**Systems Basics Review Sheet**

**Feedbacks**

Recognize the difference between positive and negative feedback scenarios.

Draw feedback loops

Include +,-,↓,↑

Example scenarios:

* You are lost on a high snowy mountain. When your body senses that it is cooling below 37 degrees C, various mechanisms such as shivering help to raise your body core temperature again. But if these are insufficient to restore normal body temperature, your metabolic processes start to slow down. As a result you become lethargic and sleepy and mover around less and result you become lethargic and sleepy and move around less and less, allowing your body to cool even further.
* A thermostat in a central heating system is a device that can sense the temperature. It switches a heating system on when the temperature decreases to a predetermined level, and off when it rises to another warmer temperature. So a room can be maintained within narrow limits of temperature.

**Value Systems**

Study the value systems

Ecocentric

Anthropocentric

Technocentric

Identify the value systems of 2 different written articles and be able to justify your reasoning.

**Systems Basics**

Know that there are four parts to the definition of a system

* + Components
  + Feedback (purpose)
  + Resource flows (inputs and outputs)
  + Boundaries

Be able to identify an object as a system or not a system and be able to justify your reasoning.

3 types of systems—define them and give an example for each

Open

Closed

Isolated

Be familiar with the terms transfers, transformations, storages, inputs, outputs, flows. Know how to use them on a diagram

**Storage flow diagrams**

Know how to convert a system into a storage flow diagram by:

Using boxes to represent storages

Arrows to represent inputs and outputs

Different thickness of arrows to represent the quantity (magnitude) of the flow

Writing the word “transfer” or “transformation” on the arrow.