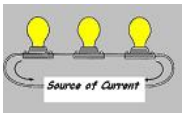
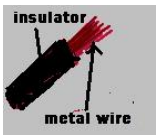
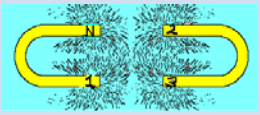
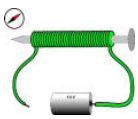
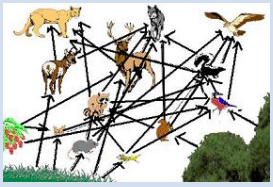
Name :	Science Review checklist	
Put a check in the box each time you answer the question correctly	Cover the right column with a piece of paper or your hand. Answer the question and check your answer. Each time you answer correctly, put a check in the little box. By test time, you'll want a check in each of the boxes.	**Cover these answers!**
	PART ONE – 4TH GRADE SCIENCE	
	1. If you are given a picture and asked to make an OBSERVATION, you must choose the answer that includes only:	things that you can actually see with your own eyes
	2. Which is NOT an observation I could make while looking up at the sky? "The sky is blue." "A big, dark cloud is moving in" "Soon it's going to rain."	"Soon it's going to rain" is not an observation. It is a prediction.
	3. The mass of an object is:	the amount of matter in an object
	4. Given a 2-liter bottle of Coke, 2 liters is a measure of:	the volume of Coke - or how much space it takes up.
	5. The capacity of a container is how much it can hold. The capacity our large Coke bottle, even if it is empty, is:	2 liters
	6. The capacity of an eyedropper would be a few:	milliliters
	7. A milliliter of liquid is:	a few drops
	8. The volume of liquid in a graduated cylinder might be 50:	ml or 50 milliliters
	9. The volume of liquid in a beaker might be 300:	ml or 300 milliliters
	10. One thousand milliliters equals:	1 liter
	11. A liter is close in volume to a:	quart
	12. .An instrument used to measure mass is a:	balance
	13. The mass of a paperclip or a sheet of paper is about:	1 gram or 1g
	14. The mass of a book could be about:	1 kilogram or 1kg
	15. 1000 grams equal:	1 kilogram

16. Length and distance are measured in these metric units:	millimeters (mm) centimeters (cm) (m) kilometers (km)
17. Volume of a liquid or capacity of a container is measured in these metric units:	milliliters (mL) liters (L) 1000mL=1L
18. Mass is measured in these metric units:	grams(g) 1000g=1kg kilograms (kg)
19. A centimeter is about as long as your:	fingernail
20. The length of each of these dashes - - - is about:	1 or 2 millimeters (mm)
21. If your fingernail is one centimeter long, how long is it in millimeters?	10 (10mm = 1cm)
22. The distance from your waist to the floor could be about:	1 meter or 1m
23. One-hundred centimeters equals:	1 meter
24. One thousand meters equals:	1 kilometer or 1km
25. In an experiment to measure the how different types of soil affect tulip growth, you fill five identical pots with different types of soil and place a tulip bulb in each. The variable in the experiment is the:	soil
26. The pots, tulip bulbs, water and amount of sunlight are should be the same for all of the pots. These are the:	constants
27. For accuracy, you perform the experiment many times. In the first three trials, the tulip in sandy soil grows only 10cm tall before dying. The 4th trial, the tulip grows 15cm tall and flowers. Which result is **unusual**?	The 4th trial (15cm) because it is different from the others.
28. Objects in motion have _____ energy.	kinetic
29. Potential energy is _____ energy.	stored
30. Due to the pull of gravity, the higher an object is off the ground, the more _____ it has.	potential energy
31. When I hold a ball in the air, it has potential energy. When I let go, the ball starts to fall. Potential energy changes to: 	kinetic energy
32. There are many forms of energy. Energy caused by the movement of electrons is:	electrical energy
33. Energy stored in food, batteries and fossil fuels like coal and gasoline is:	chemical energy
34. Two objects rubbing together create:	friction

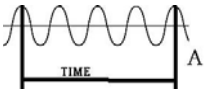
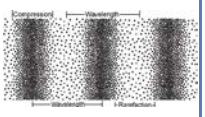
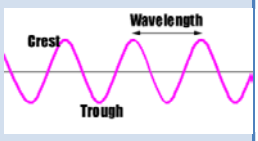
35. Friction resists or stops motion, and creates:	heat
36. Unless acted on by a force, objects in motion tend to stay in motion and objects at rest remain at rest. This is the principal of:	inertia
37. It's harder to push a real truck than a toy truck because objects with more mass have:	more inertia
38. Which will light a bulb, an open or closed circuit?	A closed circuit
39. If your string of holiday lights goes dark when one little bulb burns out, the string of lights is a: 	series circuit
40. This circuit has more than one pathway for the flow of electrical current. If one bulb burns the others will remain lit. It is a: 	Parallel circuit
41. Electrical energy moves easily through materials that are:	conductors.
42. Wires are usual made from ____ because it conducts electricity well.	metal (often copper)
43. Material like rubber, plastic and wood do not conduct electricity well. They are: 	insulators
44. This is a dry-cell battery. Common dry-cells usually have low: 	voltage (1.5v or 9v)
45. Magnets attract these metals:	iron (steel) cobalt, nickel
46. The iron filings in this picture show _____created by a magnetic field. 	lines of force
47. Magnetism and _____ are very closely related.	electricity
48. An electric current creates a magnetic field, and a magnetic field creates an _____ .	electric current
49. If you wrap wire around a nail and run electricity through the wire, you have created an: Electromagnets are useful because they can be turned on an off. 	electromagnet
50. If you rub your feet on the carpet, or rub a balloon on a wool sweater, you may create: 	static electricity

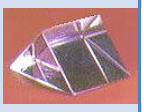
51. Static electricity occurs when negatively charged _____ are rubbed off of one surface and on to another.	electrons
52. Benjamin Franklin learned that lightning was a form of electricity. What kind of electricity? 	static electricity
53.	Thomas Edison
54. Which plant part takes in water and nutrients?	the root
55. Which part supports the plant and allows the movement of water and nutrients?	the stem
56. Which plant part makes food for the plant?	the leaves
57. The seed forms in the female reproductive part of the flower called the:	pistil
58. Pollen forms on the ends of the male reproductive parts of the flower called the:	stamen
59. The small leaves that form around the developing flower are the:	sepals
60. Pollen is transferred from the stamen to the pistil in a process called:	pollination
61. Most plants reproduce with seeds, but ferns and mosses reproduce with:	spores
62. Green plants produce their own food in a process called:	photosynthesis
63. To produce food, green plants use:	water, nutrients, sunlight, carbon dioxide (from the air) and chlorophyll.
64. Plants are green because of:	chlorophyll
65. Many plants enter a period of _____ in the winter, which is similar to hibernation for animals. During this period most of their normal activities stop.	dormancy
66. An organism's _____ provides food, water, shelter and space.	habitat
67. All of the organisms in a forest make up a _____, and all of the organisms in a pond make up a pond _____.	forest community; pond community
68. All energy comes from _____ , and then cycles through the food webs to all of the animals in the community.	the sun
69. . _____ get energy directly from the sun and use it to make food.	Plants
70. Because plants produce their own food, they are called _____ .	producers

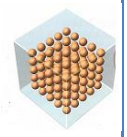
71. Other organism do not get their energy from the sun. They get their energy by:	eating plants, or eating animals that have eaten plants.
72. Organisms that get their energy from eating plants or other animals are called:	consumers
73. The sun's energy cycles through the ecosystem in this order:	sun->producers->consumers>decomposers
74. All of the interrelated food chains in an ecosystem make up a: 	food web
75. Food chains and food webs **always** start with a:	plant
76. The food chain starts with a producer (a plant) and ends with a:	decomposer
77. Decomposers like _____ break down organisms and recycle them back to the nutrient pool.	fungi
78. All of the living and nonliving things in an environment make up:	an ecosystem
79. Everything in an ecosystem depends on everything else. Humans often destroy ecosystems by:	polluting ponds, chopping down forests, etc.
80. The specific place an organism has in the food web is the organism's:	niche
81. The niche of every organism is different, and an organism's niche changes as it grows. A niche is the organism's role in the community, and includes:	what it does, what it eats, and what eats it.
82. All organisms have _____ that allow it to survive in its environment.	adaptations
83. Structural adaptations are _____ that help an organism survive, like long beaks, webbed feet, camouflage.	body parts
84. Behavioral adaptations are things that organisms do to survive. Examples of behavioral adaptations are:	migration, hibernation, instincts, etc
85. The measure of the amount of heat energy in the atmosphere is:	temperature
86. The amount of moisture in the air is:	humidity
87. The weight of the air causes:	air pressure
88. Air circulates around the Earth in big chunks called:	air masses

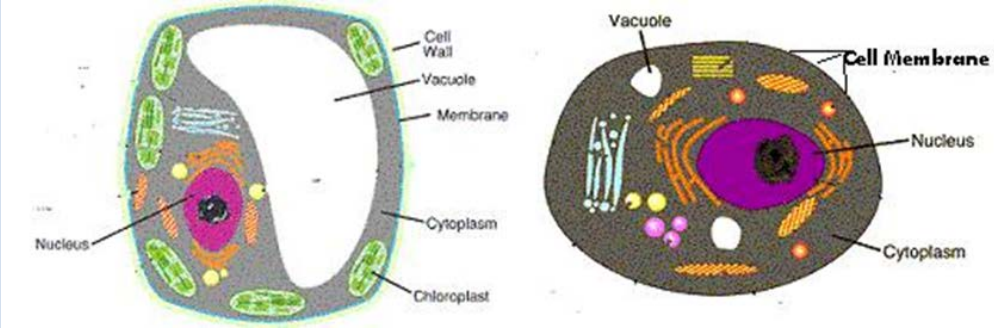
89. The boundary between two air masses is called a:	front
90. A warm front occurs when a warm air mass pushes out a cold mass. A warm front usually brings:	steady rain or drizzle followed by warmer temperatures.
91. A cold front occurs when a cold air mass pushes out a warm air mass. A cold front usually brings:	a short period of heavy rain or thunder, followed by clear colder weather.
92. A falling barometer often means:	rainy weather ahead.
93. 106. What kind of cloud brings stormy weather, thunderstorms, and sometimes even tornadoes?	Cumulonimbus
94. Puffy white clouds that look like cotton balls are: 	cumulus clouds
95. High, thin, wispy clouds are: 	cirrus clouds
96. Which cloud forms a gray blanket over the sky, often bringing steady rain or drizzle? 	stratus cloud
97. This instrument measures air pressure is a:	barometer
98. This instrument measures wind speed:	anemometer
99. This instrument measures precipitation:	rain gauge
100. These severe storms usually form over water in the Caribbean:	hurricanes
101. Earth is one of ____ planets that revolve around the sun.	8
102. Earth is the _____ planet from the sun.	third
103. Venus, Mercury, Earth and Mars are the :	rocky inner planets
104. The gas giants are: 105.	Jupiter, Saturn, Uranus, and Neptune
106. The smallest planet is:	Mercury

107. The largest planet is:	Jupiter
108. The planets listed from closest to farthest from the sun:	Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune
109. Because of its small size and irregular orbit, Pluto is now considered a:	dwarf planet
110. Earth revolves around the sun in:	365 days (one year)
111. The moon revolves around the Earth in approximately:	one month
112. Seasons are caused by the:	the tilt of the Earth as it revolves around sun
113. This is a _____ _ moon. 	gibbous
114. This is a _____ moon. 	crescent
115. The moon can't be seen when it passes between the Earth and the sun because the illuminated side faces away from Earth. This phase is called:	a new moon
116. How far is the Earth from the sun?	150 million km
117. What does the Earth have that allows it to support life?	water and an oxygen rich atmosphere
118. How does the Earth's atmosphere protect the Earth?	It blocks out most of the sun's damaging rays.
119. Ancient Greeks like Aristotle and Ptolemy believed _____ was the center of our solar system, and the planets and the sun revolved around us.	the Earth
120. Copernicus and Galileo tried to convince the world that _____ was actually the center of the solar system, and all of the planets revolve around it, and not around the Earth.	the sun
121. Galileo used his invention of the _____ to observe the sky.	telescope
122. The NASA Apollo missions sent astronauts to the _____ .	the moon
123. About half of Virginia is considered to be in the Chesapeake Bay _____ because the surface water and all of the materials it carries drain into the Chesapeake Bay.	watershed
124. Land drained by rivers west of Roanoke is part of the Mississippi / Gulf of Mexico:_____.	watershed
125. Much of Virginia is covered in _____, an important natural resource for	forests

Virginia.	
126. An important energy resource mined in the southwestern part of Virginia is _____ .	coal
PART 2 – GRADE 5 SCIENCE REVIEW	
127. Sound is a form of energy produced by:	vibrating matter
128. Sound travels in:	waves
129. The _____ of a sound is the number of vibration in a given time. 	frequency
130. An object vibrating faster will have a higher frequency and a higher:	pitch
131. Sound is a _____ wave. 	compression
132. The distance between compressions, or between the peaks of two waves is the: 	wavelength
133. What kind of matter does sound travel through fastest?	solids
134. Sound travels slower through gases than through liquids and solids because the molecules in gases are:	farthest apart
135. Dogs, bats and other animals can hear _____ sounds that humans cannot hear. Whales can hear lower frequency sounds.	high frequency
136. Musical instruments _____ to produce sounds.	vibrate
137. An instrument that uses sound echoes to measure see the ocean floor or underwater objects is a: 	sonar
138. _____ is a combination of several different wavelengths of light traveling together.	white light
139. The wavelengths of light from longest to shortest are.	red, orange, yellow, green, blue, violet
140. The color light with the longest wavelength is:	red

141. The color light with the shortest wavelength is:	violet
142. Light travels much _____ than sound through the atmosphere.	faster
143. It takes light from the sun _____ to travel 150 million km to Earth.	81/2 minutes
144. Light travels in straight paths called:	rays
145. Light travels fastest through:	a vacuum or empty space
146. When light bounces off an object, it is: 	reflected
147. When light bends, it is: 	refracted
148. When light passes through an object, it is:	transmitted
149. Light passes easily through a window because the glass is:	transparent
150. Some light can pass through wax paper. Wax paper is:	translucent
151. Light can't travel through a wall. A wall is:	opaque
152. When white light passes through a _____ , the different wavelengths bend at different angles, so we see a rainbow of colors. 	prism
153. There are over 100 pure substances, called:	elements
154. The smallest part of an element is an: 	atom
155. When two of more elements combine to make a completely new substance, it is called a:	compound
156. The smallest part of compound is a:	molecule
157. H_2O is a compound known as:	water
158. NaCl (Sodium Chloride) is a compound called:	salt
159. Substances that combined but can be separated again are called:	mixtures

160. A mixture in which one substance dissolves in another is called a:	solution
161. Sugar mixed into water is a_____ because if the water evaporated, the sugar would remain in the container.	solution (a type of mixture)
162. The three states of matter are:	solid, liquid, and gas
163. If you heat a solid, it may:	melt into a liquid
164. If you heat a liquid, it may:	evaporate into a gas
165. If you cool a liquid, it may _____ into a solid.	freeze
166. When you heat matter, the atoms and molecules:	move faster and usually spread apart
167. In a solid, the molecules are: 	tightly packed and barely moving
168. In a gas the molecules are: 	moving fast and spread apart
169. Living things are made of:	cells
170. Using a _____ you can see many parts of a cell.	microscope
171. Plant cells tend to be:	rectangular
172. 49. The control center of the cell is the:	nucleus
173. 50. The jellylike substance in a cell is the:	cytoplasm
174. The water and waste storage sacs in a cell are called:	vacuoles
175. The outer layer of an animal cell is the:	cell membrane
176. Plant cell have cell membranes but they have another stiff outer layer called the:	cell wall
177. Plants cell also have _____ which hold chlorophyll needed for photosynthesis.	chloroplasts
178. Which is the plant cell? Why?	One on left – it has a cell wall, chloroplasts and large central vacuole



179. Are most plants vascular or nonvascular?	Vascular
180. Plants that do not have special veins to transport food and water are:	nonvascular
181. Name a nonvascular plant.	moss
182. Animals with backbones are:	vertebrates
183. Animals without backbones are:	invertebrates
184. Snakes, lizards and fish are:	vertebrates
185. clams, squid, worms and insects are:	invertebrates
186. The ocean covers how much of the Earth?	70%
187. The shallow parts of the ocean floor at the edges of the continents make up the:	continental shelf
188. The salinity of the ocean varies. Salinity means:	saltiness
189. Wind patterns and different water densities cause:	ocean currents
190. As the depth of the ocean increases, what else increases?	water pressure
191. As the depth of the ocean increases, what decreases?	temperature and the amount of light
192. An ocean current which carries warm water from the equator to Europe is:	The Gulf Stream
193. The greatest variety of ocean life is in the shallowest part of the ocean, above the:	continental shelf

194. These tiny plant-like organisms produce much of the Earth's oxygen and serve as the basis of the ocean ecosystem	Phytoplankton
195. Phytoplankton, like other plants, need sunlight for photosynthesis, and therefore live :	On the ocean's surface
196. The deepest parts of the ocean are:	trenches
197. Underwater mountains caused by plate movements are:	mid-ocean ridges
198. Three types of rock are:	sedimentary, metamorphic, and igneous
199. Over a period of time, layers of sediment are pressed together to form these types of rocks.	Sedimentary
200. When molten rock or magma cools below the Earth's surface or cools after erupting from a volcano as lava, this type of rock is formed.	Igneous rock
201. Rocks formed from other types of rocks by intense heat and pressure deep within the Earth are called:	Metamorphic rocks
202. Sedimentary rocks often contain these remains of organisms which tell us a lot about life and Earth in the past.	fossils
203. Scientific evidence indicates the Earth is how old?	4.6 billion years old
204. The Earth's surface is constantly changing due to heat and pressure within the Earth and weathering and erosion at the surface. These processes constantly change rock from one type to another in a cycle called:	The Rock Cycle
205. The two layers of the Earth that are composed mostly of rocky material are:	The crust and mantle
206. The layers composed mostly of iron and nickel	Inner and outer core
207. Heat energy causes movement of material within the Earth. Large, continent-sized blocks that move slowly about the Earth's surface due to this heat energy are called:	plates
208. Most earthquakes and volcanoes are located at the boundary of the plates, called:	faults
209. Mountain ranges, including the Appalachian mountains, mid-ocean ridges and trenches are caused by:	Plate movements
210. Rocks on the Earth's surface are constantly being broken down by chemical processes, weather, glaciers and even tree roots. Rocks are broken into smaller pieces in a process called:	weathering

211. Weather rock material, sand and soil can be moved by water and wind in a process called:	erosion
212. Roots hold soil in place. How can soil erosion be prevented?	planting trees and other vegetation
213. Mountains are usually caused by:	plate movements
214. Mountains and volcanoes usually form on the _____ between two plates, when the plates push together or split apart. (convergent and divergent boundaries)	boundaries
215. Plates that slide against each other are called sliding boundaries - They cause:	earthquakes