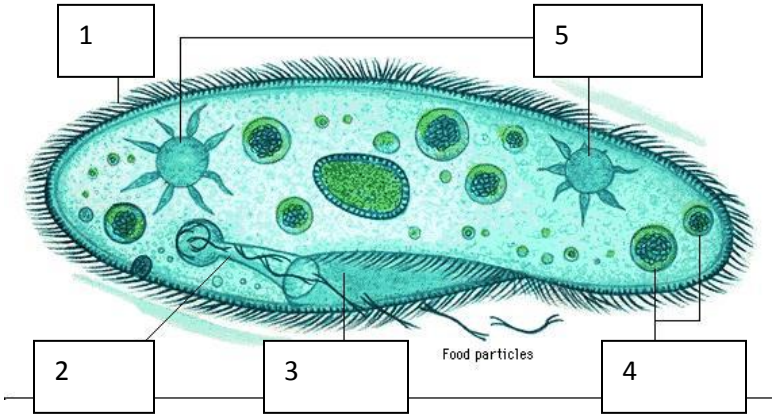
7th Grade Science Final Exam Study Guide

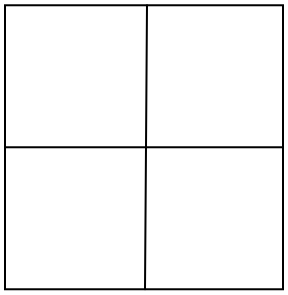
1. What are five kingdoms of living things?
2. What are the seven levels of taxonomy? List them in order from most inclusive to least inclusive
3. What are the six characteristic of living things?
4. How does an object maintain stable internal conditions?
5. Explain the difference between biotic/abiotic factors
6. Define the four critical chemicals.
7. List the four chemical activities of living things (Hint: DIRE)
8. Draw a plant cell and label it
9. Draw an animal cell and label it
10. Describe how prokaryotic cells reproduce (what is the process called and how does it work)
11. Describe how eukaryotic cells reproduce (what is the process called and how does it work)
12. Write out the equation for photosynthesis.
13. What is cellular respiration?
14. What is the difference between cell respiration and fermentation?
15. Explain how particles move in/out of a cell
16. You want to test which paper towel is the most durable. Select three brands and write a hypothesis for your experiment.
17. Fill in the data table below based on your tests for the above experiment (make up data) and then graph the data.

Paper Towel Brand	Pounds of pennies held when wet

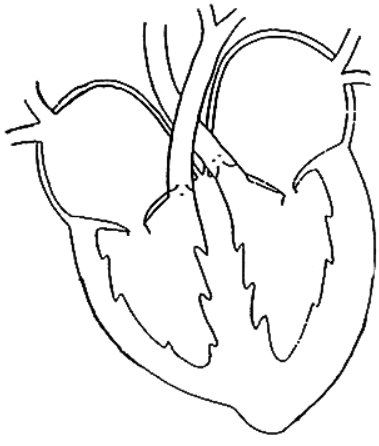
18. Label the parts of a microscope (and know what each part does!)
19. Explain why viruses are not living things
20. What is a virus' role in the environment?
21. List the three groups of protists
22. Label the five parts of a paramecium.



23. What is the role of fungi in the environment? (what do they eat?)
24. Label the parts of a perfect flower and their functions
25. Label the parts of an angiosperm and know what each part is for (what does the stem do? What are the flowers for? What do the roots do?)
26. Describe pollination and fertilization
27. What is the difference between invertebrates and vertebrates?
28. List the six types of invertebrates.
29. List the five types of vertebrates.
30. Describe the job of the internal structure of worms.
31. Explain the difference between an endotherm and an ectotherm
32. What is the difference between amphibians and reptiles
33. Explain how energy flows through a food web. What would happen if a new species was introduced?
34. Explain the relationship between traits and heredity.
35. Explain the difference between dominant and recessive genes.
36. Explain how genes and alleles are related to genotype and phenotype
37. Use the following information in a Punnett Square:
    A black male rabbit (heterozygous dominant) is crossed with a while female (homozygous recessive). What is the genotype ratio?

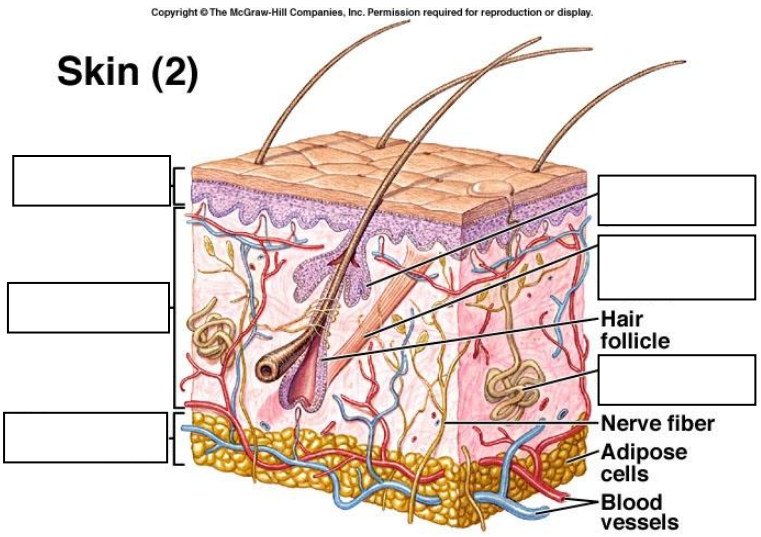


38. Describe how skeletal muscles move bones.
39. What are the four main parts of the cardiovascular system and describe their functions.
40. Draw the flow of blood through the heart. Use a solid arrow for oxygen-poor blood and a dashed arrow for oxygen rich blood.

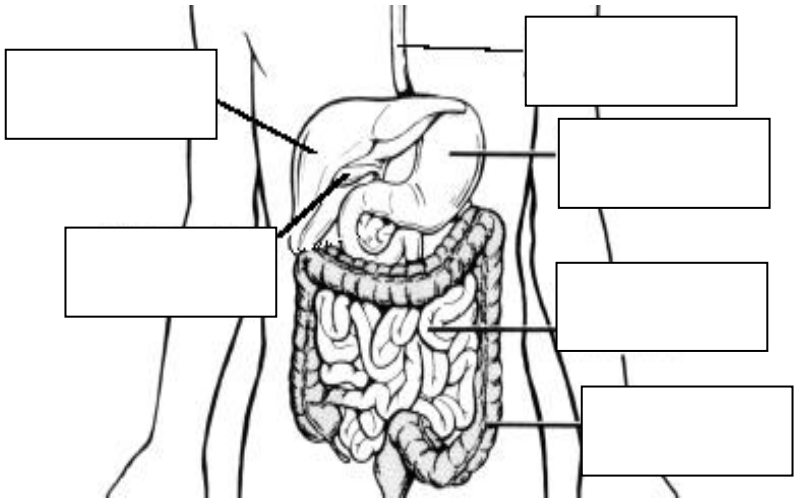


41. Describe the job of blood (what does it bring/take away?)
42. Explain how breathing happens.
43. Discuss the relationship between the respiratory system and the circulatory system.
44. How does skin help maintain homeostasis?

45. Label the diagram of skin below:



46. What are the two parts of the nervous system?
47. Describe the parts and functions of the digestive system.
48. Label the diagram below.



49. Describe the parts and functions of the urinary system.
50. Explain how kidneys filter blood.