



**USING THE FORCE
TO SUCCEED!**



Ponce de Leon Middle School

8th Grade – Summer 2017

Summer Instructional Packet

DIRECTIONS:

1. You are required to complete the Summer Instructional Packet.
2. Turn in your completed package to your teacher, when you return to school in August.



Name: _____ Date: _____ Science Teacher: _____

8th Grade Ponce Science '17 Summer Instructional Package

Completion: Complete each statement.

1. Each element is given a specific _____ that usually consists of one or two letters.
2. Mendeleev discovered that periodic patterns appeared when he arranged the elements in order of increasing _____.
3. The _____ is the very small center of an atom.
4. A column of elements in the periodic table is called a group, or _____.
5. Scientific theories often make use of _____, which are representations of an idea to help scientists understand what they cannot observe directly.
6. The property of an element that indicates the number of protons in its atoms is the _____.
7. In the modern model of the atom, the nucleus is surrounded by a negatively charged _____.
8. Each dot in a dot diagram stands for one _____.
9. When ions having a positive charge form bonds with ions having a negative charge, the charge on the resulting compound is _____.
10. A metal crystal consists of positively charged metal ions embedded in a “sea” of freely moving _____.
11. Solid metals are good conductors of heat and _____.
12. A(n) _____ is a compound that turns red litmus paper blue and is often found in soaps and detergents.
13. Acids are _____, which means that they “wear away” many metals.
14. A mistake in the design of an experiment that makes a certain result more likely is called experimental _____.
15. _____ bias describes when your likes and dislikes affect how you think about something.
16. Scientists who always report their observations and results truthfully possess the attitude of _____.

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17. Scientists who are eager to learn more about the topics they study possess the attitude of _____.
18. The study of the human body is part of _____ science, one of the three main branches of science.
19. The three main branches of science are earth and space science, physical science, and _____.
20. If a scientific theory cannot explain a new observation, but still explains a wide range of observations, the theory will be _____.
21. A scientific _____ is a well-tested explanation for a wide range of observations or experimental results.
22. Similarities in the early development of chickens and opossums suggest that these animals share a common _____.
23. The forelimbs of a bird and a mammal are examples of _____ structures.
24. A(n) _____ is a well-tested concept that explains a wide range of observations.
25. Natural selection is affected by _____, or traits that are different in members of the same species.
26. The only traits that can be acted upon by natural selection are those that are controlled by _____.
27. Coral reefs are biologically diverse ecosystems because they support many different _____, which allow a great number of species to live there.
28. A diverse pool of _____ helps ensure that individuals in a species will pass a variety of traits to their offspring.
29. Earth's most diverse ecosystems are tropical _____ and coral reefs.
30. _____ changes occur when bonds form between atoms, or when bonds break and new bonds form.
31. A precipitate is a(n) _____ that forms from solution during a chemical reaction.
32. In a(n) _____ change, elements and/or compounds rearrange to form new substances.
33. A chemical reaction that releases energy in the form of heat is a(n) _____ reaction.

34. In a chemical equation, the substances written on the right side of the arrow are called _____.
35. The _____ of a compound shows the ratio of elements present in the compound.
36. The law of _____ states that during a chemical reaction, matter is not created or destroyed.
37. A burning match is an example of a(n) _____, where matter can enter from or escape to the surroundings.
38. In a chemical reaction, 28 g of iron reacts with 16 g of sulfur to produce _____ of iron sulfide.
39. The peripheral nervous system consists of _____ that link the central nervous system with all parts of the body.
40. The part of the brain that controls balance is the _____.
41. Many commonly abused drugs are dangerous because they act on the _____, which controls mood and thought.
42. Sound waves travel down the ear canal and strike the _____, causing it to vibrate and to pass the vibrations on to small bones in the middle ear.
43. Endocrine glands produce hormones that travel in the blood to specialized cells called _____.
44. The endocrine system controls the amount of a particular _____ in the blood by stopping its release when it reaches a certain level.
45. One important function of ovaries is to produce _____ cells.
46. The hormone _____ controls the development of male characteristics.
47. Sperm are produced in the organs called _____.
48. During the menstrual cycle, the lining of the _____ builds up with extra blood and tissue to prepare for a fertilized egg.
49. A developing human is called a(n) _____ between the end of the eighth week of development and birth.
50. The baby is pushed out of the uterus during _____, or the second stage of birth.

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51. The sun and moon seem to move across the sky each day because of Earth's _____ on its axis.
52. The times when day and night are of equal length are called _____.
53. The moon can be seen from Earth because _____ reflects off the moon's surface.
54. The moon rotates once on its axis in the same amount of time that it _____ once around Earth.
55. The darkest part of the moon's shadow is called the _____.
56. You can see the solar corona from Earth during a(n) _____ eclipse.
57. A tide with the least distance between low and high tides is called a(n) _____ tide.
58. Tides are caused by the force of _____ from the sun and moon acting on Earth.
59. Plants make their own food using energy that comes from the _____.
60. Almost all living things depend on the process of _____ to supply them with the energy they need.
61. During photosynthesis, water in the chloroplasts is split into hydrogen and _____.
62. The main difference between respiration and fermentation is that respiration uses _____ to obtain energy from food.
63. The process in which yeast produces carbon dioxide and alcohol is called _____ fermentation.
64. The main difference between cellular respiration and fermentation is that cellular respiration uses _____ to obtain energy from food.
65. The process in which yeasts break down sugars and produce carbon dioxide and alcohol is called _____ fermentation.
66. Certain bacteria change nitrogen gas into a usable form in a process called _____.
67. Producers release _____ as a result of photosynthesis.
68. An American physicist who designed and built rockets during the early 1900s was _____.
69. A common use of _____ is in fireworks displays.

70. The velocity a rocket must reach to establish an orbit around Earth is called _____.
71. A rocket burns fuel to produce _____, the force that moves the rocket forward.
72. An artificial satellite in which people can live and work for long periods is called a(n) _____.
73. Small robots called _____ have been used to explore the surface of Mars.
74. Because space is nearly a vacuum, spacecraft must be _____ to protect astronauts.
75. The type of light humans can see is called _____ light.
76. Telescopes work by collecting and focusing different forms of _____ radiation.
77. A device that detects radio waves from objects in space is called a(n) _____.
78. A picture of a planet taken in visible light or any other form of _____ is called a planetary image.
79. Colds and tuberculosis are both examples of _____ diseases, because they are caused by pathogens within the body.
80. Lyme disease and rabies are both examples of diseases that can be spread by means of _____.
81. Some bacteria produce poisons, or _____, that damage cells.
82. The _____, in which fluid and white blood cells leave blood vessels, is the body's second line of defense.
83. A(n) _____ is a chemical that kills bacteria or slows their growth.
84. The body's ability to destroy pathogens before they can cause disease is called _____.
85. Two ways to gain active immunity are being sick with the disease and receiving a(n) _____.
86. In diabetes, high levels of _____ are found in the blood and urine.
87. A person whose immune system is overly sensitive to dust is said to have a(n) _____ to dust.

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88. The curve on the surface of water in a graduated cylinder is called a(n) _____.
89. The percent difference between the known value and its measured value is called the _____.
90. Scientists use _____ to understand how systems work and to predict changes in a system.
91. If you state that your basketball team will win tonight's game because your team has always beaten the other team in the past, you are making a(n) _____.
92. _____ is the process of grouping together items that are alike in some way.
93. Scientists who possess the attitude of _____ always report their observations and results truthfully.
94. A scientist's open-mindedness should always be balanced by _____, which is having an attitude of doubt.
95. You travel a total of _____ degrees if you circle the globe completely and return to the spot from where you departed.
96. The basic SI unit of mass is the _____.
97. Density is a measure of how much mass is contained in a given _____.
98. Temperature is measured using a(n) _____.
99. _____ are data points that do not fit with the rest of a data set.
100. A high percent error means that your result was not very _____.

NOTES: