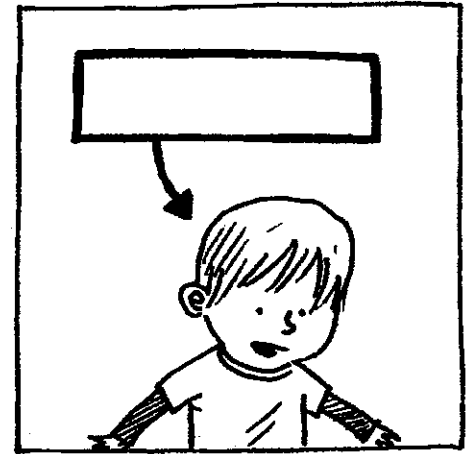
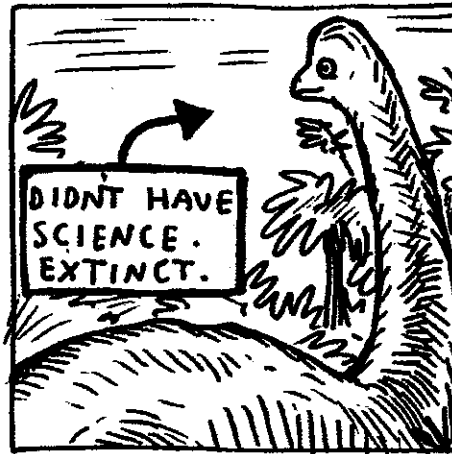
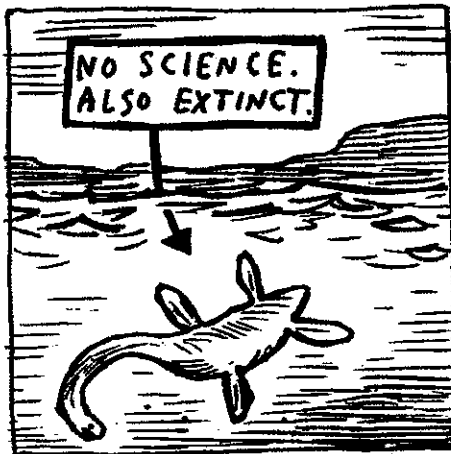
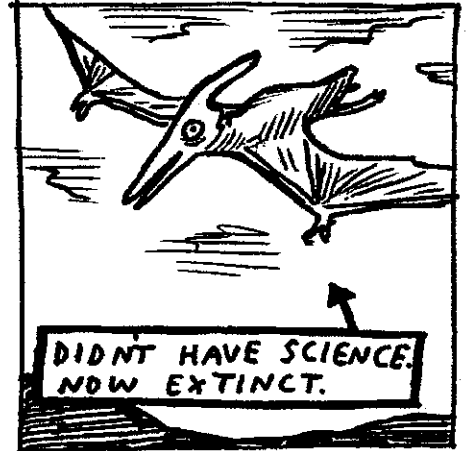
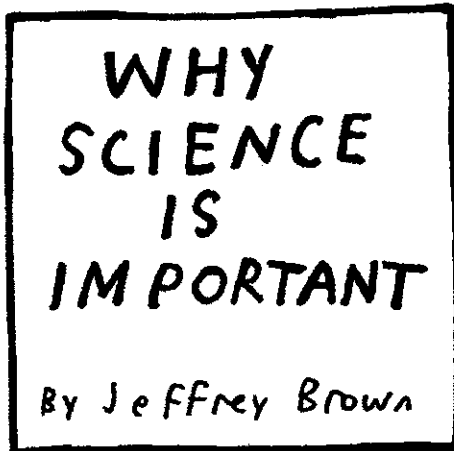


# Science 8 Final Exam

## Part 1

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

1. You have the first block to write this part of the exam
2. You may use a 2 pg handwritten "cheat sheet" to assist you.
3. You may not use other notes or the textbook during the test.
4. You must write in black pen, blue pen or pencil.
5. Please answer all questions.



## Section 1: Fill in the Blank

Fill in the blanks with the most suitable word from your vocab sheet. Each word will be used only once, all words will be used.

1. \_\_\_\_\_ are single celled prokaryotic organisms which can cause disease but which also help with digestion.
2. A way to get active immunity without having a disease is to get a(n) \_\_\_\_\_.
3. The outermost layer of an animal cell is the \_\_\_\_\_.
4. Most complex organisms are made up of \_\_\_\_\_ cells which have membrane bound organelles.
5. Non-living things which can cause the host cells to reproduce them and often cause disease are called \_\_\_\_\_.
6. If a barrier is \_\_\_\_\_ to sugar it means that sugar can go through it.
7. The flap of skin which prevents food from entering the trachea is the \_\_\_\_\_.
8. The yellowish part of blood which carries nutrients is called \_\_\_\_\_.
9. Acquired immune deficiency syndrome is better known as \_\_\_\_\_.
10. The \_\_\_\_\_ are the parts of blood which carry oxygen and carbon dioxide.
11. The \_\_\_\_\_ are the parts of blood which cause clotting.
12. The smallest blood vessels are called \_\_\_\_\_.
13. When you swallow a bolus the esophagus pushes it down by a process called \_\_\_\_\_.
14. A red area around an infection is called \_\_\_\_\_.
15. The type of white blood cells which "eat" pathogens are called \_\_\_\_\_.
16. The distance from the rest position to the crest of a wave is called the \_\_\_\_\_.
17. How often the crest (or trough) of a wave passes is called \_\_\_\_\_.
18. A water wave travels through water, water is the \_\_\_\_\_ for the wave.
19. Visible light, radio waves, and X-rays are all parts of the \_\_\_\_\_.
20. A particle of light is called a(n) \_\_\_\_\_.

21. A material which light rays go straight through (such as a window) is called \_\_\_\_\_.
22. An imaginary line at an angle of 90 degrees to the mirror is called the \_\_\_\_\_.
23. If it is bright outside your eyes will \_\_\_\_\_ and let in more light.
24. A condition where the cornea is irregularly shaped is called \_\_\_\_\_.
25. To see very small objects (such as cells) we need to use a(n) \_\_\_\_\_.
26. In a camera you move the lenses to \_\_\_\_\_, in the human eye we do it by changing the shape of the lens.
27. When light changes mediums it appears to bend, this is called \_\_\_\_\_.
28. Anything with mass and volume is \_\_\_\_\_.
29. The state of matter where particles have the most energy is \_\_\_\_\_.
30. \_\_\_\_\_ is measured in kilograms and is the same everywhere in the universe.
31. The energy of motion is called \_\_\_\_\_ energy.
32. When an solid object is cooled its volume will decrease slightly, this is called \_\_\_\_\_.
33. The energy which transfers from an object with high temperature to an object with lower temperature is called \_\_\_\_\_.
34. A boat floats in the water, it pushes some of the water out of the way. This is called \_\_\_\_\_.
35. Anything which flows is a(n) \_\_\_\_\_.
36. The units used to measure force are \_\_\_\_\_.
37. The amount of force do to gravity acting on an object is called its \_\_\_\_\_.
38. If force is applied to an object which causes that object to decrease in volume the object has undergone \_\_\_\_\_.
39. If force is applied to an object and the object changes shape but does not decrease in volume the object has undergone \_\_\_\_\_.
40. If the pressure inside a container is greater than the pressure outside a(n) \_\_\_\_\_ can occur.
41. Some insects and lizards are able to walk on top of water due to \_\_\_\_\_.
42. The circulatory system is a natural example of a \_\_\_\_\_ system.

43. All the water on earth is called the \_\_\_\_\_.
44. When water changes from a liquid to a gas it \_\_\_\_\_.
45. Rain and snow are examples of \_\_\_\_\_.
46. The amount of salt in water is \_\_\_\_\_.
47. Water which flows over land back to the ocean is called \_\_\_\_\_.
48. The Muskwa River is a(n) \_\_\_\_\_ of the Fort Nelson River.
49. The amount of space between rocks (how much water can fit there for instance) is called \_\_\_\_\_.
50. An area of porous rock underground where water can flow is called a(n) \_\_\_\_\_.
51. An area with many sinkholes is \_\_\_\_\_.
52. The scratches left by glaciers on rocks are called \_\_\_\_\_.
53. A mound of sediment left by a glacier at the farthest place it was before it started to retreat is called a(n) \_\_\_\_\_.
54. The \_\_\_\_\_ causes currents to turn to the right in the northern hemisphere.
55. The layer of water between the warm surface water and the cold deep water is called the \_\_\_\_\_.
56. The movement of cold water from the deep to the surface is called \_\_\_\_\_.
57. The opposite of a spring tide, during a(n) \_\_\_\_\_ tide high tides are not very high and low tides are not very low.
58. An area on the coast where salt water and fresh water mix is a(n) \_\_\_\_\_.
59. The ability of some animals to create their own light is \_\_\_\_\_.
60. When air pollution mixes with water vapor in the atmosphere it can create \_\_\_\_\_.

## Section 2: Matching

61. Match each step of the scientific method with a description of it (see example)

A:EXAMPLE	Choose a topic, do some research.	
B: Conclusion	Think of one specific testable thing which would be true if the hypothesis was correct.	
C: Experiment	Determine if your hypothesis was supported or not.	
D: Hypothesis	Test your prediction.	
E: Prediction	EXAMPLE	A
F: Observation	An educated guess.	

62. Match each function with the organelle which performs it. There are more organelles than functions (see example).

A: Example	Mitochondrion	
B: Cleans the cell	Cell wall	
C: Controls the activities of the cell	Cell membrane	
D: Rigid structure which surrounds plant cells	Chloroplast	
E: Organelle where photosynthesis occurs in plants	Nucleus	
F: Storage	Vacuole	
G: Produce proteins	Ribosome	
H: Converts sugar into energy the cell can use	Vesicle	
	Golgi body	
	Lysosome	
	Example	A

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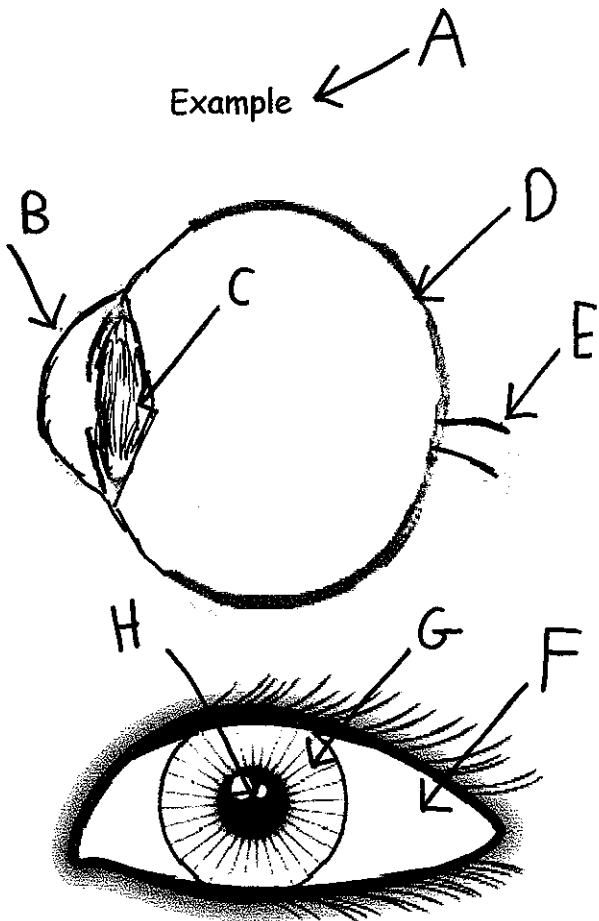
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63. Match each body system's function with its name, there are more body systems than functions (see example.)

A: Example	Immune System	
B: Transports blood	Nervous System	
C: Makes and releases hormones	Circulatory System	
D: Creates a waterproof barrier around the body	Digestive System	
E: Detects changes in the environment and signals these changes to the body which then carries out a response	Respiratory System	
F: Major organs are the lungs	Muscular System	
G: Removes liquid and gas wastes from the body.	Excretory System	
	Example	A
	Endocrine System	
	Reproductive System	
	Integumentary System	
	Skeletal System	

64. Match the letter pointing to the eye part with the name of that part (see example.)

16



Example	A
Cornea	
Iris	
Lens	
Optic nerve	
Pupil	
Retina	
Sclera	

17

65. Match the lens with the type of image it produces (2 spaces will be left blank)

A: EXAMPLE	Inverted, smaller	
B: Concave lens	Inverted, same size	
C: Convex lens (object between lens and focal point)	Inverted, enlarged	
D: Convex lens (object between one and two focal lengths from lens)	EXAMPLE	A
E: Convex lens (object more than two focal lengths from lens)	Upright, smaller	
	Upright, same size	
	Upright, enlarged	

66. Give the order the following liquids would layer from top to bottom based on their densities. The density of water is not given as it is expected you know this:

4

Liquids	Order
A. Gasoline (0.737 g/ml)	1.
B. Water	2.
C. Mercury (13.59 g/ml)	3.
D. Milk (1.05g/ml)	4.

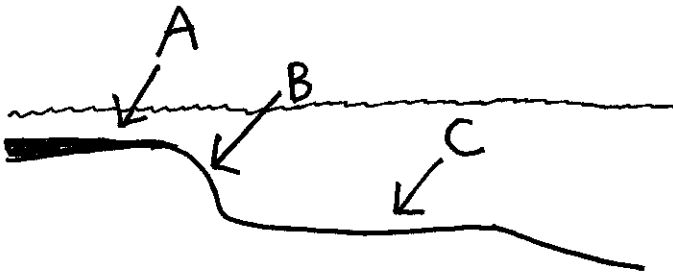
67. Match the location with the correct percentage of the world's water which it contains (see example.)

4

A: Example	97 percent	
B: Underground	2.4 percent	
C: Lakes and Rivers	0.6 percent	
D: Oceans	0.02 percent	
E: Glaciers	Example	A

4

68. Match the letter pointing to the area on the sea floor with the name of that area (see example.)



Example ← D

Example	D
Continental Slope	
Continental Shelf	
Continental Rise	

Section 3: True/False

13

Put T next to each sentence which is TRUE, put F next to each sentence which is false.

Example: Fort Nelson has a population of 3.5 million people.

F

69. When you have finished using a chemical you should pour all of it back into the original container. \_\_\_\_\_

70. Animal cells have cell walls. \_\_\_\_\_

71. A group of organs which work together forms a tissue. \_\_\_\_\_

72. Breathing is caused by a muscle called the diaphragm. \_\_\_\_\_

73. The body's first line of defence against pathogens includes the skin. \_\_\_\_\_

74. If speed doesn't change and wavelength increases, frequency will increase. \_\_\_\_\_

75. The angle of incidence is equal to the angle of reflection. \_\_\_\_\_

76. A ray of light which changes mediums and slows down will refract towards the normal. \_\_\_\_\_

77. Blind spots are where the lens enters the retina. \_\_\_\_\_

78. Rod cells are used for colour vision. \_\_\_\_\_

79. Absolute zero is when solids turn into liquids. \_\_\_\_\_

80. When solid objects are heated generally they will contract (i.e. lose volume) \_\_\_\_\_

81. Solids are fluids. \_\_\_\_\_

82. Weight is measured in kilograms or pounds. \_\_\_\_\_

83. Water sticking to the side of a glass is an example of adhesion. \_\_\_\_\_

15



84. 97% of the Earth is covered in water.

\_\_\_\_\_

85. Ocean water is denser than fresh water.

\_\_\_\_\_

86. The water table is normally higher in the summer than in the fall or spring.

\_\_\_\_\_

\_\_\_\_\_

87. Rust is an example of chemical weathering.

\_\_\_\_\_

88. A rain shadow is an area that gets a lot of precipitation.

\_\_\_\_\_

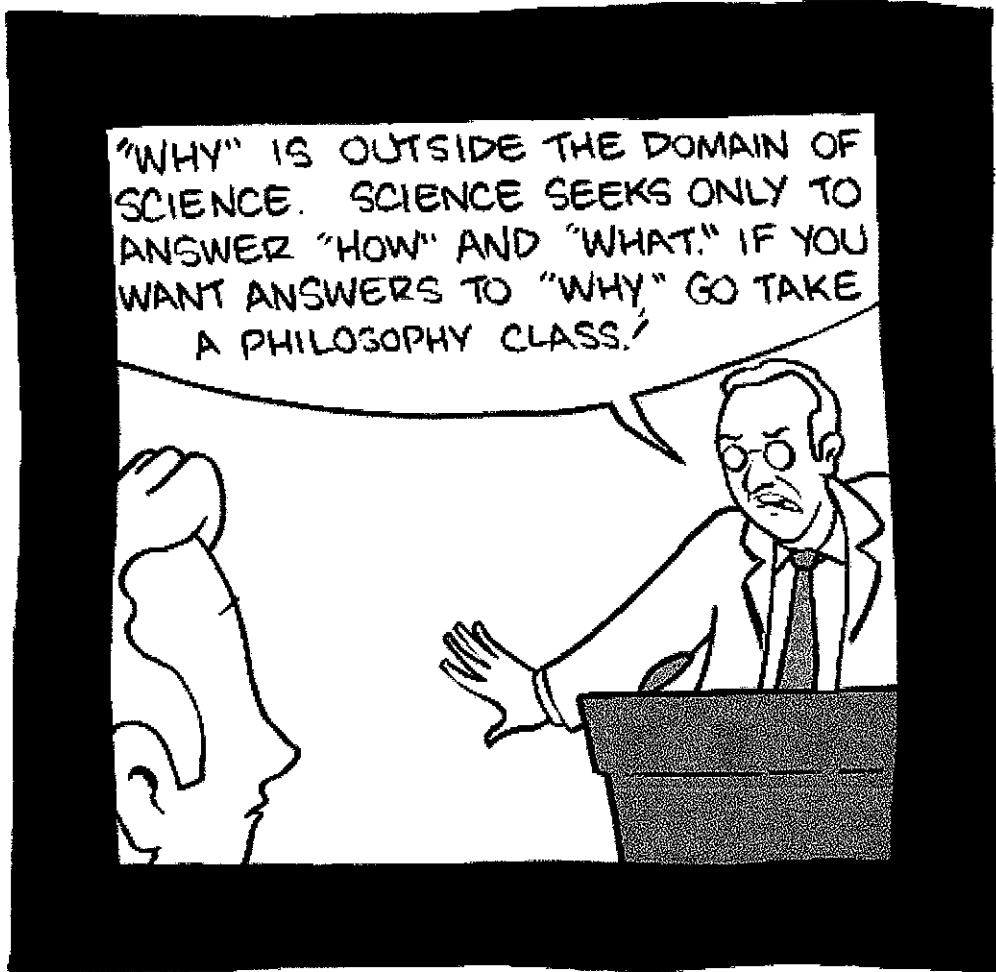
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# Science 8 Final Exam

## Part 2

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

1. You have the second block to write this part of the exam
2. You may use a 2 pg handwritten "cheat sheet" to assist you.
3. You may not use other notes or the textbook during the test.
4. You must write in black pen, blue pen or pencil.
5. Please answer all questions.



**Professor Beiser gave a brief Q&A as to his experiments on bears flying jetpacks.**

## Written Section:

89. Give an example of a non-living thing which satisfies at least two of the characteristics of living thing. Explain which two characteristics it satisfies and how.

90. A cell is 90% water, 5% dissolved salt, and 5% dissolved sugar. It is put into a beaker which is 80% water, 15% dissolved salt, and 5% dissolved sugar. What will happen in terms of osmosis and diffusion if the cell membrane is permeable to water, sugar, and salts.

91. Create a labelled diagram of the digestive system. Include the esophagus, mouth, large intestine, small intestine, stomach, duodenum, and anus.

92. What do waves transport? \_\_\_\_\_

✓1

93. Calculate the frequency of a wave if 10 crests pass in 5 seconds. \_\_\_\_\_ Hz.

✓1

94. Explain what happens when white light hits a red shirt, use the terms absorb and reflect.

✓2

95. List the eight parts of the electromagnetic spectrum (does not need to be in order.)

✓8

96. Make a ray diagram of light hitting a translucent material; include at least 3 rays of light.

✓2

97. Create and label a ray diagram of light hitting a plane mirror and reflecting. Show the incident ray, reflected ray, normal, angle of incidence and angle of reflection.

✓5

98. What is the angle of reflection if a ray of light hits a plane mirror with angle of incidence of 50 degrees?

1

99. Draw and label a concave lens and a convex lens.

2

100. List the three common states of matter on Earth.

3

101. Give an example of something which is NOT matter.

1

102. List the four principles of the kinetic theory of matter.

4

103. Give a mathematical description of density using mass and volume.

2

104. Describe how you would find the density of a sugar cube.

3

105. When people climb very high mountains they often bring oxygen tanks to breathe. Explain why this is necessary.

1

106. List 3 contact forces.

3

107. List 3 action at a distance forces.

3

108. Create and label a force arrow diagram of an object speeding up as it falls with gravitation force and air friction labeled with arrows of appropriate length.

2

109. How is the temperature and viscosity of a liquid related?

2

110. Explain why it would be difficult to open a car door if the car was underwater (but still full of air.)

111. Explain why the oceans are salty. Your answer should include where the salt originally came from and why it became concentrated in the ocean.

1/2

112. Give two reasons why exploring the ocean is difficult

1/2

113. What separates one drainage basin from another?

1/2

114. Explain the difference between weathering and erosion.

1/1

115. List the five oceans; put a star next to the largest and a circle around the smallest.

1/2

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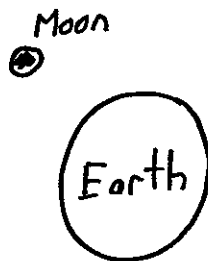
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116. How would earth's rotation (the Coriolis Effect) affect currents in the Northern Hemisphere?

/1

117. Label the diagram below of the moon and the earth with H where high tides would occur and L where low tides would occur.



118. Explain the difference between weather and climate.

/2

119. Explain how oceans moderate temperatures, use the term heat capacity. Include what occurs in the summer and the winter.

/2

/3



## Bonus Questions:

Explain your views on the use of animals in science. Explain what uses you think are acceptable and why, as well as what uses you do not think are acceptable and why.

/3

Explain how humans are affecting the environment and what you think we can do to protect the Earth. What do you feel are the most major issues (climate change, pollution, etc) and how do you think they can be fixed? What (if anything) can you do about these in your daily life?

/3

## Vocab Sheet

Each word will be used only once, all words will be used.

acid precipitation	epiglottis	mass	precipitation
AIDS	estuary	matter	red blood cells
amplitude	eukaryotic	medium	refraction
aquifer	evaporates	microscope	runoff
astigmatism	explosion	moraine	salinity
bacteria	fluid	neap	striations
bioluminescence	focus	newtons	surface tension
capillaries	frequency	normal	thermal contraction
cell membrane	gas	peristalsis	thermocline
compression	heat	permeable	transparent
Coriolis effect	hydraulic	phagocytes	tributary
deformation	hydrosphere	photon	upwelling
dilate	inflammation	plasma	vaccine
displacement	karst	platelets	virus
electromagnetic spectrum	kinetic	porosity	weight

## Vocab Sheet

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bacteria	fluid	neap	striations
bioluminescence	focus	newtons	surface tension
capillaries	frequency	normal	thermal contraction
cell membrane	gas	peristalsis	thermocline
compression	heat	permeable	transparent
Coriolis effect	hydraulic	phagocytes	tributary
deformation	hydrosphere	photon	upwelling
dilate	inflammation	plasma	vaccine
displacement	karst	platelets	virus
electromagnetic spectrum	kinetic	porosity	weight