

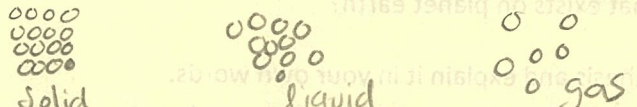
Review Part 1

Name

Key

Period

8.1 Energy and Matter

1. What is matter - Anything that has mass & takes up space
2. What is mass # of atoms in an object
3. What are physical properties? physical attributes of an object
4. List 10 physical properties.
Color, texture, melting point, boiling point, density, soft, smooth, phase of matter, temperature
5. What are chemical properties? how objects react to other substances
6. What is a physical change? a change in the physical attribute of an object
7. Give me 10 examples of physical change:
- ripping, cutting, crumbling, change in shape/size/color, texture, density
8. What is a chemical change? change in the chemical makeup of a substance
9. Give me 5 examples of how you know that a chemical change has occurred and ^{not} just a physical change? change in color / change in odor, new substance is formed, change in smell, bubbles present
10. Describe the molecular difference between a solid, liquid and a gas?


Solid liquid gas
11. Describe the different energy level in a solid, liquid, and gas.
solid = low energy gas = high energy
liquid = medium energy
12. Why is the phase change diagram of a solid liquid to gas not a straight line (what are the flat parts)? - Flat parts are an actual phase change
Solid → liquid
liquid → gas
13. Evaporation is? liquid → gas
14. Condensation is? gas → liquid
15. Deposition is? gas → solid

16. What is a chemical reaction? when 2 chemicals react with one another

17. Where do you find reactants in a chemical formula (give me an example too)?

reactants → products

18. Where do you find products in a chemical formula (give me an example too)?

reactants → products

19. Explain the law of conservation of mass?

mass cannot be created or destroyed

20. What 4 things would make a chemical reaction go faster?

- stir it
- add heat
- crush the object (more surface area)
- increase concentration
- add a catalyst

21. Why does a temperature increase make the speed of a reaction faster?

increased the molecular movement

22. Why does a temperature increase make the speed of a reaction faster (think about the molecules moving)?

23. Why does increasing the concentration of reactions make the speed of a reaction faster?

- more concentration in the liquid = faster reaction time

24. Why does surface area increase make the speed of a reaction faster?

- more surface area = more liquid can connect with the object.

25. What is a catalyst?

- speeds up a chemical reaction.

26. Explain natural (give examples).

- Not man made. grass

27. Explain synthetic (give examples).

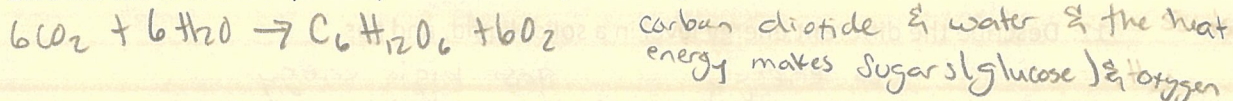
- made by man - artificial grass

8.3 – Life systems and transfer of matter and energy

28. Where do we get all our energy that exists on planet earth?

the sun

29. Give me the formula of photosynthesis and explain it in your own words.



30. Explain how photosynthesis produces chemical energy from sunlight.

heat energy is transferred into chemical energy

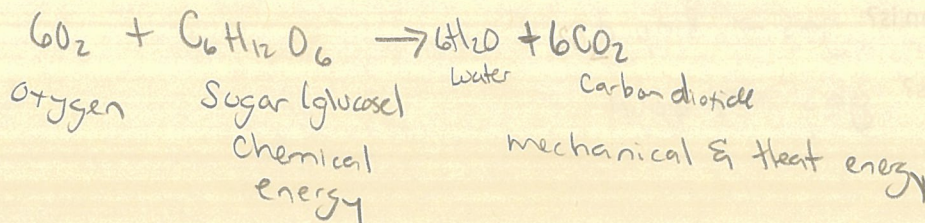
31. What are the reactants of photosynthesis?

$6CO_2 + 6H_2O$ Carbon dioxide & water

32. What are the products of photosynthesis?

$C_6H_{12}O_6 + O_2$ glucose + oxygen

33. Give me the formula of respiration and explain it in your own words.



34. Explain how respiration produces mechanical energy from chemical energy?

Chemical energy is transferred to Mechanical energy

35. What are the reactants of respiration?

$6O_2 + C_6H_{12}O_6$ Oxygen & Sugar

36. What are the products of respiration?

$6CO_2 + 6H_2O$ carbon dioxide & water

37. Explain what a producer is and why are they important?

Makes their own food from the sun

38. Explain what a consumer is and why are they so important?

Consumes food by eating other organisms

39. Explain what a decomposer is and why are they so important?

decomposes larger molecules into smaller molecules.

40. What is a predator - prey relationship and why is it important?

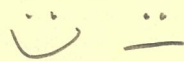
Predator eats prey

41. Explain the three levels of symbiosis and provide an example of each

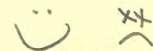
a. Mutualism - clown fish & sea anemone



b. Commensalism - shark & remoras fish



c. Parasitism - tick & deer



42. Explain how a food chain is set up as far as energy?

energy transferred from 1 organism to the next

43. How much energy is lost/moved on in an energy pyramid?

10% is passed on 90% is lost

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

Food web are multiple food chains combined.

45. Explain the carbon cycle in your own words and does it go in a pattern?

Carbon moving around the earth & atmosphere &

No there is no pattern

