What is metabolism?

1. The chemical reactions that support all life is called metabolism.
2. Metabolism requires energy.
3. The sun provides radiant energy which is converted into chemical energy via photosynthesis.

How does energy flow in an ecosystem?

1. Plants:
2. Called producers or autotrophs, as they produce their own food
3. Convert sun’s energy into glucose (stored as starch)
4. Plant later breaks starch down into glucose
5. Animals
6. Called consumers or heterotrophs, as they consume energy from other organisms
7. Types of consumers:
8. Herbivores
9. Eat only plants
10. Examples are cows and horses
11. Carnivores
12. Eat only animals
13. Examples are lions
14. Omnivores:
15. Eat both plants and animals
16. Examples are humans

What are the models for representing flow of energy in ecosystem?

1. Food chain:
2. Shows energy flow using arrows from producers to several levels of consumers
3. Energy Pyramid:
4. Shows amount of energy available for organisms at each feeding level
5. Steps:
6. First step:
7. Contains Producers
8. Is largest step in entire pyramid
9. Second step:
10. Contains primary consumers (consumers who feed on producers)
11. Are herbivores
12. Holds fewer organisms that producers
13. Third step:
14. Contains secondary consumers (they eat primary consumers)
15. May be omnivores or carnivores
16. Holds fewer organisms that primary consumers’ step
17. Fourth step:
18. Contains tertiary consumers (they eat secondary consumers)
19. Holds least organisms of all
20. Often carnivores
21. General Information:
22. Only 10% of energy from one level reaches the next level. Rest 90% is used by the organisms.
23. This is why each step above is smaller than the step below
24. Some energy is lost to environment as heat