



Doing hands-on science is still the best way to learn science. But understanding science lingo builds the firm foundation kids need to dig deeper. Find ways to make memorizing as fun as it is informative.

Make flashcards of vocab words and focus on learning one new term each week. Take turns quizzing each other during brain breaks. Using a science notebook, have children rephrase definitions in their own words. Drawing or symbolizing concepts can also help kids make ideas stick.

SCIENCE TERMS

Analysis: studying something to learn about its parts

Atom: the smallest unit with chemical properties of an element

Bacteria: one-celled or unicellular microorganisms with no distinct, membrane-enclosed nucleus containing genetic material

Biodiversity: or biological diversity, is the variety of living organisms on Earth, or in an ecosystem or habitat

Classification: a system of organizing items in a group according to shared characteristics

Climate: the average weather in an area over a long period of time

Compound: a substance resulting from the chemical combination of two or more elements

Current: electrons flowing to produce electricity

Density: measurement of an item's compactness based on the following equation—
 $density = mass/volume$

Diffusion: how molecules move from an area of higher concentration to lower concentration

Diffraction: how light waves bend when passing through a slit or around an edge

DNA: deoxyribonucleic acid (DNA) is a chemical found in the nucleus of cells that carries the 'instructions' for the development and functioning of living organisms

Ecosystem: all interconnected living things that share an environment

Electrolyte: in chemistry, a substance that conducts electricity when dissolved in water

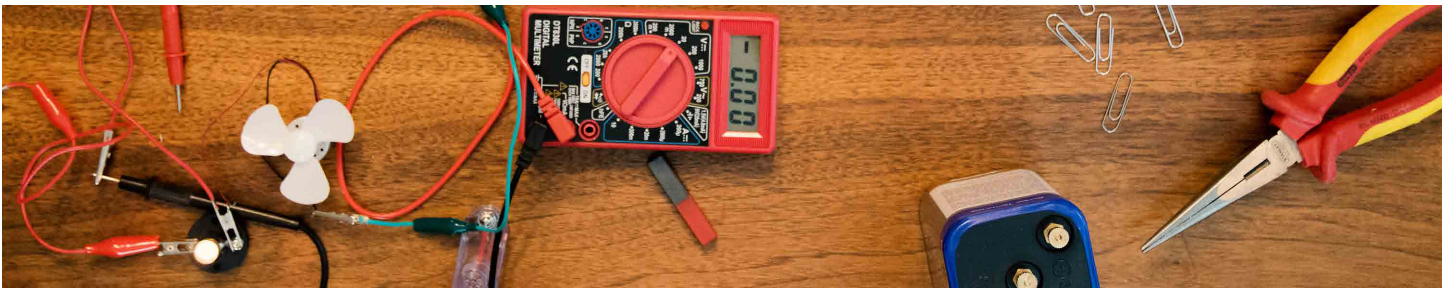
Entropy: a measurement of a system's unusable energy; or the randomness and disorder within a system

Force: a push or pull resulting from two objects interacting with each other, summarized with the following equation— $Force = mass \times acceleration$

Frequency: the number of complete sound wave cycles that occurs in one second

Gravity: an attractive force that exerts a pull between two objects, such as a baseball and the earth

Habitat: the environment in which an animal lives



Hypothesis: a prediction of what will happen in an experiment

Inertia: the property of matter that resists changes to the object's motion

Joule: a unit measuring energy based on the following— 1 newton of force applied over 1-meter distance

Kinetic energy: energy in motion

Matter: the substance that composes every physical object that has mass and takes up space

Mitosis: asexual reproduction that takes places in cells

Nucleus: positively charged mass at the center of an atom

Observation: noticing or paying close attention to an object or event

Particle: a very small piece of matter

Pigment: the color-producing matter of plant or animal tissue

Photosynthesis: the process of turning sunlight, carbon dioxide, and water into food for a plant and oxygen

Polymer: a long chain of molecules that makes a substance flexible and stretchy

Quantify: accurately measuring

Refraction: light waves changing direction when passing through one substance to another

Scientific method: process scientists use to learn about and study the world

Surface tension: a force between molecules at a liquid's surface that causes it to behave like a film

Wavelength: distance between peaks of a wave

CLASSICAL LAWS

Gas Laws

Boyle's Law: Under constant temperature, the product of pressure (P) times volume (V) must remain constant, or $PV=constant$. This means that if one increases, the other must decrease (if $P\uparrow$ then $V\downarrow$).

Charles's Law: Under constant pressure, the quotient of volume (V) divided by temperature (T) is constant, or $V/T=constant$. This means that if one increases, so must the other, and vice versa (if $T\uparrow$, V must also \uparrow).

Combined Gas Law: $PV/T=constant$. In other words, $P_1V_1/T_1 = P_2V_2/T_2$, or the total of PV/T at one point will be the same as the total of PV/T at another point.

Laws of Thermodynamics

The First Law of Thermodynamics: Also known as the Principle of Conservation of Energy, heat and energy can't be created or destroyed, only moved from one location to another and converted to and from different forms of energy.

Second Law of Thermodynamics: Also known as the Law of Increased Entropy, while the quantity of energy remains the same, the quality of matter/energy deteriorates gradually over time.

Newton's Laws of Motion

First Law of Motion: Also known as the Law of Inertia, an object's velocity will not change unless it is acted on by an outside force. In other words, an object in in motion will stay in motion, but an object at rest won't move until a force acts upon it.

Second Law of Motion: When an object is acted on by an outside force, the strength of the force equals the mass of the object times the resulting acceleration.

Third Law of Motion: For every action, there is an equal and opposite reaction.

Resources

VisionLearning

<http://www.visionlearning.com/en/glossary/>

CHEM4KIDS

<http://www.chem4kids.com/glossary/index.html>

The Physics Classroom

<http://www.physicsclassroom.com/>

Tips for Teaching Science

<https://www.homesciencetools.com/learning-center/tips-for-teaching-science>

How to Keep a Science Notebook

<https://www.homesciencetools.com/learning-center/how-to-keep-a-science-notebook>

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