

NAME \_\_\_\_\_

1. What are the three subatomic particles in an atom? What is the charge for each particle?
2. Using your periodic table, complete the following:

Name	Symbol	Atomic #	Atomic Mass	# Protons	# Neutrons	# Electrons
	Li	3		3		3
Potassium			39		20	
		32				
Aluminum	Al					

3. How do you determine the number of protons in an element?
4. How do you determine the number of electrons in an element?
5. How do you determine the number of neutrons in an element?
6. Draw a Bohr model for N.
7. You know the density of an object is 4g/ml and its volume is 3 ml. What is its Mass?
8. Using a drawing or diagram, compare the particles in a solid, a liquid and a gas.

9. What is the difference between physical and chemical properties? Give at least three examples of each.

10. I begin with 30 grams of ice and melt it to form 20 grams of water and some water vapor. What would be the mass of my water vapor and why?

11. Name at least two clues that tell you a chemical process has taken place.

12. Convert the following numbers into scientific notation.

a. 00123457145

b. 64,600

13. Name at least two differences between plant and animal cells.

	<u>Plant Cell</u>		<u>Animal Cell</u>
1.		1.	
2.		2.	

14. Define the following terms and describe what it is used for in a cell:

a. cell membrane

b. Chloroplast

c. Nucleus

15. The element \_\_\_\_\_ is one of the basic elements of life found in every living thing.
16. What is the name of the clear, jelly-like fluid that is between the cell membrane and nucleus, surrounding all organelles present in a cell?
17. What is the difference between prokaryotic and eukaryotic cells? Give an example of each.
18. Can you catch diabetes from another person? What things might you have to change about your life if you are diagnosed with diabetes?
19. The most accurate definition of biotechnology is
- Using robots to do our housework
  - Using computers to look up biology terms
  - Using living things or their parts to create or modify products and procedures that improve life for humans and animals
  - Programming computers to harvest crops
20. Which statement reflects the greatest concern for genetically modified crops?
- High yield crop varieties will reduce the use of fertilizers
  - The cost of agriculture will decrease
  - Drought resistant crops may die during rainy seasons
  - Genes for herbicide resistance might be transferred to weeds by cross-pollination
21. Using microbes to clean up oil spills before contaminants get to water sources is an example of biotech used in which area?
- Medicine
  - Agriculture
  - Food and consumer goods
  - Environment
22. How does the DNA differ between prokaryotes and eukaryotes?
23. Explain what is meant by GMO.

24. Talk about one way that GMO plants are created.
25. What makes it so difficult to create a flu vaccine?
26. Currently there are 4000 people per week dying of the flu in the United States. Would you say this is an epidemic or a pandemic? Why did you choose your answer?
27. Explain the difference between a virus and a bacteria.
28. The physical process for changing a solid to a liquid is called \_\_\_\_\_.
29. The physical process for changing a solid directly into a gas without having a liquid phase is S \_ \_ L \_ \_ \_ T I \_ \_.
30. Think about the movie Contagion. What things could you do to prevent the spread of a virus. (Name at least three.)