

Student Instructions

Living Earth: Week 3 Assignment → 4/20 – 4/24

Big Ideas We'll Be Discussing: Homeostasis and Feedback

- Remember that the human body is made up of trillions of cells that all work together for the maintenance of the entire organism. While cells, tissues, and organs may perform very different functions, all the cells in the body are similar in their metabolic needs. Maintaining a constant internal environment by providing the cells with what they need to survive (oxygen, nutrients, and removal of waste) is necessary for the well-being of both individual cells and the entire body. The many processes by which the body controls its internal environment are collectively called **homeostasis**. The function of major body systems is what keeps homeostasis.
- Homeostasis is an important characteristic of all living things. Keeping a stable internal environment requires constant adjustments as conditions change inside and outside the cell. The adjusting of systems is done by **feedback loops**. Because the internal and external environments of a cell are constantly changing, adjustments must be made continuously to stay at or near the set point (the normal level or range).
- Feedback occurs when the response to a stimulus has some kind of effect on the original stimulus. The type of response determines what the feedback is called. **Negative feedback** occurs when the response to a stimulus reduces the original stimulus. **Positive feedback** occurs when the response to a stimulus increases the original stimulus.

Assignments:

1) Please log into the HMH app via Clever in order to do the Textbook Assignment

Unit 7: Lesson 3 – Mechanisms of Homeostasis

- Explore/Explain 1: Control Systems in Organisms
 - Please take notes → these should help you answer questions correctly on the Week 3 Control Systems Quiz
 - Answer the EXPLAIN and INFER questions only
 - Skip the Model, Hands on Activity (Modeling Feedback), Evidence Notebook
- 2) After completing the reading, take the **LE Week 3 Control Systems Reading Quiz**
<https://forms.office.com/Pages/ResponsePage.aspx?id=bsSeXYwVI0uXor1txqc9IkzD7ovUBylluEOjUbcsSiJUNjIwUE9IUeISVjBBSjJVQVgyTjVFS0w2Ry4u>
- 3) Watch **Amoeba Sisters Video** on YouTube “Homeostasis and Negative/Positive Feedback” [6:24]
 - <https://www.youtube.com/watch?v=Iz0Q9nTZCw4>
 - You may want to take some basic notes to help you remember important details from this video on the Video Quiz
- 4) Watch the **GCSE Biology Video** on YouTube titled “Control of Blood Glucose Concentration” [4:33]
 - <https://www.youtube.com/watch?v=OHRX3X3LGzI&t=110s>
 - You may want to take some basic notes to help you remember important details from this video on the Video Quiz
- 5) After watching both videos, take the **LE Week 3 Video Quiz**.
<https://forms.office.com/Pages/ResponsePage.aspx?id=bsSeXYwVI0uXor1txqc9IkzD7ovUBylluEOjUbcsSiJURVRSWDIQMedPNUiZrZQOV082TTdETkZHUC4u>
- 6) Complete the **LE Week 3 Control Systems and Diabetes Assignment**.
<https://forms.office.com/Pages/ResponsePage.aspx?id=bsSeXYwVI0uXor1txqc9IkzD7ovUBylluEOjUbcsSiJUOTZNWUxNMDNIU1pLUFNDM0pXRVVJR1BCWS4u>