

TOP ~~20~~¹⁶ NEED-TO-KNOW SCIENCE CONCEPTS

Table 1: Weight Distributions for Grade 5 Science

Unifying Concept	Grade 5 Science
Forces and Motion	13–15%
Matter: Properties and Change	12–14%
Energy: Conservation and Transfer	11–13%
Earth Systems, Structures and Processes	15–17%
Structures and Functions of Living Organisms	14–16%
Ecosystems	14–16%
Evolution and Genetics	13–15%
Total	100%

NC Department of Public Instruction/Accountability Services Division
Revised March 20, 2015

Tues. 5/5/15

1.) Which will most likely result from a low-pressure weather system?

A. warm temperatures

B. clear conditions

C. cloudy conditions

D. cool temperatures

2.) On a cold, cloudy day, the local weather forecaster predicts that a high-pressure system will be moving into the area in the next 24 hours. Which weather condition will this system most likely bring to the area?

A. stormy

B. snowy

C. hot

D. sunny

Wed. 5/6/15

3.) Which is most responsible for the uneven heating of the air in the atmosphere?

A. conduction

B. convection

C. radiation

D. condensation

4.) Andres lives in the southern hemisphere. What season does he most likely experience in August?

A. spring

B. summer

C. winter

D. autumn

Thur. 5/7/15

5.) The weather forecast indicates that a ~~warm~~^{cold} front will be moving into the area in the next 24 hours. Which type of weather will most likely result?

- A. cloudy skies and rainy weather
- B. clear skies and cold temperatures
- C. clear skies and hot temperatures
- D. heavy snow and ice

6.) What must occur before clouds can form?

- A. Water vapor must lose heat energy.
- B. Water vapor must get warmer.
- C. Transpiration must add water vapor to the atmosphere.
- D. Precipitation must begin to fall and run off.

Fri. 5/8/15

7.) What will most likely result when the ^{polar} jet stream moves south of North Carolina?

- A. North Carolina will experience cold weather.
- B. North Carolina will experience tropical weather conditions.
- C. North Carolina will experience hot, dry weather.
- D. North Carolina will experience mild weather.

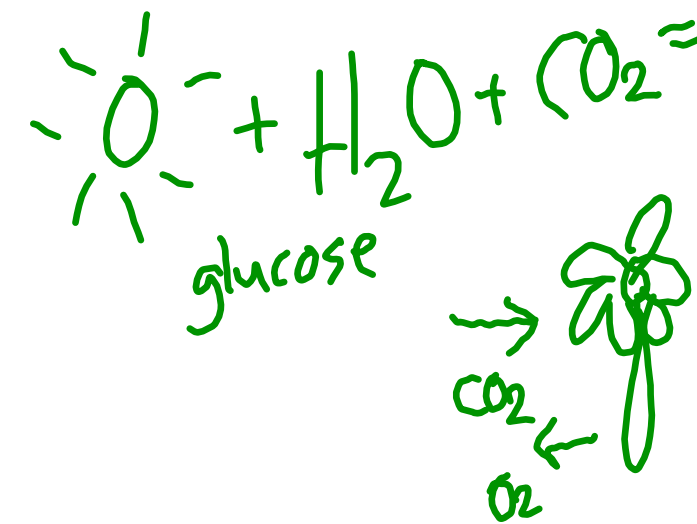
8.) What is the cause of ~~rising surface temperatures~~ ^{warmer} of the Pacific Ocean, drought in the western United States, and flooding on the Pacific coast of South America?

- A. the Gulf Stream
- B. the jet stream
- C. El Niño
- D. La Niña

Mon. 5/11/15

9.) Which process allows green plants to control the amount of water stored in their leaves?

- A. transpiration
- B. photosynthesis
- C. condensation
- D. respiration



10.) Which statement best describes a bacterial cell?

- A. It contains more than one cell.
- B. It is part of a larger organism.
- C. It contains different kinds of cells.
- D. It is a complete organism.

Tues. 5/12/15

11.) A scientist is trying to decide whether an organism is unicellular or multicellular. Which information would help the scientist most to make her decision?

- A. size of the cells of the organism
- B. what the organism eats
- C. how many types of cells are in the organism
- D. how fast the organism grows

12.) Which characteristic do single-celled organisms and multicellular organisms have in common?

- A. Both have cells with specialized functions for each life process.
- B. Both perform all of life processes within one cell.
- C. Both have a way to get rid of waste materials.
- D. Both are able to make food from sunlight.

Wed. 5/13/15

13.) Why do multicellular organisms need transport systems?

- A. Most have cells that are not able to exchange gases with the outside environment.
- B. Most have cells that are unable to grow and survive in their environment.
- C. Most have cells that need food from sources outside their environment.
- D. Most have cells that require more energy to survive than single-celled organisms.

14.) Which is a function of the cardiovascular system?

- A. to move water throughout the body
- B. to provide structural support for the body
- C. to eliminate waste from the body
- D. to transport gases throughout the body

Thurs. 5/14/15

15.) Which best describes the speed of a ball as it is thrown straight up into the air and comes back down?

- A. The ball goes up at a constant speed, stops, then comes down at a constant speed.
- B. The ball goes up at a constant speed, stops, and increases speed as it comes down.
- C. The ball goes slower and slower as it goes up, stops, and then goes faster and faster as it comes down.
- D. The ball goes slower and slower as it goes up, stops, and then comes down at a constant speed.

16.) A student notices that an inflated balloon gets larger when it is warmed by a lamp. Which best describes the mass of the balloon as a result of this change?

- A. The mass of the balloon increases because the size of the balloon has increased.
- B. The mass of the balloon increases because the temperature of the balloon has increased.
- C. The mass of the balloon stays the same because the gas inside the balloon still has the same mass after it warms up.
- D. The mass of the balloon stays the same because warming decreased the mass enough to cancel out the effect of increasing the size.