

Review 02

Key to function is organization.....structure promotes function

- **Brains are highly organized structures, consisting of various tissues. They function to receive, process, and store information as appropriate. They also send information out to the rest of the body. They are constructed of cells, which are composed of various chemicals, etc.**
- **Brain after blending is still made up of the same things (cells, chemicals) but organization has been disrupted, rendering it nonfunctional.**
- **Once blended, you could never predict accurately what a brain looked like or how it functioned prior to blending. The whole is much greater than the sum of the parts!**

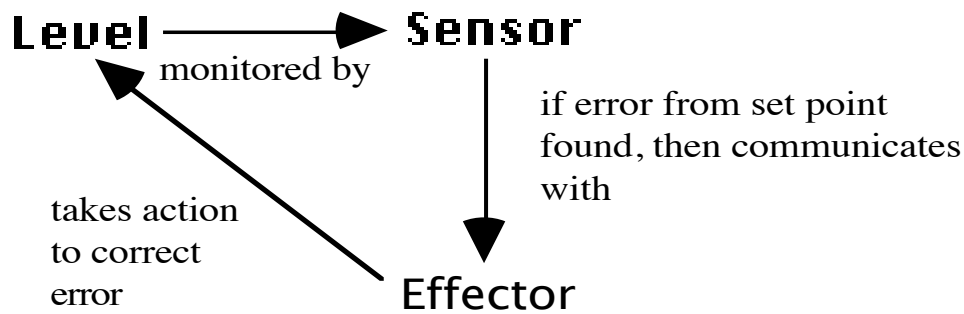
HOMEOSTASIS = MAINTENANCE OF A RELATIVELY CONSTANT INTERNAL ENVIRONMENT IN THE FACE OF A CHANGING EXTERNAL ENVIRONMENT (BY MEANS OF INTERACTING FEEDBACK MECHANISMS)

Homeostatic control mechanisms:

SET POINT—desired level of something being monitored

SENSOR—monitors level, communicates errors to effector[s]

EFFECTOR—corrects error in level



e.g. home refrigerator or heating system

Precision of control depends on

- ✓ **sensitivity of sensor to errors**
- ✓ **ability of effector to correct errors**

REGULATION OF ACTIVITIES:

Positive feedback control.....signal turns on, level builds; turns off when signal gone

Negative feedback control.....error correction; level remains constant

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DIGESTIVE SYSTEM

4 Functions:

- ① intake of food (mouth, pharynx, esophagus)
- ② processing of food (mouth, stomach, small intestine,);
- ③ absorption of nutrients (primarily small & large intestines but some also in stomach)
- ④ elimination of wastes (large intestine, rectum, anal canal, anus)