

Name: _____ Science Teacher: _____ Period: _____ Date: _____



Ponce de Leon Middle School

8th Grade



Summer 2018 Instructional Packet

DIRECTIONS:

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

SCIENCE | TECHNOLOGY | ENGINEERING | MATHEMATICS

STEM



8th Grade Science Ponce Summer '18 Instructional Review Package

Completion - Complete each statement.

1. A(n) _____ is a group of similar cells that work together to perform a specific function.
2. Since carbon cannot be broken down into simpler substances, it is an example of a(n) _____.
3. When two or more elements combine chemically, they form a(n) _____.
4. A microscope allowed Hooke to see “tiny rectangular rooms,” which he called _____.
5. Cells are the basic units of structure and _____ in living things.
6. According to the cell theory, all organisms are made of _____.
7. A lens that is thicker in the center than at the edges is called a(n) _____ lens.
8. Obtaining and using energy from food and removing wastes are two processes that help cells maintain _____.
9. During cellular respiration, _____ is needed to release energy from glucose molecules.
10. The nucleus of a cell has thin strands of _____ that contain genetic material.
11. Organelles known as _____ contain chemicals that break down food particles and old cell parts.
12. During cytokinesis in plant cells, a(n) _____ forms across the middle of the cell.
13. _____ is the process by which a cell makes an exact copy of its DNA.
14. Similarities in the early development of chickens and opossums suggest that these animals share a common _____.
15. The forelimbs of a bird and a mammal are examples of _____ structures.
16. Similarities in the early development of chickens and pigs suggest that these animals share a common _____.
17. A(n) _____ is a well-tested concept that explains a wide range of observations.
18. In the process of natural selection, the organisms that are best suited to their environments are most likely to survive and _____.
19. Natural selection is affected by _____, or traits that are different in members of the same species.

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20. The only traits that can be acted upon by natural selection are those that are controlled by _____.
21. A new _____ can form when a group of individuals become isolated from the main group.
22. Coral reefs are biologically diverse ecosystems because they support many different _____, which allow a great number of species to live there.
23. A diverse pool of _____ helps ensure that individuals in a species will pass a variety of traits to their offspring.
24. The actions of animals most commonly can cause the type of weathering known as _____.
25. Some plants produce acids that result in _____ weathering.
26. One cause of mechanical weathering is _____, or the wearing away of rock by rock particles.
27. One agent of chemical weathering is _____, which combines with water to form carbonic acid.
28. Two factors that determine the rate of weathering are the type of rock and the _____.
29. A rock that contains tiny, connected spaces through which water can move is said to be _____.
30. Features of topography, such as the Columbia Plateau and Mount Hood, are called _____.
31. The vast, flat or gently rolling grassland in the interior of North America is called the _____.
32. A(n) _____ is a landform with high elevation and a more or less level surface.
33. A large area of land where the topography is similar is called a(n) _____ region.
34. A very slow downhill movement of rock and soil that can occur even on gentle slopes is called _____.
35. The force that moves sediment in a landslide or mudflow is _____.
36. A mass movement called _____ occurs when a mass of rock and soil suddenly slips down a slope in one large mass.
37. In a flashlight, _____ energy in the batteries is transformed into electrical energy.
38. Even though the water in a filled bathtub may be at the same temperature as water in a teacup, the water in the bathtub has more _____ because it contains a greater number of water molecules.

39. An increase in the total energy of the particles in an object results in an increase in the _____ energy of the object.
40. The SI unit of heat is the _____.
41. If _____ is transferred from object A to object B, the temperature of object A decreases.
42. The handle of a spoon in a bowl of hot soup becomes warm due to heat transfer by the process of _____.
43. Energy from the sun is transferred to Earth by the process of _____.
44. The genetic code is found in the order of nitrogen _____ along a gene.
45. A set of three bases codes for one specific _____ in a protein.
46. An organism that is the offspring of many generations that have the same form of a trait is called _____.
47. If a(n) _____ allele is present, its trait will appear in the organism.
48. Mendel used the principles of _____ to predict what percent of offspring would show a particular trait.
49. If each of ten events is equally likely to occur, the probability of each individual event occurring is _____ percent.
50. A chart used to predict results of genetic crosses is known as a(n) _____.
51. An organism that has two dominant or two recessive alleles is said to be _____ for that trait.
52. Genes are carried from parents to their offspring on structures called _____.
53. The process in which a parent cell divides twice to produce sex cells is called _____.
54. If all of the sex cells of an organism have the *T* allele, the genotype of that organism must be _____.
55. The three alleles on the single gene that controls blood type are said to be _____ alleles.
56. A gene is said to have multiple alleles if it has more than _____ alleles.
57. An egg that is fertilized by a sperm cell with a(n) _____ chromosome will develop into a female.
58. A carrier of a trait controlled by a _____ allele does not express the trait.

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59. People who have the genetic disorder called _____ suffer from abnormally low levels of oxygen in the blood.
60. Down syndrome is caused by the presence of an extra _____.
61. A(n) _____ helps couples understand their chances of having a child with a genetic disorder.
62. Breeders use a technique called _____ to cross genetically different individuals.
63. A gene from one organism is inserted into the DNA of another organism in the process known as _____.
64. Scientists in the Human Genome Project worked to identify the _____ sequence of every human gene.
65. All of the DNA in one cell of an organism is called a(n) _____.
66. A pattern produced from fragments of the DNA of a specific person is called a(n) _____.
67. The hypothesis of _____ was that all the continents once were joined as a single supercontinent and have since drifted apart.
68. Subduction occurs where the oceanic crust bends down toward the mantle at a(n) _____.
69. The ocean floor sinks beneath a deep-ocean trench and back into the mantle in a process known as _____.
70. The lithosphere is broken into sections called _____, which float on top of the asthenosphere.
71. When continental plates pull apart at a divergent boundary on land, a(n) _____ forms.
72. The official SI unit for temperature is the _____.
73. The curve on the surface of water in a graduated cylinder is called a(n) _____.
74. The percent difference between the known value and its measured value is called the _____.
75. Scientific _____ refers to the diverse ways in which scientists study the natural world and propose explanations based on the evidence they gather.
76. Data and observations collected through scientific processes are called _____ evidence.
77. Future testing can still prove an accepted scientific _____ to be incorrect.
78. The fuel in a home heating system is part of the _____ of the system.
79. The property that describes what happens in a system is called the _____.

80. Scientists use _____ to understand how systems work and to predict changes in a system.
81. In electromagnetic waves, the magnetic fields are _____ to the electric fields.
82. In the phenomenon known as the _____ effect, electric current will flow when light shines on certain substances.
83. An electromagnetic wave is made up of vibrating electric and magnetic _____.
84. The _____ of a wave is the number of waves that pass a given point in a certain amount of time.
85. The part of the electromagnetic spectrum you can see is called _____ light.
86. Diffuse _____ occurs when parallel rays of light hit a bumpy, or uneven, surface.
87. A material's index of refraction is a measure of how much a ray of light _____ when it enters that material at an angle.
88. As parallel rays of light pass through a(n) _____ lens, they are bent toward the center of the lens.
89. Three factors that affect the speed of sound through a substance are temperature, density, and _____.
90. 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) _____.
91. _____ is the process of grouping together items that are alike in some way.
92. Scientists who possess the attitude of _____ always report their observations and results truthfully.
93. A scientist's open-mindedness should always be balanced by _____, which is having an attitude of doubt.
94. You travel a total of _____ degrees if you circle the globe completely and return to the spot from where you departed.
95. The basic SI unit of mass is the _____.
96. Density is a measure of how much mass is contained in a given _____.
97. A common tool used to measure length is the _____.
98. Temperature is measured using a(n) _____.
99. _____ are data points that do not fit with the rest of a data set.
100. An experiment in which only one variable is manipulated at a time is called a(n) _____ experiment.

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Notes: