**DO NOW:**

1. What is the feedback mechanism in plants that we talked about?
2. What is the function of the circulatory system?
3. Why are organelles important to cells?
4. Write the equation for photosynthesis:
5. Write the equation for cellular respiration:
6. Why must we “digest” food? (Think about permeability)

**Pulse:**

* A pulse can be measured at the neck or wrist
* Pulse rate indicates how fast the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* We took our pulse at rest.
* After exercise, we recorded our pulse again.
* Pulse rate **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**after exercise
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, or how fast we breathe, also increased after exercise.

**Cellular Respiration and ATP:**

* During exercise, cells need to use a lot of **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.
* In order to maintain **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**, our body must do more cellular respiration to make more ATP.
* ATP requires **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* Our heart beats faster to **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** to the cells with oxygen and glucose.
* We breathe faster to get more **\_\_\_\_\_\_\_** and to get rid of the carbon dioxide **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**.
* The respiratory and circulatory system work together to **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** during exercise.

**Feedback Mechanism:**

* The increase of pulse rate and breathing rate is an example of a **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
* Feedback mechanisms- one change that leads to another change in order to maintain homeostasis.
* **CHANGE**- **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **RESPONSE**- **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* **CHANGE**- ATP levels back to “normal”
* **RESPONSE**- Breathe normal, pulse rate decreases

**The Clothespin:**

* How does **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**affect performance?
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_:**
  + Squeeze clothespin for 1 minute and count
  + Squeeze clothespin again for another minute and count.

*Did you squeeze the pin more the first or second time?*

**Explaining the Results:**

**“\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”-** If you warm up and get the blood flowing, then you will be able squeeze more times.

**“\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_”-** If you “waste” any energy you’ll be tired, and then squeeze the clothes pin less.

**Making Connections- *Designing an Experiment*:**

**QUESTION**: If we exercise first, can we squeeze the clothespin more times?

HYPOTHESIS:

**1**NPENDENT VARIABLE:

**D**EPENDENT VARIABLE:

EXPER**1**MENTAL GROUP:

CONTROL GROUP:

DATA TO BE COLLECTED:

RESULTS TO SUPPORT THE CLAIM:

* **What variables should be kept the same between both groups?**
* **Why should the sample size be large?**
* THE RESULTS WILL BE MORE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* MORE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* RESULTS ARE MORE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**PRACTICE:**

A scientist would like to know how fertilizer affects the growth of a sunflower. Design an experiment.

Hypothesis:

1ndependent variable:

Dependent variable:

Exper1mental group:

Control group:

Data to be collected:

Results to support your claim:

Variable to be kept the same:

How many sunflowers will you use?