# Homeostasis

# Warm-Up

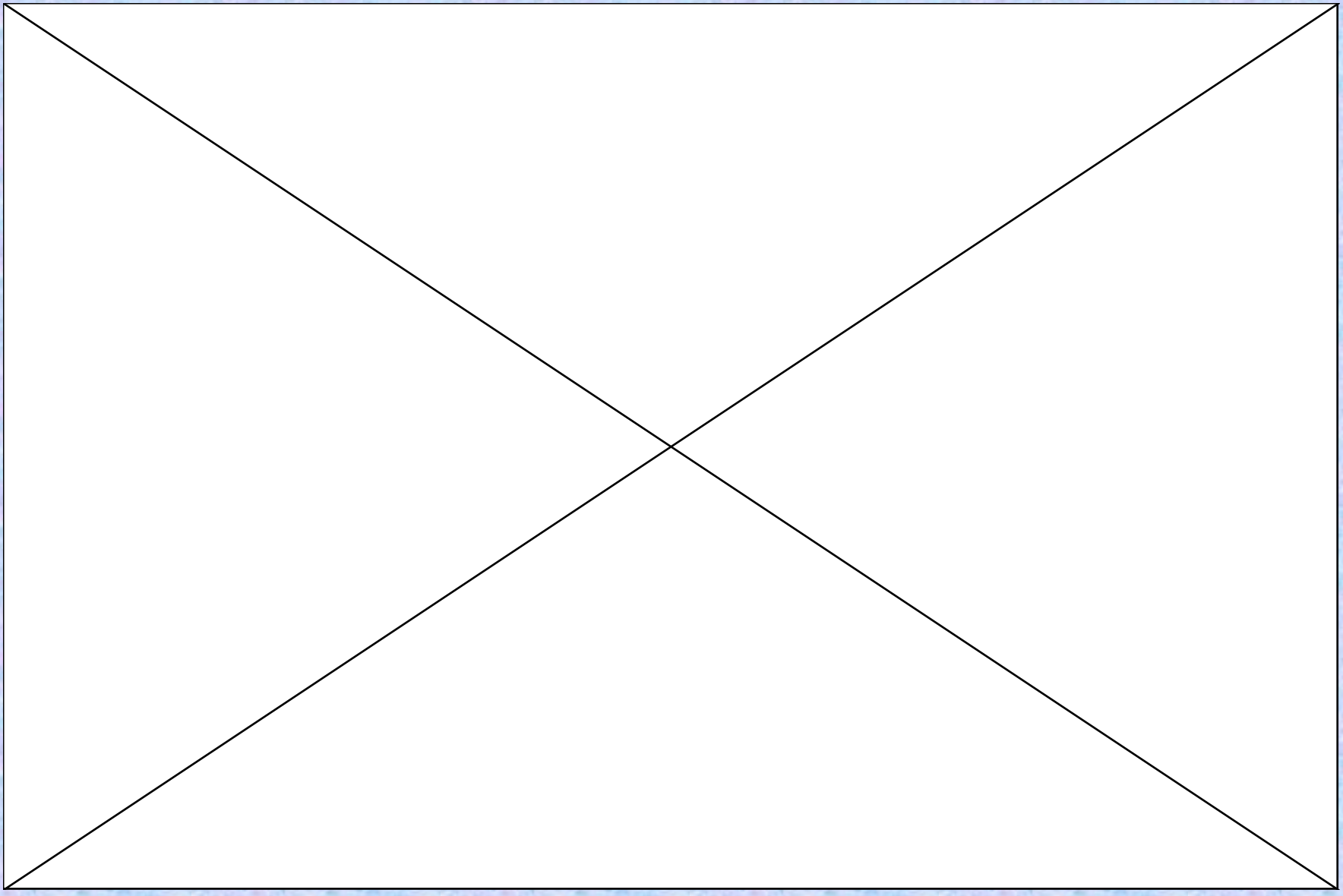
1. Describe homeostasis
(give a definition in your own words).

2. List as many examples of homeostasis in the body as you can.
(Have out your notes & list at least 5).

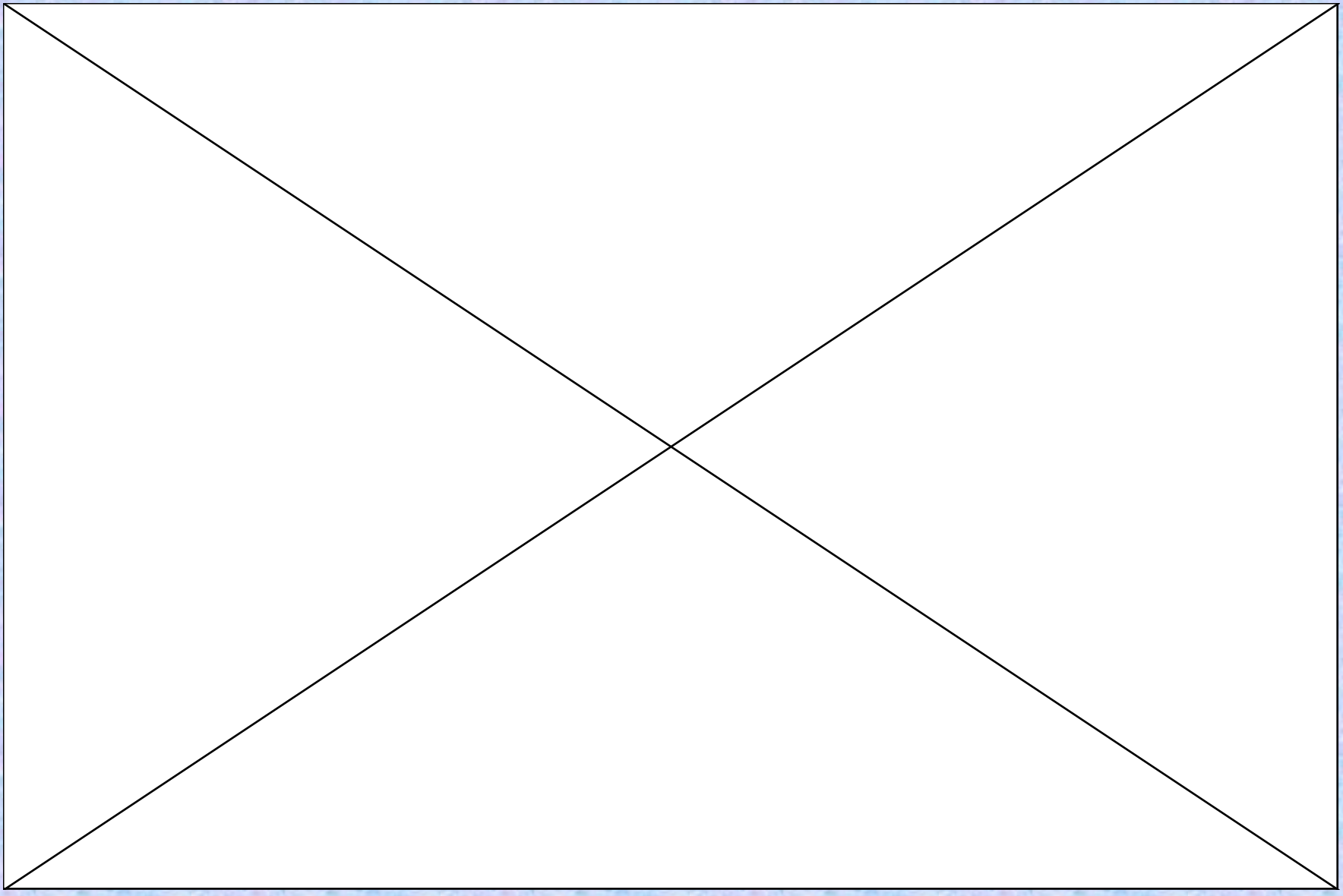
3. List the 6 needs of living things

4. List the 4 characteristics of living things

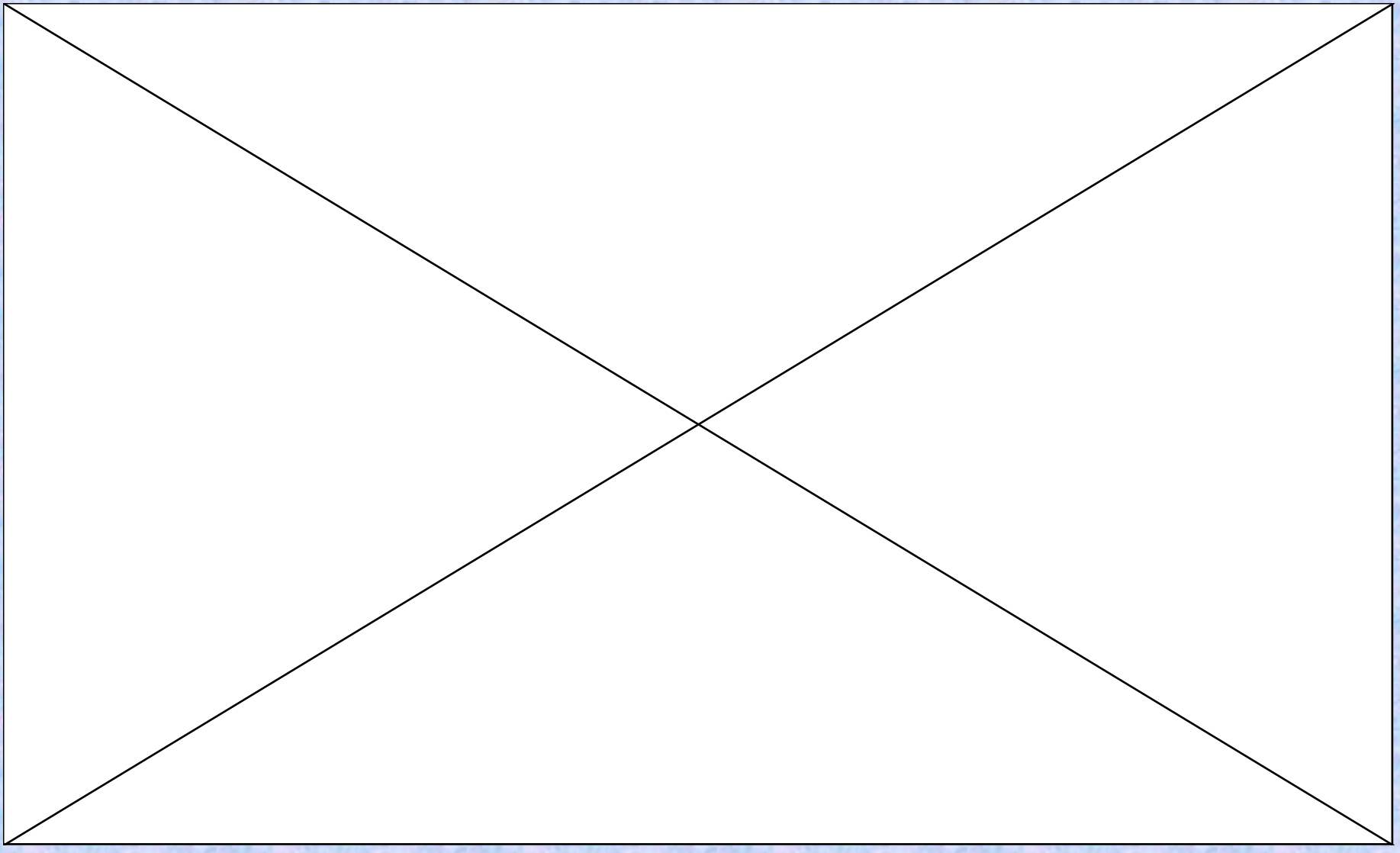
# HOMEOSTASIS (4:07)



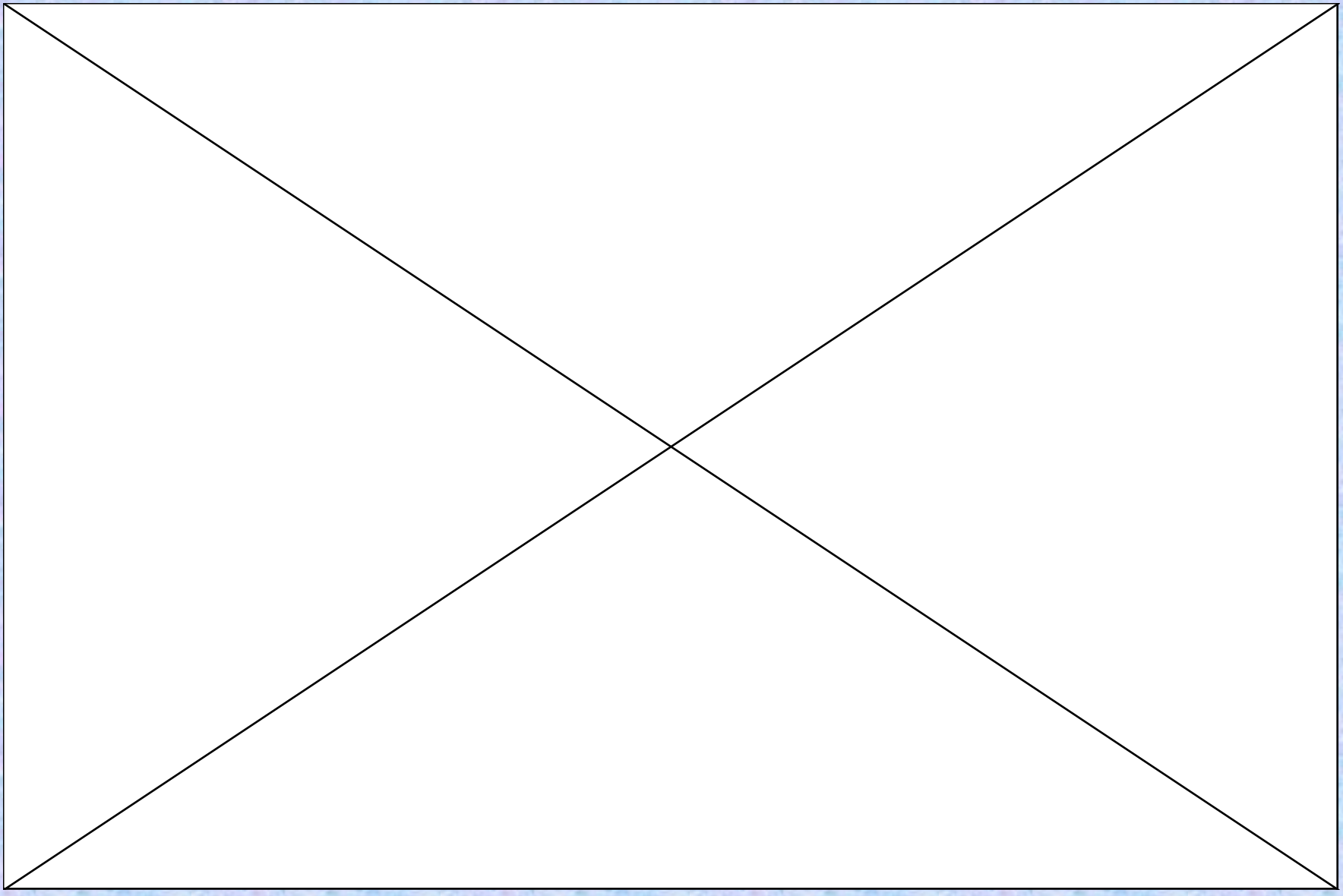
# HOMEOSTASIS.AVI (3:04)



# LIDO HOMEOSTASIS (4:58)



# HOW COLD IS TOO COLD? (2:26)



# HOMEOSTASIS

**DESCRIPTION: the body's attempt to maintain a constant internal environment.**

- **Maintaining a stable internal environment requires constant monitoring and adjustments as conditions change.**

- **Homeostasis is attempting to keep everything in the body stable, balanced, and in a state of equilibrium.**

# Examples of homeostasis in the body

- shivering
- goosebumps
- sweating
- thirsty
- hungry
- running a fever when sick

**Here are some metaphors for homeostasis:**

**Temperature Regulation in the Home (Thermostat)**


**Balancing a scale**

**Cruise control in the car:**


**Leveler:**

**Conditions that homeostasis tries to keep constant:**

- Temperature control
- Amount of water in the body
- Amount of glucose (sugar) in the blood stream
- Amount of waste in the body
- Levels of oxygen
- Levels of $CO_2$
- Size of pupil (light regulation)
- Blood pressure (blood flow)
- Hormone levels
- Levels of vitamins & minerals in the blood

# Mr. Packard's Definition

Homeostasis:  the body's attempt to keep the conditions inside the body the same (unchanging)

# Examples of homeostasis:

- Temperature control
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Choose a picture from the notes, or this slide, that best represents homeostasis to you.

# Homeostasis Scenario

- What is the body's response in this situation?
  - –You go to the movies on Friday night & decide to eat a large bag of popcorn. On the popcorn, you put extra salt & butter.

# Body's response

You will be thirsty because your body is pulling water from all parts of the body to counteract the large amount of salt in your stomach. Your body is telling you that you need to drink water to replenish what is being used.

# Homeostasis Scenario

- What is the body's response in this situation?
  - –You are taking off in an airplane. (The air pressure is decreasing the higher you fly.)

# Body's response

Your ears will pop (release pressure) to try to get the pressure inside of your ear to equal the pressure inside of the airplane.

# Homeostasis Scenario

- What is the body's response in this situation?
  - –You give blood.

# Body's response

Your body will produce more blood (red blood cells & plasma) to replenish what was lost.

# Homeostasis Scenario

- What is the body's response in this situation?
  - When you fall asleep, what happens to your body?

# Body's response

Your body's metabolism will slow down. This includes your breathing which will become more shallow and less frequent (because your body's need for oxygen and getting rid of carbon dioxide is not as great due to the decrease in metabolism).