

Topic: Homeostasis Worksheet

Summary: Students will answer questions on positive and negative feedback loops.

Goals & Objectives: Students will be able to differentiate between positive and negative feedback loops. Students will be able to describe how feedback mechanisms help to maintain homeostasis.

Standards: CA Biology 9c. *Students know* how feedback loops in the nervous and endocrine systems regulate conditions in the body. 9i. *Students know* how hormones (including digestive, reproductive, osmoregulatory) provide internal feedback mechanisms for homeostasis at the cellular level and in whole organisms.

Time Length: 30 minutes

Prerequisite Knowledge: Students have been introduced to the concept of feedback mechanisms and homeostasis.

Materials:

- Photocopied handouts
- Biology textbook

Accommodations: Students with an IEP can take the handout home if they need extra time, work with a partner, and/or answer the odd questions.

Evaluation:

Questions 1-6 are worth 2 points each for a total of 12 points. Questions 7-12 are worth 1 point each for a total of 6 points. The assignment is worth a total of 18 points.

Homeostasis Worksheet

1. Define homeostasis in your own words. _____

2. Explain in your own words about negative feedback mechanisms. _____

3. Explain in your own words about negative feedback mechanisms. _____

4. Would you use a positive or negative feedback mechanism for clotting blood when you get a cut your skin or blood vessel? Describe why. _____

5. Would you use a positive or negative feedback mechanism for regulating body temperature? Describe why. _____

6. Does a positive or negative feedback mechanism cause the body to have a fever? Describe why. _____

Identify questions 7-12 as an example of Positive or Negative feedback.

7. _____ feedback tries to maintain homeostasis.

8. _____ feedback continues to disrupt homeostasis.

9. _____ feedback inhibits hormones.

10. _____ feedback continues to strengthen the stimulus.

11. _____ feedback is used when the hormone oxytocin is released to intensify the contractions that take place during childbirth.

12. _____ feedback is used when the kidneys remove H⁺ ion from the blood when the pH of the blood becomes too acidic.