

Name: \_\_\_\_\_

## 1<sup>ST</sup> Semester Final Review

You need to also review all notes and vocabulary for the semester. You will get to look over the answer key during your designated review time (it is an hour and a half class period). If you complete this review and get your parents signature you will receive 5 bonus points on the exam.

**Parent Signature:** \_\_\_\_\_

### Work and Force:

**Solve. Write the formula, show plugging in the numbers, and then give your answer.**

1. 20 m, 2 s

3. 8 N, 7 m

2. 9 kg, 10 m/s/s

4. Describe a situation where no work is done.

5. What is the difference between balanced and unbalanced forces?

6. What do simple machines lesson?

7. What stays the same whether a simple machine is used or not?

### Photosynthesis:

8. What are the 7 different types of energies and the acronym we use to remember the main 6?

9. What is the original source of energy for the earth?

10. Describe the energy transformation in photosynthesis.

11. What type of organism uses photosynthesis?

12. Describe the first step of photosynthesis.

13. Describe the second step of photosynthesis.

14. Describe the final step of photosynthesis.
15. What are the substances that go into a chemical reaction called?
16. What are the reactants in photosynthesis?
17. What are the substances that come out of a chemical reaction called?
18. What are the products of photosynthesis?
19. What is the chemical equation of photosynthesis?

**Forces That Move Plants:**

20. Describe germination.
21. Describe Turgor pressure.
22. Describe why osmosis is important.
23. What are the 6 different tropisms and the stimulus that causes them?
24. What is the difference between positive and negative of any tropism?
25. What is geotropism also known as?
26. Which parts of a plant have positive geotropism and which have negative geotropism?
27. Why do the stems and roots move the directions that they do? (What do they get for moving that way)
28. Why do plants typically move toward light?
29. Why does chlorophyll not get produced until the plant is in light?
30. Describe fight or flight.

## Homeostasis:

31. Describe homeostasis.
32. Describe what an internal stimulus is.
33. Describe what equilibrium is.
34. Give an example of a receptor, control center, and effector.
35. Contrast negative and positive feedback.
36. Why do plants wilt?
37. What is a plant's response to wilting?
38. What is included in a food chain?
39. Give 3 examples of organisms from different ecosystems for each trophic level.  
Producers                      Primary Consumers                      Secondary Consumers                      Tertiary Consumers

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

40. How does energy get from one level to the next?
41. Producers must make their own food (photosynthesis). Consumers eat and digest plants or other animals.
42. What is the difference between producers and consumers?
43. What is a decomposer?
44. What level has the most energy? The least?
45. What are 2 reasons that all of the energy in one level doesn't go to the next level?

46. How much energy is transferred to the next level?
47. If the tertiary consumer has 6.8 calories, how much energy did the producers have? Draw a pyramid with labels for the trophic levels and calories.

**Organic Compounds:**

48. What determines if a compound is organic or inorganic?
49. What elements are typically present in organic compounds?
50. Write a chemical formula that would be an organic compound. (Use one from your notes)
51. What three types of organic compounds do all living things need?
52. Using your answers from the previous question, what do each do for a person?
53. Chemical and Physical Changes:
54. What kind of energy is in food?
55. What is energy measured in?
56. Why do we need energy?
57. What moves the energy around your body?
58. What type of energy is produced during digestion?
59. What are all of the energy transformation during digestion?

**Molecules:**

60. What are the 3 parts of the human diet?
61. Why must large molecules be broken down?
62. What does saliva do for a human?
63. What is an enzyme?

64. What are small carbs generally called?
65. Where are carbs digested?
66. What two things are required to help break down protein?
67. What are small proteins generally called?
68. Where does protein digestion take place?
69. Which large dietary molecule is the most highly concentrated source of energy?
70. Where do fats break down in the digestive system?
71. What digestive juice does the human body use to break up the fats into tiny droplets?
72. What makes this juice and where is it stored?
73. Small lipid molecules are generally called?

**Cycling of Matter:**

74. Describe evaporation.
75. Describe transpiration.
76. What are 3 large water reservoirs?
77. Describe condensation.
78. Describe precipitation.
79. What is the difference between groundwater and surface water?
80. What element makes up the highest percent of the atmosphere?
81. What makes nitrogen in the air available to all living organisms?
82. What form of nitrogen can plants and animals use?
83. What two ways do nitrates return to the soil?

84. What organisms are responsible for getting the nitrates back in the soil?
85. How does nitrogen get from the humus back into the atmosphere?
86. Carbon is carbon dioxide in what "sphere"?
87. Where is carbon in the biosphere?
88. How does carbon get back in the soil?
89. What are two ways carbon gets back in the atmosphere?
90. What is one way to demonstrate the role of bacteria in decomposition?
91. What does composting do to organic material?
92. Where does groundwater come from?
93. How far down into the ground does water go?
94. What watershed do we live in?
95. What are some pollutants that can be carried away by runoff?
96. Why is clearcutting forest bad for the environment?
97. Pollution in runoff will eventually affect the what?
98. How do humans affect runoff negatively?
99. How are some ways to fix the runoff and pollution problems?

**Ecoregions of Texas:**

**STUDY YOUR TEXAS ECOREGIONS CHART!**

100. What are the agents of weathering, erosion and deposition?
101. What is the difference between mechanical and chemical weathering?
102. How is erosion different with wind, water, and ice?
103. How is deposition different with wind, water, and ice?

104. What is a delta?

**Catastrophic Events:**

105. What is the minimum wind speed for a hurricane?

106. What would be the perfect condition for a hurricane to form?

107. What are two things that make hurricanes dangerous and destructive?

108. What damage does wind cause?

109. What damage does storm surge cause?

110. Storm surge can also cause saltwater intrusion. What can that cause?

111. What can floods do to contaminants?

112. What causes flooding?

113. What are some positives to flooding?

114. How have flood management practices affected floodplains?

115. What are some negative effects of floods?

116. How are animals affected by floods?

117. What can runoff do to contaminants?

118. How fast can tornado winds go?