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NEW
Amazing
Science

Scientific Keywords Worksheet



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Unit 1

ECOLOGY

Learn the definitions of the following keywords.

Words	Definition
Ecology	Branch of biology which deals with the relationships between the living organisms themselves and with their surroundings.
Biotic	Living things in an environment, such as plants, animals, humans, and microorganisms.
Abiotic	Non-living things in an environment that affect living organisms.
Consumer	An organism that generally obtains food by feeding on other organisms such as animals.
Decomposers	Organisms that break down dead or decaying organisms such as fungi.

Fill in the missing spaces with either the words or their definitions

1. Ecology

2. _____ non living things in an environment that affect living organisms

3. _____ organisms that break down dead or decaying organisms such as fungi

4. Biotic

5. Consumer

Unit 2

HUMAN NERVOUS SYSTEM

Learn the definitions of the following keywords.

Words	Definition
Coordination	The ability to control movements.
Nerve impulse	An electrical signal that passes from one end of a neuron to the other.
Stimulus	Any change in organism's external or internal environment such as change in temperature.
Receptors	A nerve ending in the body that reacts to stimuli such as heat or cold, and makes the body react in a particular way.
Response	Reaction to a stimulus.
Sensory neuron	A neuron connected with a sense organ.
Peripheral nervous System	A large network of neurons that covers all parts of the body.
Central nervous System	The brain and the spinal cord connected to various parts of body by the peripheral nervous system.
Synapse	A connection between two nerve cells.

Memorize the scientific vocabulary given in the table above and complete the following sentences by filling in the blanks with the correct answers.

1. _____ is the ability to control movements.
2. _____ is any change in organism's external or internal environment such as change in temperature.
3. Response is the reaction to a _____
4. A sensory neuron is a neuron connected with a _____ organ
5. _____ nervous system is a large network of neurons that covers all parts of the body.

6. Central nervous system is the connection of the _____ and the _____ to various parts of the body by the peripheral nervous system
7. _____ is an electrical signal that passes from one end of a neuron to the other.
8. _____ is a nerve ending in the body that reacts to stimuli such as heat or cold, and makes the body react in a particular way.
9. _____ is a connection between two nerve cells

Unit 3

HEREDITARY AND CELL DIVISION

Learn the definitions of the following keywords.

Words	Definition
Chromosomes	The very small thread-like structures made of DNA in the nucleus of cells that carry genes.
Meiosis	Cell division in which the number of chromosomes becomes half of the original.
Mitosis	Cell division in which the number of chromosomes remains the same.

Memorize the scientific vocabulary given in the table above and complete the following sentences by filling in the blanks with the correct answers.

1. Chromosomes are very small thread-like structures made of _____ in the nucleus of cells that carry genes
2. _____ is cell division in which the number of chromosomes becomes half of the original.
3. Mitosis is cell division in the number of chromosomes _____

Unit 4

BIOTECHNOLOGY

Learn the definitions of the following keywords.

words	Definition
Biotechnology	The use of organisms, parts of organisms, or processes done by organisms to help humans make life easier.
Fermentation	A process in which yeast or bacteria break down sugar to produce energy, usually in the absence of oxygen.

Memorize the scientific vocabulary given in the table above and complete the following sentences by filling in the blanks with the correct answers.

- _____ is the use of organisms, parts of organisms, or processes done by organisms to help humans make life easier.
- Fermentation is a _____ process in which yeast or bacteria break down sugar to produce energy, usually in the _____ of oxygen

Unit 5

PLANT SYSTEMS

Learn the definitions of the following keywords.

words	Definition
Elements	It is a substance that consists of only one type of atom and cannot be broken down into simpler forms of matter.
Compound	A pure substance made up of different kinds of elements.
Atomic number	Number of protons in an atom of an element and is represented by the symbol Z.
Mass number	The sum of the number of protons and neutrons in the nucleus of an atom, represented by the symbol A.
Electron Shell	It is a layer around the nucleus of an atom that holds electrons.
Electronic configuration	The electron distribution in an atom's shells.

Memorize the scientific vocabulary given in the table above and complete the following sentences by filling in the blanks with the correct answers.

1. _____ is a substance that consists of only one type of atom and cannot be broken down into simpler forms of matter.
2. A _____ is a pure substance made up of different kinds of elements.
3. The _____ is the number of protons in an atom of an element and is represented by the symbol Z.
4. The _____ is the sum of the number of protons and neutrons in the nucleus of an atom and is represented by the symbol A.
5. An _____ is a layer around the nucleus of an atom that holds electrons
6. _____ refers to the electron distribution in an atom's shells.

Unit 6

CHEMICAL REACTIONS

Learn the definitions of the following keywords.

Words	Definitions
Conservation of mass	The mass can neither be created nor be destroyed but can change form.
Endothermic	A chemical reaction needing heat in order to take place.
Exothermic	A chemical reaction that produces heat.
Products	New substances that are produced during the chemical reactions.
Reactants	A substance that takes part in and is changed by a chemical reaction.

Memorize the scientific vocabulary given in the table above and complete the following sentences by filling in the blanks with the correct answers.

1. _____ states that mass can neither be created nor destroyed but can change form.
2. An _____ reaction is a chemical reaction that needs heat in order to take place.
3. An _____ reaction is a chemical reaction that produces heat.
4. _____ are new substances that are produced during chemical reactions.
5. _____ are substances that take part in and are changed by a chemical reaction.

Unit 7

ACIDS, BASES AND SALTS

Learn the definitions of the following keywords.

words	Definitions
Acid	A chemical that produces hydrogen ions and has a pH of less than seven.
Alkali	A chemical substance that reacts with acids to form salt and gives a solution with a pH more than seven when dissolved in water.
Indicator	A dye that changes colour when it is put into an acidic or alkaline solution.
Litmus	An indicator that is made from lichen.
Neutralisation	A reaction of alkali with acid that gives water and a salt.
Salts	A compound formed by reaction of an acid and a base.
Universal indicator	A mixture of several indicators which gives a different colour at each pH.

Memorize the scientific vocabulary given in the table above and complete the following sentences by filling in the blanks with the correct answers.

1. An _____ is a chemical that produces hydrogen ions and has a pH of less than seven.
2. An _____ is a chemical substance that reacts with acids to form salt and gives a solution with a pH more than seven when dissolved in water.
3. An _____ is a dye that changes colour when it is put into an acidic or alkaline solution.
4. _____ is an indicator that is made from lichen.
5. _____ is the reaction of an alkali with an acid that produces water and a salt.
6. _____ are compounds formed by the reaction of an acid and a base.
7. _____ is a mixture of several indicators which gives a different colour at each pH.

Unit 8

FORCES AND PRESSURE

Learn the definitions of the following keywords.

words	Definition
Force	A push or a pull on an object.
Pressure	The force per unit square. $P=F/A$.
Atmospheric pressure	The pressure exerted by the Earth's atmosphere.
Density	The mass of a substance per unit of its volume. In SI units it is measured in kg/m^3 .
Gravity	The force of attraction experienced by an object having mass within the gravitational field.
Contact force	Forces that act when two objects are in contact with each other such as friction.
Non-contact force	Forces between two objects that are physically separated and are not touching each other, such as gravity.
Barometer	A tool used to measure atmospheric pressure.

Memorize the scientific vocabulary given in the table above and complete the following sentences by filling in the blanks with the correct answers.

1. A _____ is a push or a pull on an object.
2. _____ is the force per unit area and is given by the formula $P = F / A$.
3. _____ is the pressure exerted by the Earth's atmosphere.
4. _____ is the mass of a substance per unit volume and is measured in kg/m^3 in SI units.
5. _____ is the force of attraction experienced by an object having mass within a gravitational field.

6. A _____ is a force that acts when two objects are in contact with each other, such as friction.
7. A _____ is a force between objects that are not touching each other, such as gravity.
8. A _____ is a tool used to measure atmospheric pressure.

Unit 9

REFLECTION AND REFRACTION OF LIGHT

Learn the definitions of the following keywords.

Words	Definitions
Refraction	The bending of light when it enters a new transparent material.
Incident Ray	The ray of light that strikes a surface or enters a medium.
Refracted Ray	The ray of light that changes direction when it passes from one medium to another.
Normal Ray	An imaginary straight line drawn perpendicular (at 90°) to the surface at the point where the incident ray strikes.
Angle of incidence	The angle between the incident ray and the normal at the boundary.
Angle of refraction	The angle between the refracted ray and the normal at the boundary.
Dispersion	The splitting of white light into its component colours.
Opaque	An opaque object is one that does not allow light to pass through it.
Transparent	A transparent object is the one that allows light to pass through it.

Memorize the scientific vocabulary given in the table above and complete the following sentences by filling in the blanks with the correct answers.

1. _____ is the bending of light when it enters a new transparent material.
2. The _____ is the ray of light that strikes a surface or enters a medium.
3. The _____ is the ray of light that changes direction when it passes from one medium to another.
4. The _____ is an imaginary straight line drawn perpendicular (at 90°) to the surface at the point where the incident ray strikes.

5. The _____ is the angle between the incident ray and the normal at the boundary.
6. The _____ is the angle between the refracted ray and the normal at the boundary.
7. _____ is the splitting of white light into its component colours.
8. An _____ object does not allow light to pass through it.
9. A _____ object allows light to pass through it.

Unit 10

ELECTRICITY AND MAGNETISM

Learn the definitions of the following keywords.

words	Definitions
Circuit	The complete path of wires and electrical components along which an electric current flows.
Voltage	Electrical force measured in volts.
Power	Energy that can be collected and used to operate a machine, to make electricity, etc.
Fuse	A small wire or device inside a piece of electrical equipment that breaks and stops the current if the flow of electricity is too strong.
Electromagnet	A piece of metal that becomes magnetic when electricity is passed through it.

Memorize the scientific vocabulary given in the table above and complete the following sentences by filling in the blanks with the correct answers.

1. A _____ is the complete path of wires and electrical components along which an electric current flows.
2. _____ is the electrical force measured in volts.
3. _____ is energy that can be collected and used to operate a machine or to make electricity.
4. A _____ is a small wire or device inside electrical equipment that breaks and stops the current if the flow of electricity is too strong.
5. An _____ is a piece of metal that becomes magnetic when electricity is passed through it.

Unit 11

OUR UNIVERSE

Learn the definitions of the following keywords.

words	Definitions
Stars	Balls of burning gas in space visible as a point of light in the sky at night
Constellation	Bright stars which join up to make patterns in the sky.
Galaxy	The system of stars that contains our Sun and its planets, seen as a bright band in the night sky.
Pulsar	A giant star that has shrunk so much that it appears smaller than the Earth.
Black hole	An area in space that even light cannot escape from because gravity is so strong there.
Supernova	A star that suddenly becomes much brighter because it is exploding.
Nebula	Great clouds of gas and dust found throughout the universe.
Black body	An object that absorbs all electromagnetic radiation.

Memorize the scientific vocabulary given in the table above and complete the following sentences by filling in the blanks with the correct answers.

- _____ are balls of burning gas in space that are visible as points of light in the night sky.
- A _____ is a group of bright stars that join up to make patterns in the sky.
- A _____ is the system of stars that contains our Sun and its planets and is seen as a bright band in the night sky.
- A _____ is a giant star that has shrunk so much that it appears smaller than the Earth.
- A _____ is an area in space from which even light cannot escape because gravity is extremely strong.
- A _____ is a star that suddenly becomes much brighter because it is exploding.
- A _____ is a great cloud of gas and dust found throughout the universe.
- A _____ is an object that absorbs all electromagnetic radiation.