KEY

Organic Compounds, Energy Flow, Physical/Chemical Changes, Energy Transformation Test Review

Remember to study your digestive system Cornell notes and your vocabulary.

7.6A: Organic Compounds:

1. What determines if a compound is organic or inorganic?
   Organic compounds have carbon.
2. What elements are typically present in organic compounds?
   SPONCH
3. Write a chemical formula that would be an organic compound. (Use one from your notes)
   $C_6H_{12}O_6$
4. What three types of organic compounds do all living things need?
   Carbohydrates, Proteins, Lipids
5. Using your answers from the previous question, what do each do for a person?
   Carbohydrates = main energy source

   Proteins = build muscle

   Lipids = long term energy

From your 7.5C: Energy Flow Through Living System Student Journal

What is included in a food chain?

Sun, Producer, Primary Consumer, Secondary Consumer (if needed), Tertiary Consumer (if needed)

Give 3 examples of organisms from different ecosystems for each trophic level.

Producers	Primary Consumers	Secondary Consumers	Tertiary Consumers
Grass	Grasshopper	Mouse	Fox
Phytoplankton	Zooplankton	Krill	Penguin
Cactus	Ant	Lizard	Snake

What is the difference between a food chain and food web?

Food chains show just one path for the energy to travel, and webs show multiple paths.

How does energy get from one level to the next?

Producers must make their own food (photosynthesis). Consumers eat and digest plants or other animals.

What is the difference between producers and consumers?

Producers make their own food and consumers must eat their food. Producers rely on the sun for energy, while consumers rely on plants or other animals for energy.

What is a decomposer?

An organism that gets energy by breaking down dead organisms. Typically bones and other indigestible parts of animals and plants.

What level has the most energy? The least?

Producers have the most energy and the top consumers have the least.

What are 2 reasons that all of the energy in one level doesn't go to the next level?

Organisms use most of the energy for themselves. Some energy is lost to heat. Some energy is locked in indigestible parts like bones.

How much energy is transferred to the next level?

Only 10%

From your 7.6B: Physical and Chemical Changes Student Journal

What are three ways to physically change a substance?

Change the size, shape, or texture of the substance.

What must have happened for a chemical change to have occurred?

There must be a new substance.

What are the signs/clues to a chemical reaction? (Include the extra one I told you about in class)

Temperature change or light emitted

Color change

Odor change

Formation of a solid (precipitate)

Formation of a gas

Where are physical changes in your digestive system? Why are these physical?

Chewing with your teeth and your stomach churning. The food is not being changed into a new substance.

What is iodine used to test for?

If there is starch in a food.

Where are chemical changes in your digestive system? Why are these chemical?

Mixing the food with the saliva in your mouth, the acid in your stomach, or juices in your small intestine. The food is changed into a new substance. It is no longer what you ate.

What enzyme is in your saliva and what does it do?

Amylase. It breaks down starches into simple sugars.

What is in your stomach that causes chemical changes?

Hydrochloric Acid

From your 7.7B: Organism Energy Transfers Student Journal

What kind of energy is in food?

Chemical energy

What is energy measured in?

Calories

Why do we need energy?

To allow us to move our muscles. We need energy for all of our body systems to work.

What moves the energy around your body?

Blood

What is the process called when a cell releases the energy in the food?

Cellular Respiration

What type of energy is produced during digestion?

Chemical energy for plants is changed into chemical energy for humans. A little of the chemical energy is also transformed into thermal energy.

How many calories should a teen eat a day?

Boys: 2800-3000 Girls: 2400

What are all of the energy transformation during digestion? (Whoops, I meant after)

The chemical energy made during digestion is transported to muscles and transformed into mechanical energy. Then the mechanical energy is transformed into thermal energy. Which is why you get hot when you exercise.

Review your vocabulary for each unit and your digestive system Cornell notes.