

Homeostasis Millionaire

Materials

- Homeostasis Millionaire Game Cards reproducible
- reference materials about homeostasis and body regulation
- index cards

Objective

Students will explore different ways the body self-regulates in order to maintain homeostasis.

Homeostasis is the process of keeping a system in balance. The human body self-regulates in order to maintain constant internal conditions regardless of external conditions. In this game, students answer a series of challenging questions about homeostasis in an effort to win increasing amounts of money.

1. Ask students if they have ever seen the game show *Who Wants to Be a Millionaire*®? Invite them to share what they know about the game. Then tell them that they will be participating in a scientific game played similarly to *Who Wants to Be a Millionaire*® (a registered trademark of Celador International Limited Corporation).
2. Use the sample cards from the **Homeostasis Millionaire Game Cards reproducible (page 62)** to explain and demonstrate how to play the game. Invite several volunteers to act as game show hosts, reading aloud the questions for other students to answer.
 - a. Players answer multiple-choice questions at increasing levels of difficulty in order to win larger amounts of money, starting at \$100 and moving up to \$1,000,000. They must decide after each question whether to keep what they have already earned or to risk losing it by answering the next question for more money.
 - b. Players have access to three “lifesavers,” which allow them to get help from different sources. They may use each lifesaver only once. The three lifesavers are:
 - **50/50:** Two wrong answers are eliminated, leaving only two possible answers.
 - **Poll the Class:** Players read aloud each answer, and classmates silently indicate by a show of hands which answer they think is correct.
 - **Ask a Scientist:** Players choose one classmate to help answer the question.
 - c. There are two “safe levels” of \$2,000 and \$64,000. If players reach those levels without making a mistake, they win at least that amount of money. If they answer a subsequent question incorrectly, they drop back down in earnings to that safe money amount. If players answer a question incorrectly before the \$2,000 level, they win no money.

Homeostasis Millionaire Game Cards



	<p>The maintenance of an organism's internal environment is called:</p> <ul style="list-style-type: none">a. compensatingb. homeostasisc. balancingd. routine	
		
	<p>The coordination of activities in an organism that maintain homeostasis in a constantly changing environment is called:</p> <ul style="list-style-type: none">a. regulationb. digestionc. synthesisd. respiration	
		
	<p>Our bodies try to maintain a constant temperature of about:</p> <ul style="list-style-type: none">a. 100 °Fb. 98.6 °Fc. 75 °Fd. 20 °F	
		
	<p>If the environment gets cold, we will often shiver in order to:</p> <ul style="list-style-type: none">a. keep body temperature the same as the external temperatureb. decrease body temperaturec. increase body temperatured. regulate blood pressure	
		
	<p>Homeostasis in the human body is often maintained by a:</p> <ul style="list-style-type: none">a. neutral feedback loopb. solar feedback loopc. positive feedback loopd. negative feedback loop	
		