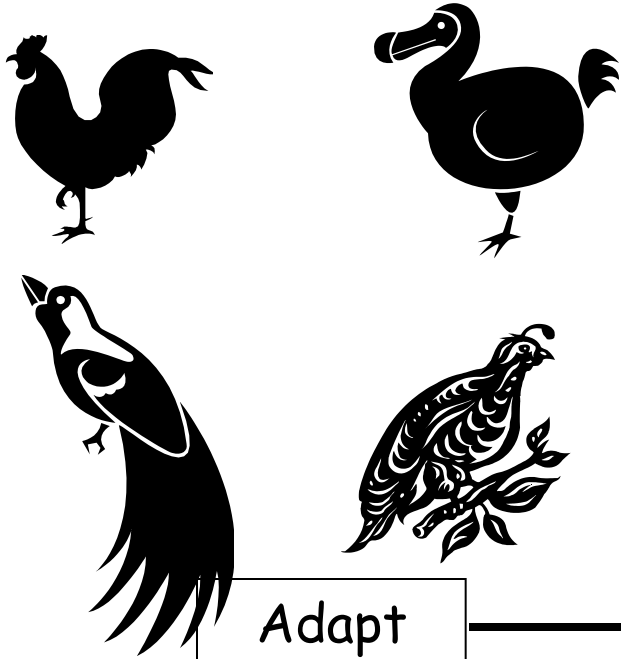


Characteristics of Living Things



Characteristics of Living Things





Agenda

- Warm Up
- Sign up for Google Classroom and Quick Quiz
- Chapter 1 Quizlet Live
- Notes: 1.2- The Methods of Biology
- Scientific Method Task Cards

Homework: Read 1.1- 1.2 in textbook, answer #1-5 on pg 18 (1.2 Section Assessment)

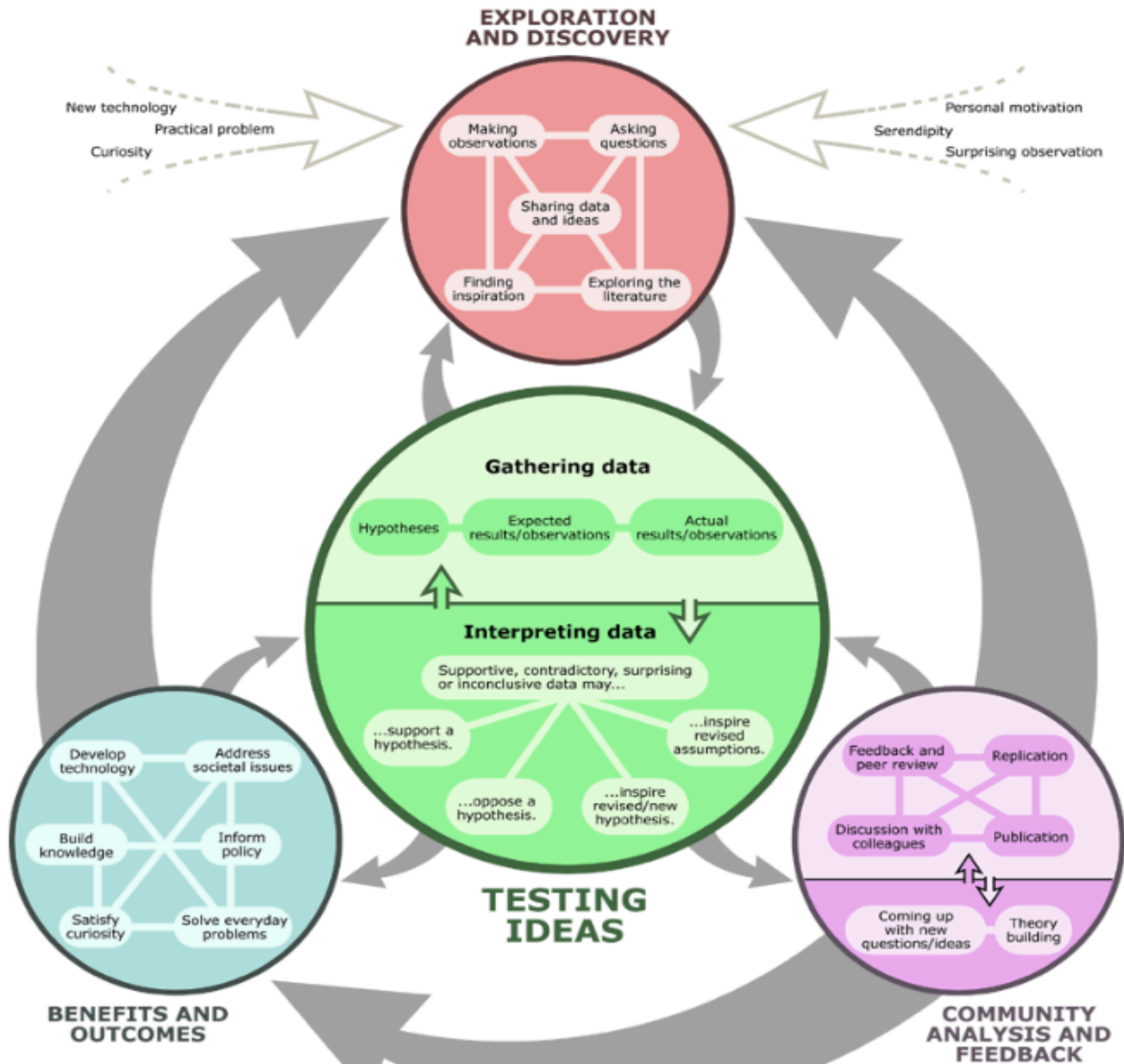
Let's see how well you know the
vocabulary!

<https://quizlet.com/306700171/chapter-1-biology-the-study-of-life-flash-cards/>

1.2: The Methods of Biology

Look Familiar?

State the problem
Gather information
Hypothesis
Experiment
Analysis



Observation

Observation: when studying something describe only facts that you can see, touch, smell and hear. You are not making any guesses.

**THIS IS NOT AN
OPINION!!**



Ohh... This liquid is **green** and it is leaking from a **brown** can. I also smell it.



Inference

Inference: using your observations to make a **guess** about an object or an outcome

**THIS CAN BE A
SCIENTIFIC OPINION**



Based on my **observations**, I **think** that this can is **old** and is leaking a **toxic** substance.

Inference vs. Hypothesis

- An **inference** is a logical interpretation based on prior knowledge or experience.
- A **hypothesis** is a possible explanation for a set of observations or an answer to a scientific question.

Observation & Inference

Statement	Observation	Inference
Object A is round and orange.	★	
Object A is a basketball.		★
Object C is round and black and white.	★	
Object C is larger than Object B.	★	
Object B is smooth.	★	
Object B is a table-tennis ball.		★
Each object is used in a different sport.	★	★

- Infer: What is Object C?
A soccer ball.

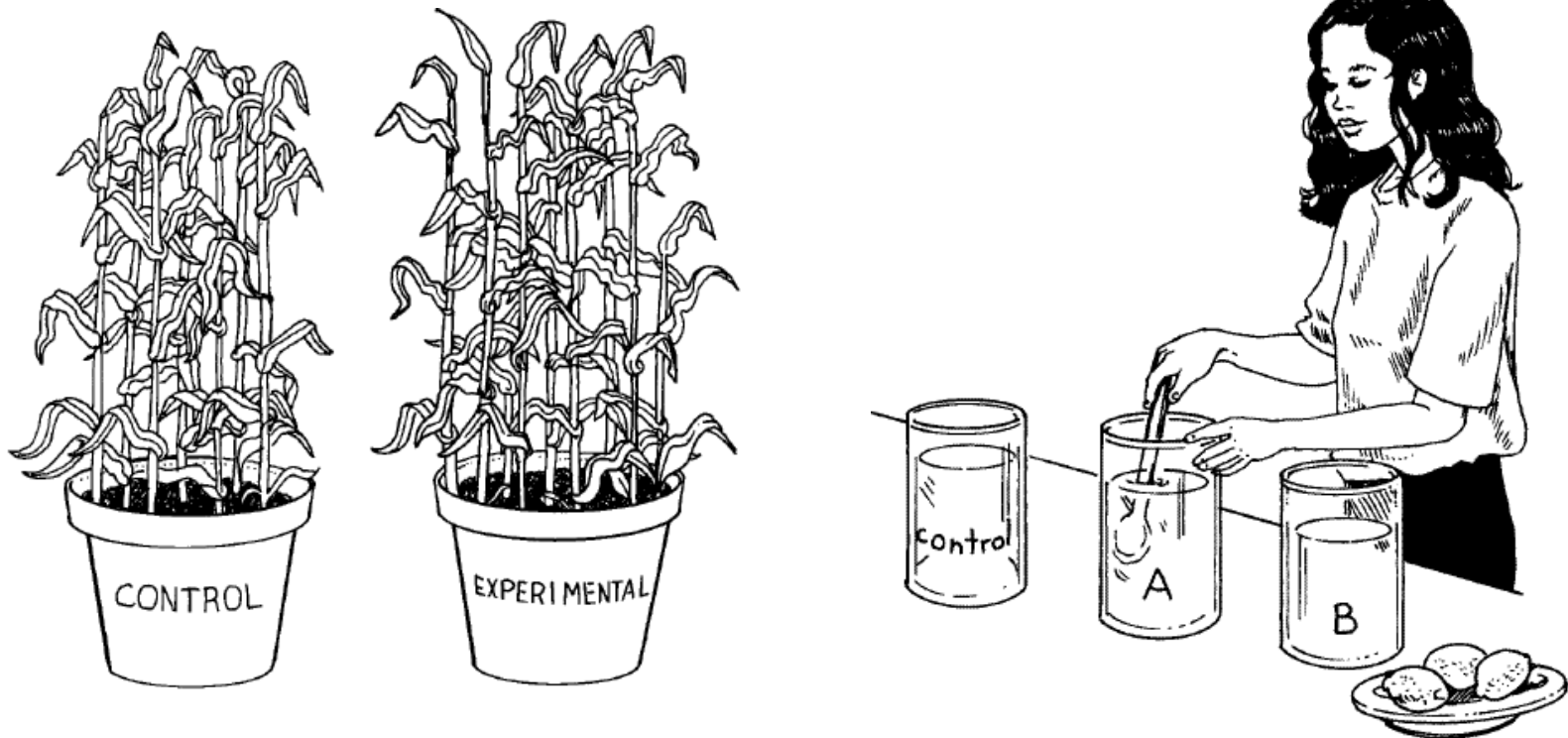
Observation

Types of Observations:

- **Quantitative** observations involve numbers by counting or measuring objects
 - *Ex:* There are 24 cars parked in the lot outside
- **Qualitative** observations involve characteristics that cannot easily be measured or counted
 - *Ex:* Mr. Eddy put a red bumper sticker on his car

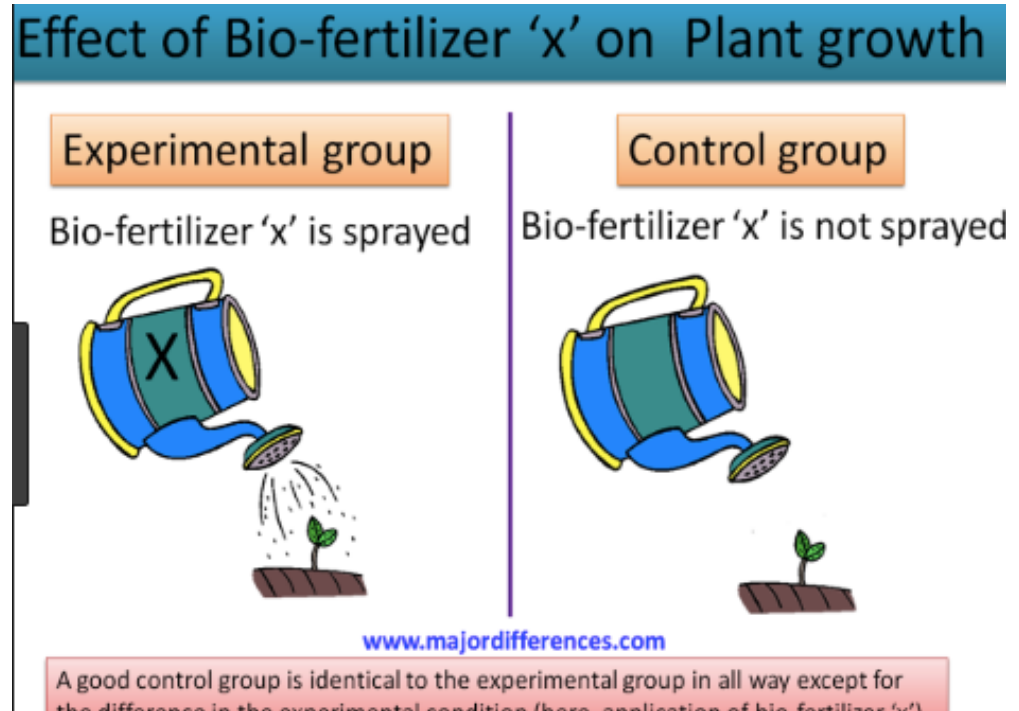
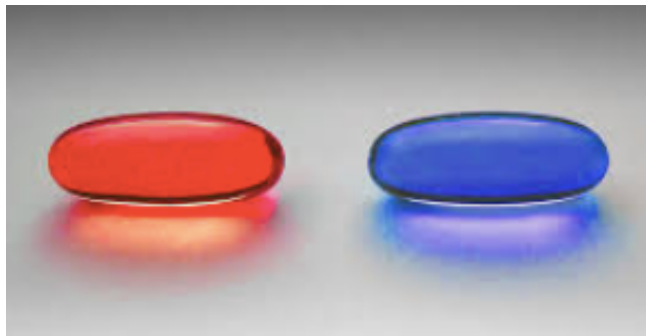
Controlled Experiment

In an experiment, only one variable is changed at a time. All other variables should be kept unchanged, or *controlled*.



Control Group

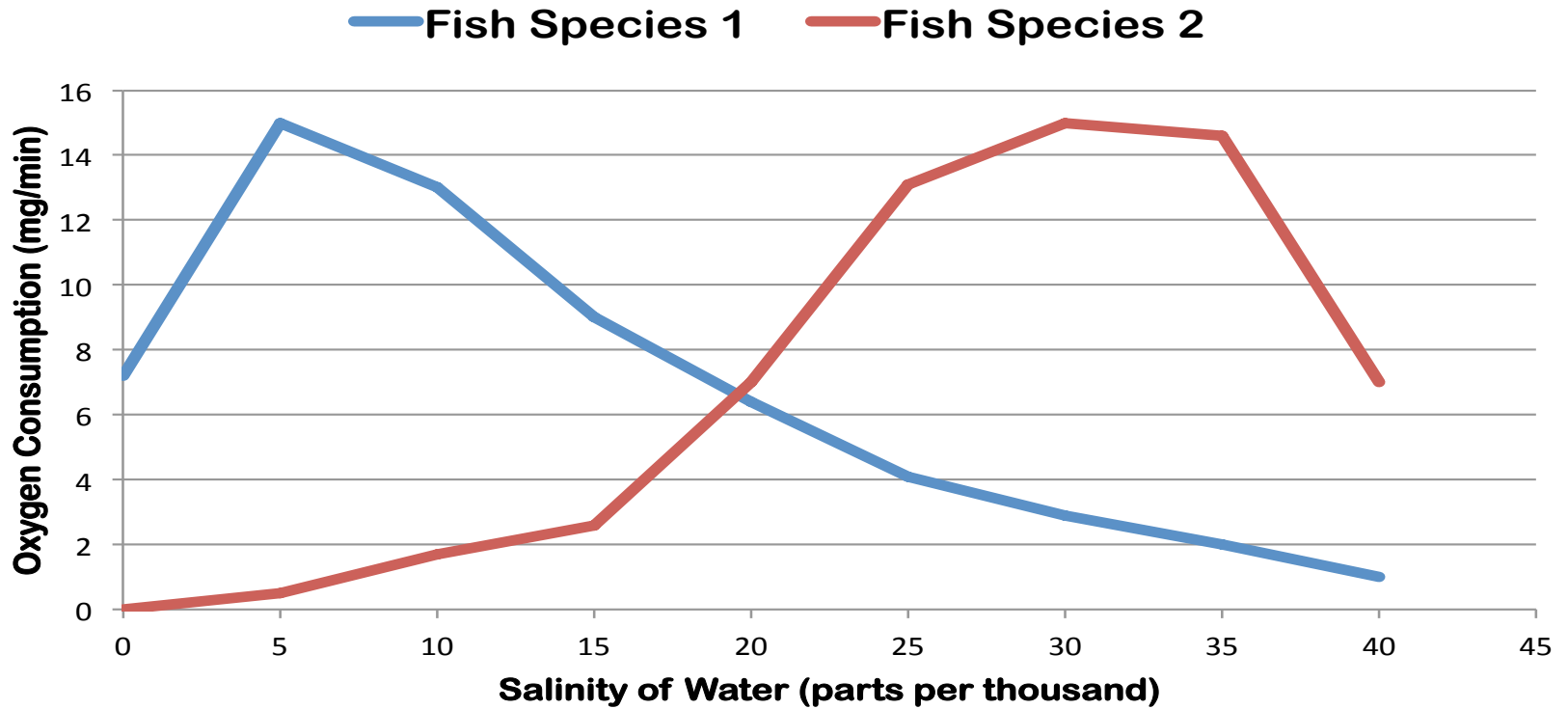
- Receives no experimental treatment
- Used to *compare* with the experimental group



Vocabulary

- **Theory:**
a well-tested explanation that unifies a broad range of observations. A theory is essentially a well supported hypothesis.
- **Law:**
statement of observed phenomena
- **Independent Variable:**
the variable that is changed (what is tested)
- **Dependent Variable:**
the variable that responds to the manipulated variable (the outcome measured)

Oxygen Consumption of Fish at Different Salinity Levels



video clip