

ACCELERATED PHYSICAL SCIENCE SUMMER ASSIGNMENT

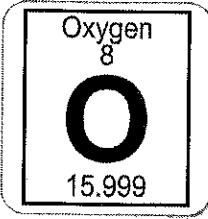
Description:

Students will build an Accelerated Science Dictionary using terms necessary to understand the standards covered in class. The dictionary can be completed in a composition notebook, in a Google document, in Google Slides, or on a Google website. Projects must be complete on or before Friday, August 10th. The assignment will count as a project grade.

Criteria:

1. The dictionary should be ordered and organized by standard. (2 points per standard for lack of organization)
2. All keywords should be alphabetized under each standard. (2 points per standard for words that are not alphabetized)
3. Each keyword should include a definition in your own words. (2 points per definition)
4. Each keyword should include a picture related to the keyword. Make sure the picture can be understood. (2 points per picture)
5. Each keyword should include a description of how the word relates to everyday life. (2 points per description)

Example:

Key Term	Definition (in your own words)	Related picture	Real life description
Element	A substance that cannot be broken down into anything simpler		The element oxygen is the most important element to a human's survival.

Useful website for science terms & everyday examples:

<http://www.worldofscience.in/dictionary.aspx>

Standards & Key Terms

SPS 1 (the atom & the periodic table)
Alkali metal
Alkaline earth metal

Atom
Atomic number
Atomic mass
Electron
Element
Energy levels
Groups (also called families)
Halogen
Isotope
Metals
Metalloids
Neutron
Noble gases
Nonmetals
Nucleus
Periodic table
Periods
Proton
Semiconductors
Subatomic particles
Transition metals
Valence electrons

SPS 2 (ionic vs covalent compounds) and SPS 3 (chemical reactions)
Anion
Binary compound

Boiling point
Cation
Chemical bond
Chemical change
Chemical equation
Chemical formula
Chemical reaction
Chemical symbol
Coefficient
Compound
Conductivity
Covalent bond
Covalent compound
Decomposition reaction
Double replacement reaction (also called double displacement reaction)
Electron configuration
Ion
Ionic bond
Ionic compound
Law of conservation of mass
Matter
Melting point
Physical change
Prefix
Single replacement reaction (also called single displacement reaction)
Stable

Subscript
Synthesis reaction

SPS 4 (radioactivity)
Alpha particle
Beta particle
Chain reaction
Gamma ray
Half-life
Nuclear fission
Nuclear fusion
Nuclear reactions
Radioactive decay

SPS 5 (phases of matter and gas laws) & 7. d (phase change diagrams)
Atmospheres (ATM)
Boyles' Law
Charles' Law
Compressible
Condensation
Density
Deposition
Evaporation
Freezing
Gas

Joule
Liquid
Melting
Plasma
Phase change
Phase change diagram
Pressure
Solid
Specific heat
Sublimation
Temperature
Volume

SPS 6 (solutions, acids, & bases)
Acid
Agitation
Base
Concentration
Conductivity
Hydronium ions
Hydroxide ions
Litmus paper
Neutral pH
pH
pH scale
Solubility curve

Solute
Solution
Solvent
Surface area

SPS 7 (energy & specific heat)
Chemical energy
Conduction
Conductor
Convection
Electrical energy
Electromagnetic energy
Energy
Energy transformation
Insulator
Kinetic energy
Mechanical energy
Nuclear energy
Potential energy
Radiation
Sound energy
Thermal energy

SPS 8 (force, mass, & motion)
Acceleration due to gravity

Compound machine
Displacement
Distance
Efficiency
Force
Friction
Inertia
Mass
Mechanical advantage
Motion
Negative acceleration
Net force
Newton
Newton's 1st law of motion
Newton's 2nd law of motion
Newton's 3rd law of motion
Positive acceleration
Simple machines
Speed
Velocity
Weight
Work

SPS 9 (waves)
Absorption
Amplitude

Angle of incidence
Angle of reflection
Compression
Constructive interference
Crest
Destructive interference
Diffraction
Doppler Effect
Electromagnetic wave
Frequency
Hertz (Hz)
Longitudinal wave (also called a compressional wave)
Mechanical wave
Medium
Pitch
Rarefaction
Reflection
Refraction
Transverse wave
Trough
Wave
Wavelength

SPS 10 (electricity & magnetism)
Alternating current (AC)
Anode

Attraction
Battery
Cathode
Current
Direct current (DC)
Electric discharge
Electric fields
Electric motor
Electromagnet
Generator
Magnetic domains
Magnetic fields
Magnetism
Negative terminal
Ohm's Law
Parallel circuit
Permanent magnet
Positive terminal
Repulsion
Resistance
Series circuit
Switch
Voltage