

## 7<sup>th</sup> Grade Science Review

### Scientific Method Steps:

1. Problem 2. Hypothesis 3. Materials 4. Procedures 5. Data and Results 6. Conclusion

stomach trade-off small quantitative control respiratory large blood nutrients  
organisms cells organ system organs tissues cell membrane genetic respire  
dominant mutation two asexual ~~diversity~~ ~~extinction~~ half ~~billion~~

1. A well designed experiment consists of a control, a reproducible procedure, a large sample size, and multiple trials.
2. Qualitative data looks at observable characteristics, quantitative data measures and counts.
3. Experiencing side-effects of your cold medicine is an example of a trade-off.
4. Food travels from your esophagus to your stomach to your small intestine to your large intestine.
5. Absorbing oxygen is an important function of your respiratory system.
6. Your heart's function is to pump blood to carry nutrients, oxygen, and waste.
7. The human body is organized from smallest to largest structure starting with the cells, tissue, organ, organ systems.
8. The cell membrane allows substances to pass in and out of the cell.
9. All living organisms are made up of cells.
10. The nucleus contains all of the genetic material of a cell.
11. Cells take in nutrients, produce waste, and respire.
12. The offspring of sexual reproduction receives half of its genetic material from each parent.
13. There are 2 copies of each chromosome in most human cells.
14. The dominant condition of a characteristic is represented by RR and Rr.
15. The offspring of asexual reproduction is identical to the parent except when there is genetic mutation.

16. Bart is known for his yellow hair (H), which is dominant over blue hair(h). If he is heterozygous for his yellow color hair and marries a woman with blue hair, what type of hair might their offspring have?

A. List the genotypes for each: Heterozygous Yellow hair: Hh Blue Hair: hh

B. Complete the Punnett Square to show the possibilities that would result if Bart had children with the blue haired woman.

	<u>H</u>	<u>h</u>
<u>h</u>	Hh	hh
<u>h</u>	Hh	hh

C. What are the chances of offspring with ~~round eyes?~~ <sup>blue hair</sup> 50%?

D. What are the chances of offspring with an ~~oval eye shape?~~ <sup>yellow hair</sup> 50%?

17. Someone is looking for their lost friend at the mall. They ask for your help and give you this description.

Classify the data below as either quantitative or qualitative data. Fill in the T-Chart.

Height: 4'11"	
Weight: 90 lbs	
Hair: long pony tail	
Jacket: red	
Eyes: Hazel	

Quantitative	Qualitative
4'11" 90 lbs	long pony tail red jacket hazel eyes

18. Two cousins have a serious type of skin cancer. They are informed that they could be part of a clinical trial for a promising new medication. They want to join the trial, but they know that there are trade-offs for participating. What would be some of the trade-offs if they were to be part of the trial?

Explain why they are trade-offs.

You could get placebo, and not get any treatment  
You could get side effects from treatment  
Treatment could be ineffective  
Treatment could not be safe

19. Read the following experiment. Explain the good factors of a well designed experiment it includes, and the factors it doesn't. How would you improve this?

Bart and Lisa are sick with the flu. Marge wants to see if a certain over the counter medicine works. She decides to give the medicine to Bart and use a home remedy for Lisa. She tries this for six days. Everyday Bart and Lisa get the same food for breakfast, lunch and dinner. She gives Bart the medicine three times a day. She gave Lisa herbal tea when she was thirsty. She took their temperatures every day and recorded their progress. At the end, both children were better.

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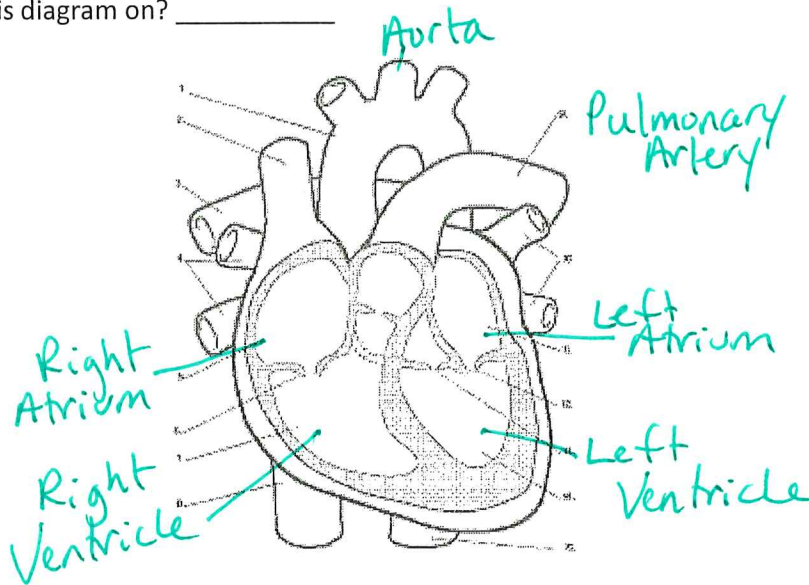
**Textbook Scavenger hunt --- Use your text book to find the answers to the following questions:**

20) In Unit B find the following answer: Your heart is made up of 4 chambers that work as 2 pumps. The right side of your heart acts as a pump that pumps blood to your lungs. The left side of your heart acts as another pump that pumps blood to all of the rest of your body. What page did you find these answers? \_\_\_\_\_

21) Your digestive system is responsible for both mechanical and chemical breakdown. What page did you find this on? \_\_\_\_\_

22) When you chew food, mechanical breakdown occurs. During chemical breakdown, acids in your digestive system break down food into even smaller particles. What page did you find these answers on? \_\_\_\_\_

23) Using the diagram below, draw arrows that show the direction in which blood flows. What page did you find this diagram on? \_\_\_\_\_



24) Using the diagram above, label the following parts: Aorta, Right Atrium, Left Atrium, Right Ventricle, Left Ventricle, Pulmonary Artery

25) Arteries carry blood away from your heart. Most arteries carry oxygen rich blood to the organs. What page did you find these answers? \_\_\_\_\_

26) Veins carry blood back to your heart. Most veins carry blood with low levels of oxygen and higher levels of CO<sup>2</sup>. What page did you find these answers on? \_\_\_\_\_

27) The human heart has valves that help blood flow in one direction. What page did you find these answers? \_\_\_\_\_

28) With every breath you take, you inhale O<sup>2</sup> and exhale CO<sup>2</sup>. Your body uses the \_\_\_\_\_ to get energy from food. What page did you find these answers on? \_\_\_\_\_

29) Give 5 examples of how the shape (structure) of the heart relates to each of their functions (jobs).  
What pages did you find these answers on? \_\_\_\_\_

See StudyGuide