

7th Grade Final Study Guide

Test Date: _____

Lab Safety/Scientific Method

1. Be able to put the steps of the scientific method in order.
2. The scientific term for a sensible explanation to a problem is a hypothesis.
3. The independent variable is the part of the experiment that is changed by the scientist.
4. Qualitative data describes the qualities or characteristics of something. Examples are colors, tastes, and sounds.
5. The conclusion should state if your hypothesis was right or wrong and why as well as any improvements/changes you would make.
6. Line graphs show trends, especially over time.
7. Bar graphs are used to compare data.
8. A variable is a factor that changes in an experiment.
9. Quantitative data is information expressed in numbers. Examples include amounts, temperatures, mass, and length.
10. Variables that do NOT change during the experiment are called constants/controls.

Plants

1. Fertilization occurs when a sperm nucleus joins an egg cell.
2. The part of the plant embryo that develops into the root system is the radicle.
3. The tissue which carries water upward in plants is called the xylem.
4. Evaporation of water from plant leaves is called transpiration.
5. The study of plants is botany.
6. The food-making process of plants is photosynthesis.
7. The early growth of a seed is germination.
8. Cotyledons are structures designed for food absorption and storage in a seed.
9. The three main parts of a seed are: endosperm, seed coat, and embryo.
10. The plumule develops into the stem and leaves in a plant.

Classification

Reptiles

1. Coldblooded vertebrates with scales
2. Breathe with lungs
3. Lay eggs

Amphibians

1. Internal skeletons, coldblooded, smooth bare skin
2. Live in water
3. Breathe with lungs
4. Lay eggs
5. Young breathe with gills, adults breathe with lungs

Fishes

1. Coldblooded vertebrates with scales
2. Live in water
3. Lay eggs
4. Young breathe with gills, adults breathe with lungs

Birds

1. Warmblooded
2. Have feathers
3. Breathe with lungs
4. Lay eggs

Mammals

1. Warmblooded
2. Breathe with lungs
3. Nurse their young
4. Give live birth

Cells

1. The cell membrane allows certain substances to enter and leave the cell.
2. The nucleus is the control center of the cell.
3. The storage spaces of the cell are the vacuoles.
4. The “building blocks of life” known as cells, are the smallest living things.
5. The lysosomes recycle worn out products in the cell so they can be used again.
6. The cell’s powerhouse, which produces energy for the cell is the mitochondria.
7. The ribosomes create protein—the product of the cell.
8. The Golgi bodies pack and carry proteins in little bubbles.
9. The cell’s environment, which holds all the organelles, is the cytoplasm.

DNA/Genetics

1. The sides or backbone of the DNA ladder are made up of sugars and phosphates.
2. A gene that always shows up in the offspring is a dominant gene.
3. A Punnett square shows possible combinations of genes.
4. An organism with two like genes for a trait is said to be pure.
5. The passing of traits from parents to offspring is called heredity.
6. The rungs of the ladder are pairs of nitrogen bases.
7. Humans have 46 chromosomes in their body cells.
8. The study of traits and how they are passed on is genetics.

Geology

1. The study of the earth beneath us is known as the science of geology.
2. The thinnest layer of the earth is the crust.
3. The ancient Greek word “geo” means earth.
4. Most of the knowledge about the interior of the earth has come from studying earthquakes.
5. Seismology is the study of earthquakes.
6. It is believed that all the continents once formed one super continent, which was called Pangaea.
7. The magnitude is a measurement of how much energy is given off by an earthquake.
8. The intensity of an earthquake is a measure of how badly the quake shakes people and objects; and the damage it causes to buildings.
9. An active volcano has steam or gases coming from it and when it erupts, it spews out lava and ash.
10. An extinct volcano has not shown any activity for more than 50 years.
11. A volcano that spills out lava and has a gentle slope is a shield volcano.
12. A volcano that shoots out chunks of ash and has a steep slope is a cinder cone volcano.
13. Metamorphic rock is formed due to intense heat and pressure.
14. Sedimentary rocks are layered rocks and are made from small particles that have cemented together through water.
15. The name, “igneous,” means “formed from fire.”

Human Body

1. A system is a group of organs which function together as a unit to perform a definite job for the body.
2. Ligaments connect bones to bones.
3. Tendons connect muscles to bones.
4. The majority of digestion and absorption takes place in the small intestine.
5. Arteries carry blood away from the heart to the rest of the body.
6. Your stomach is a temporary storage pouch where food may remain for hours.
7. Veins carry blood towards the heart.
8. The long, muscular tube that leads from the mouth to the stomach is the esophagus.
9. The three layers of skin are: dermis, epidermis, hypodermis
10. The largest organ is your skin.
11. The umbilical cord allowed oxygen and nutrients to pass from the placenta to your developing body in the womb.
12. Ovaries in females produce eggs, while testes in males produce sperm.
13. The breathing muscle is known as the diaphragm.

Ecosystem/Biomes

1. The combination of living and nonliving elements in a given place is an ecosystem.
2. A plant or animal's special job in the ecosystem is called its niche.
3. Animals that are killed and eaten for energy are prey.
4. The relationships between two organisms is known as symbiosis.
5. An omnivore is an organism that gets energy from eating plants and animals.
6. An organism that gets energy from eating other animals is a carnivore.
7. Predators kill and eat other animals for energy.
8. Biomes are areas having plants, animals, and climates.
9. Extinction is known as the loss of a species.
10. Global warming is the gradual increase in the earth's temperature caused by nature and the burning of fossil fuels.

Extra Credit—questions from Chapter 10 (Creation vs. Evolution)