

## 2cool4school - Grade 6 Science Worksheet

### Q1 - Science - Physics: Solutions

What is the term for the amount of solute dissolved in a solvent?

1. Concentration
2. Diffusion
3. Saturation
4. Molarity

### Q2 - Science - Physics: Solutions

What factor affects the movement of particles across a membrane during osmosis?

1. The color of the solution
2. The size of the container
3. The shape of the membrane
4. The concentration of water on each side

### Q3 - Science - Physics: Solutions

Osmosis specifically refers to the diffusion of water across what?

1. An open space
2. A solid barrier
3. A semipermeable membrane
4. A vacuum

### Q4 - Science - Physics: Solutions

Why does stirring a solution help dissolve a solute faster?

1. It turns the solute into a gas
2. It lowers the water temperature
3. It increases the solute's mass
4. It spreads the particles and increases contact between them

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### Q5 - Science - Physics: Solutions

Which of the following best describes diffusion?

1. The process of dissolving a solid in a liquid
2. The movement of water only
3. The movement of particles from high to low concentration
4. The separation of different substances in a mixture

### Q6 - Science - Physics: Solutions

Which process involves the movement of particles from an area of high concentration to an area of low concentration?

1. Diffusion
2. Osmosis
3. Filtration
4. Evaporation

### Q7 - Science - Physics: Solutions

Which term describes a solution that cannot dissolve any more solute at a given temperature?

1. Dilute
2. Unsaturated
3. Supersaturated
4. Saturated

### Q8 - Science - Physics: Solutions

What unit is commonly used to express concentration in chemistry?

1. Molarity
2. Molality
3. Parts per million
4. Percent composition

### Q9 - Science - Physics: Solutions

What is the main difference between diffusion and osmosis?

1. Diffusion requires energy; osmosis does not
2. Osmosis involves water; diffusion involves any type of molecules
3. Osmosis moves particles from low to high concentration; diffusion does the opposite
4. Diffusion occurs only in gases; osmosis occurs only in liquids

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### Q10 - Science - Physics: Solutions

Which factor does NOT affect the rate of diffusion?

1. Color of particles
2. Temperature
3. Particle size
4. Concentration gradient

### Q11 - Science - Physics: Solutions

Which of the following increases the solubility of most solid solutes in water?

1. Decreasing the temperature
2. Increasing the temperature
3. Decreasing the pressure
4. Adding more solute

### Q12 - Science - Physics: Solutions

What term describes a solution with a relatively low amount of solute?

1. Concentrated
2. Dilute
3. Saturated
4. Supersaturated

### Q13 - Science - Physics: Solutions

In the context of solutions, what is a solute?

1. The substance that is dissolved
2. The substance that does the dissolving
3. The resulting mixture
4. The container holding the solution

### Q14 - Science - Physics: Solutions

What happens to the diffusion rate when the concentration difference increases?

1. It stays the same
2. It decreases
3. It increases
4. It stops

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### Q15 - Science - Physics: Solutions

What happens to the rate of diffusion when the temperature increases?

1. It stops completely
2. It decreases
3. It remains the same
4. It increases

### Q16 - Science - Ecology and Conservation

Lichen life cycles involve a relationship between which two organisms?

1. Algae and fungi
2. Bacteria and fungi
3. Plants and fungi
4. Moss and fungi

### Q17 - Science - Ecology and Conservation

Which of the following is an example of a primary consumer?

1. A tree
2. A lion
3. A mushroom
4. A rabbit

### Q18 - Science - Ecology and Conservation

Which forest type requires careful conservation due to seasonal changes?

1. Desert
2. Rainforest
3. Temperate deciduous forest
4. Tundra

### Q19 - Science - Ecology and Conservation

In parasitism, which organism benefits?

1. The host
2. The parasite
3. Both organisms
4. Neither organism

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### Q20 - Science - Ecology and Conservation

What is the main reproductive structure of fungi?

1. Spores
2. Roots
3. Leaves
4. Seeds

### Q21 - Science - Ecology and Conservation

How can grazing lands be balanced between use and conservation?

1. Removing all herbivores
2. Overgrazing
3. Burning all grass
4. Rotational grazing

### Q22 - Science - Ecology and Conservation

Which gas do plants take in during photosynthesis?

1. Carbon dioxide
2. Oxygen
3. Nitrogen
4. Hydrogen

### Q23 - Science - Ecology and Conservation

Why is overfishing a concern for ocean conservation?

1. It only affects large fish
2. It increases fish populations
3. It depletes fish populations faster than they can reproduce
4. It has no environmental impact

### Q24 - Science - Ecology and Conservation

What is an ecosystem?

1. A community of interacting organisms and their environment
2. A single species in an area
3. A food chain

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4. Only the non-living environment

### **Q25 - Science - Ecology and Conservation**

How does a food web differ from a food chain?

1. A food web is shorter than a food chain
2. A food web shows multiple connections between organisms
3. A food web includes only herbivores
4. A food web shows only one path of energy

### **Q26 - Science - Ecology and Conservation**

Which term describes a relationship where both species benefit?

1. Parasitism
2. Mutualism
3. Commensalism
4. Predation

### **Q27 - Science - Ecology and Conservation**

Which of the following represents a correct food chain?

1. Grass Rabbit Fox
2. Rabbit Grass Fox
3. Fox Rabbit Grass
4. Grass Fox Rabbit

### **Q28 - Science - Ecology and Conservation**

Why are decomposers important in an ecosystem?

1. They produce their own food
2. They break down dead material and recycle nutrients
3. They hunt herbivores
4. They compete with plants for sunlight

### **Q29 - Science - Ecology and Conservation**

What is ecological succession?

1. A predator-prey relationship

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2. A sudden extinction of a species
3. A gradual change in ecosystems over time
4. A type of symbiosis

### Q30 - Science - Ecology and Conservation

Which human activity threatens freshwater ecosystems the most?

1. Urban gardening
2. Farming
3. Recycling
4. Pollution

### Q31 - Science - Physics

What is the formula to calculate speed?

1. Speed = Distance / Time
2. Speed = Time / Distance
3. Speed = Distance \* Time
4. Speed = Distance + Time

### Q32 - Science - Physics

If two forces acting on an object are equal and opposite, what is the net force?

1. 5 N
2. 10 N
3. 100 N
4. 0 N

### Q33 - Science - Physics

What is the SI unit of speed?

1. meters per second (m/s)
2. kilometers per hour (km/h)
3. miles per hour (mph)
4. meters per minute (m/min)

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### Q34 - Science - Physics

Which scenario best describes an unbalanced force?

1. A car driving at constant speed
2. A book resting on a table
3. A moving car coming to a stop
4. A ball sitting still on the ground

### Q35 - Science - Physics

If an object is moving at a constant speed in a straight line, what is its acceleration?

1. 0 m/s
2. 10 m/s
3. 5 m/s
4. 1 m/s

### Q36 - Science - Physics

What force causes objects to fall to the ground?

1. Air resistance
2. Friction
3. Magnetism
4. Gravity

### Q37 - Science - Physics

A person pushes a box, but it doesn't move. What force is opposing the push?

1. Inertia
2. Gravity
3. Friction
4. Centripetal force

### Q38 - Science - Physics

If an object has more mass, what happens to its acceleration when the same force is applied?

1. It decreases
2. It increases
3. It stays the same
4. It becomes zero



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### Q39 - Science - Physics

How do you calculate distance when speed and time are known?

1. Distance = Speed / Time
2. Distance = Speed Time
3. Distance = Time / Speed
4. Distance = Speed + Time

### Q40 - Science - Physics

If a car speeds up from 20 m/s to 30 m/s in 5 seconds, what is its acceleration?

1. 2 m/s
2. 5 m/s
3. 10 m/s
4. 15 m/s

### Q41 - Science - Physics

A train moves at 50 m/s for 10 seconds. How far does it travel?

1. 50 meters
2. 500 meters
3. 10 meters
4. 5000 meters

### Q42 - Science - Physics

If a car travels 120 km in 2 hours, what is its speed?

1. 60 km/h
2. 120 km/h
3. 40 km/h
4. 80 km/h

### Q43 - Science - Physics

How do you calculate time when speed and distance are known?

1. Time = Speed / Distance
2. Time = Distance / Speed
3. Time = Distance Speed
4. Time = Speed + Distance

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### Q44 - Science - Physics

Which force keeps objects moving in a circular path?

1. Frictional force
2. Gravitational force
3. Centripetal force
4. Magnetic force

### Q45 - Science - Physics

What happens to an object if no external force is applied to it?

1. It changes direction
2. It stops moving
3. It speeds up
4. It continues moving at the same speed or stays at rest

### Q46 - Science - Geology

Which type of rock is formed from the cooling and solidification of magma or lava?

1. Igneous
2. Sedimentary
3. Metamorphic
4. Fossil

### Q47 - Science - Geology

The theory that explains the movement of Earth's lithospheric plates is called what?

1. Rock Cycle
2. Continental Drift
3. Seafloor Spreading
4. Plate Tectonics

### Q48 - Science - Geology

Which type of boundary occurs when two tectonic plates move away from each other?

1. Transform
2. Convergent
3. Divergent
4. Subduction

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### Q49 - Science - Geology

Fossils are most commonly found in which type of rock?

1. Sedimentary
2. Igneous
3. Metamorphic
4. Magma

### Q50 - Science - Geology

What is the name of the supercontinent that existed about 300 million years ago?

1. Gondwana
2. Pangaea
3. Laurasia
4. Eurasia

### Q51 - Science - Geology

What is the process called when existing rocks are changed by heat and pressure?

1. Metamorphism
2. Erosion
3. Sedimentation
4. Weathering

### Q52 - Science - Geology

What is the main cause of earthquakes?

1. Volcanic eruptions
2. Erosion
3. Movement of tectonic plates
4. Heavy rainfall

### Q53 - Science - Geology

Which layer of the Earth lies directly beneath the crust?

1. Outer Core

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2. Mantle
3. Inner Core
4. Lithosphere

### **Q54 - Science - Geology**

What is the process called when existing rocks are changed by heat and pressure?

1. Metamorphism
2. Erosion
3. Sedimentation
4. Weathering

### **Q55 - Science - Geology**

The continuous process by which rocks are created, changed, destroyed, and formed again is known as what?

1. Plate Tectonics
2. The Rock Cycle
3. Erosion Cycle
4. Fossilization

### **Q56 - Science - Geology**

What is the process called when rocks are broken down by wind, water, or ice?

1. Deposition
2. Erosion
3. Weathering
4. Cementation

### **Q57 - Science - Geology**

Which layer of the Earth is composed primarily of solid iron and nickel?

1. Crust
2. Outer Core
3. Mantle
4. Inner Core

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### Q58 - Science - Geology

What do you call molten rock when it is beneath the Earth's surface?

1. Basalt
2. Lava
3. Magma
4. Ash

### Q59 - Science - Geology

What type of rock is formed from existing rocks that are changed by heat and pressure?

1. Sedimentary
2. Metamorphic
3. Igneous
4. Fossilized

### Q60 - Science - Geology

What process describes the transformation of sediment into sedimentary rock through compaction and cementation?

1. Weathering
2. Metamorphism
3. Erosion
4. Lithification

### Q61 - Science - Biochemistry

Which macromolecule is the primary source of energy for living organisms?

1. Carbohydrates
2. Proteins
3. Lipids
4. Nucleic acids

### Q62 - Science - Biochemistry

What is the smallest unit of life?

1. Organ
2. Molecule
3. Atom
4. Cell

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### Q63 - Science - Biochemistry

What is the main function of lipids in the body?

1. Energy storage
2. Genetic information
3. Catalyzing reactions
4. Transporting oxygen

### Q64 - Science - Biochemistry

What pigment is responsible for the green color in plants?

1. Hemoglobin
2. Chlorophyll
3. Melanin
4. Carotene

### Q65 - Science - Biochemistry

What is the primary function of ATP in the cell?

1. Build cell structures
2. Provide genetic instructions
3. Store and transfer energy
4. Transport oxygen

### Q66 - Science - Biochemistry

What process do cells use to convert glucose into energy?

1. Cellular respiration
2. Photosynthesis
3. Fermentation
4. Glycolysis

### Q67 - Science - Biochemistry

Which macromolecule is primarily responsible for building and repairing body tissues?

1. Nucleic acids
2. Carbohydrates
3. Lipids
4. Proteins

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### Q68 - Science - Biochemistry

What is the primary function of the nucleus in a cell?

1. Produces energy
2. Stores genetic information
3. Synthesizes proteins
4. Packages molecules

### Q69 - Science - Biochemistry

Which organelle is known as the "powerhouse" of the cell?

1. Mitochondria
2. Nucleus
3. Ribosome
4. Endoplasmic reticulum

### Q70 - Science - Biochemistry

What is the process by which plants make their own food?

1. Fermentation
2. Respiration
3. Photosynthesis
4. Digestion

### Q71 - Science - Biochemistry

What type of bond holds water molecules together?

1. Hydrogen bond
2. Ionic bond
3. Covalent bond
4. Peptide bond

### Q72 - Science - Biochemistry

Which structure is found only in plant cells and not in animal cells?

1. Mitochondria
2. Cell wall
3. Nucleus
4. Ribosome

## 2cool4school - Grade 6 Science Worksheet

### Q73 - Science - Biochemistry

Which macromolecule carries genetic information in cells?

1. Nucleic acids
2. Carbohydrates
3. Proteins
4. Lipids

### Q74 - Science - Biochemistry

What element is found in all organic molecules?

1. Hydrogen
2. Oxygen
3. Carbon
4. Nitrogen

### Q75 - Science - Biochemistry

What is the role of enzymes in biological reactions?

1. Change reaction products
2. Slow down reactions
3. Stop reactions completely
4. Speed up reactions

### Q76 - Science - Physics: Energy

What type of energy is stored in an object due to its position above the ground?

1. Kinetic energy
2. Gravitational potential energy
3. Thermal energy
4. Chemical energy

### Q77 - Science - Physics: Energy

What is the process called when energy changes from one form to another?

1. Energy transformation
2. Energy conservation
3. Energy dissipation
4. Energy storage



## 2cool4school - Grade 6 Science Worksheet

### Q78 - Science - Physics: Energy

Which graph is commonly used to identify patterns in kinetic energy?

1. Bar graph
2. Line graph
3. Pie chart
4. Scatter plot

### Q79 - Science - Physics: Energy

How does heat typically flow between objects?

1. From colder to hotter objects
2. From hotter to colder objects
3. Equally between objects
4. It doesn't flow between objects

### Q80 - Science - Physics: Energy

Which factor does NOT affect an object's thermal energy?

1. Temperature
2. Mass
3. Volume
4. Color

### Q81 - Science - Physics: Energy

What happens to an object's potential energy as it falls to the ground?

1. It increases
2. It stays the same
3. It decreases
4. It turns into sound energy

### Q82 - Science - Physics: Energy

Which form of energy is stored in food and fuel?

1. Thermal energy
2. Chemical energy
3. Electrical energy
4. Sound energy

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### Q83 - Science - Physics: Energy

What is the main source of energy for the Earth?

1. Wind
2. The Moon
3. The Sun
4. The Ocean

### Q84 - Science - Physics: Energy

What type of energy transformation occurs in a toaster?

1. Electrical to thermal
2. Chemical to mechanical
3. Kinetic to electrical
4. Thermal to sound

### Q85 - Science - Physics: Energy

Which of the following is an example of mechanical energy?

1. A moving car
2. A glowing light bulb
3. A hot cup of tea
4. A loudspeaker playing music

### Q86 - Science - Physics: Energy

What type of energy is produced by the vibration of particles?

1. Light energy
2. Thermal energy
3. Sound energy
4. Electrical energy

### Q87 - Science - Physics: Energy

What is the best example of thermal energy transfer by radiation?

1. Heat from a campfire warming your hands
2. A pot heating on a stove
3. Hot soup warming a spoon inside it
4. Boiling water rising and falling in a pot

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### Q88 - Science - Physics: Energy

Which of the following is NOT an example of energy transformation?

1. A battery powering a flashlight
2. A ball resting on the ground
3. A solar panel generating electricity
4. A wind turbine producing power

### Q89 - Science - Physics: Energy

Which factor most affects an object's kinetic energy?

1. Its temperature
2. Its height
3. Its speed
4. Its shape

### Q90 - Science - Physics: Energy

Why does a metal spoon feel colder than a wooden spoon at room temperature?

1. Metal absorbs more heat than wood
2. Metal conducts heat away from your hand faster than wood
3. Wood generates heat on its own
4. The wooden spoon is actually colder

### Q91 - Science - Science -Science 6

What process in the water cycle turns liquid water into gas?

1. Condensation
2. Evaporation
3. Precipitation
4. Freezing

### Q92 - Science - Science -Science 6

Which of the following is NOT a characteristic of vertebrates?

1. Being warm-blooded
2. Having a backbone
3. Having an exoskeleton
4. Having a nervous system

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### Q93 - Science - Science -Science 6

Which planet is known as the Red Planet?

1. Venus
2. Mars
3. Jupiter
4. Saturn

### Q94 - Science - Science -Science 6

What force pulls objects toward Earth's center?

1. Friction
2. Gravity
3. Magnetism
4. Inertia

### Q95 - Science - Science -Science 6

What type of energy is stored in food?

1. Chemical energy
2. Kinetic energy
3. Thermal energy
4. Nuclear energy

### Q96 - Science - Science -Science 6

What gas do plants take in for photosynthesis?

1. Oxygen
2. Carbon Dioxide
3. Nitrogen
4. Hydrogen

### Q97 - Science - Science -Science 6

What type of energy is passed along a food chain?

1. Light energy
2. Sound energy
3. Chemical energy
4. Electrical energy

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### Q98 - Science - Science -Science 6

What is a producer in an ecosystem?

1. A plant that makes its own food
2. An animal that eats plants
3. A predator at the top of the food chain
4. A decomposer that breaks down waste

### Q99 - Science - Science -Science 6

Which organ pumps blood throughout the body?

1. Brain
2. Lungs
3. Heart
4. Liver

### Q100 - Science - Science -Science 6

What state of matter has a definite shape and volume?

1. Solid
2. Liquid
3. Gas
4. Plasma

### Q101 - Science - Science -Science 6

What do decomposers do in an ecosystem?

1. Produce oxygen
2. Break down dead material
3. Make food
4. Hunt for prey

### Q102 - Science - Science -Science 6

What material is a good conductor of electricity?

1. Plastic
2. Wood
3. Copper
4. Rubber

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### Q103 - Science - Science -Science 6

Why do arctic animals have thick fur?

1. To swim faster
2. To keep warm
3. To attract mates
4. To camouflage

### Q104 - Science - Science -Science 6

What is the main criterion used to classify living organisms?

1. Their size
2. Their color
3. Their ability to move
4. Their cell structure

### Q105 - Science - Science -Science 6

Which principle explains how airplane wings generate lift?

1. Bernoullis Principle
2. Newtons Third Law
3. Archimedes' Principle
4. Pascals Law

### Q106 - Science - Physiology and genes

Which organ is primarily responsible for gas exchange in the human respiratory system?

1. Lungs
2. Heart
3. Liver
4. Kidneys

### Q107 - Science - Physiology and genes

Which organ produces insulin to regulate blood sugar levels?

1. Heart
2. Liver
3. Kidneys
4. Pancreas

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### Q108 - Science - Physiology and genes

What is the main function of the human digestive system?

1. To break down food into nutrients
2. To pump blood throughout the body
3. To filter waste from the blood
4. To transmit nerve signals

### Q109 - Science - Physiology and genes

What is the role of the nervous system in the body?

1. Produce energy
2. Break down food
3. Send electrical signals
4. Maintain balance

### Q110 - Science - Physiology and genes

Which organ is known for detoxifying chemicals and metabolizing drugs in the human body?

1. Liver
2. Heart
3. Brain
4. Stomach

### Q111 - Science - Physiology and genes

Which process explains how organisms better adapted to their environment tend to survive and produce more offspring?

1. Photosynthesis
2. Natural selection
3. Cell division
4. Growth

### Q112 - Science - Physiology and genes

Which part of the brain is primarily responsible for processing visual information?

1. Occipital lobe
2. Frontal lobe
3. Parietal lobe
4. Temporal lobe

## 2cool4school - Grade 6 Science Worksheet

### Q113 - Science - Physiology and genes

Which process leads to genetic variation by combining DNA from two parents?

1. Cloning
2. Asexual reproduction
3. Mitosis
4. Sexual reproduction

### Q114 - Science - Physiology and genes

What term describes the observable characteristics of an organism resulting from the interaction of its genotype with the environment?

1. Phenotype
2. Genotype
3. Allele
4. Chromosome

### Q115 - Science - Physiology and genes

1. What are the building blocks of proteins, encoded by sequences of three nucleotides in DNA? Fatty acids
2. Amino acids
3. Monosaccharides
4. Nucleotides

### Q116 - Science - Physiology and genes

Which body system is responsible for transporting nutrients, gases, and waste products?

1. Nervous system
2. Digestive system
3. Circulatory system
4. Respiratory system

### Q117 - Science - Physiology and genes

What tool is used to predict the possible genetic outcomes of offspring from a particular cross?

1. Food web
2. Venn diagram
3. Periodic table
4. Punnett square



## 2cool4school - Grade 6 Science Worksheet

### Q118 - Science - Physiology and genes

What term describes a change in the DNA sequence that can lead to variations in traits?

1. Transcription
2. Mutation
3. Translation
4. Replication

### Q119 - Science - Physiology and genes

What is the function of red blood cells in the human body?

1. Transmit genetic information
2. Fight infections
3. Transport oxygen
4. Store nutrients

### Q120 - Science - Physiology and genes

In genetics, which type of allele masks the effect of another allele when present?

1. Incomplete dominant
2. Recessive
3. Co-dominant
4. Dominant

### Q121 - Science - Astronomy

What celestial body does the Moon orbit?

1. Earth
2. Sun
3. Mars
4. Venus

### Q122 - Science - Astronomy

What season is it in the Southern Hemisphere when it is summer in the Northern Hemisphere?

1. Summer
2. Spring
3. Autumn
4. Winter

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### Q123 - Science - Astronomy

Which planet is the farthest from the Sun?

1. Pluto
2. Uranus
3. Neptune
4. Saturn

### Q124 - Science - Astronomy

What force keeps the Earth in orbit around the Sun?

1. Gravity
2. Magnetism
3. Electric Force
4. Friction

### Q125 - Science - Astronomy

How many main phases does the Moon have?

1. 4
2. 8
3. 6
4. 12

### Q126 - Science - Astronomy

How long does it take for the Moon to complete one orbit around Earth?

1. About 27 days
2. 7 days
3. 365 days
4. 24 hours

### Q127 - Science - Astronomy

Which planet has the most prominent ring system?

1. Jupiter
2. Neptune
3. Saturn
4. Uranus

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### Q128 - Science - Astronomy

What causes the different phases of the Moon?

1. The Moon's position relative to the Sun and Earth
2. Clouds covering the Moon
3. The Moon changing shape
4. The Earth's rotation

### Q129 - Science - Astronomy

Why do we have seasons on Earth?

1. Moon's orbit
2. The distance from the Sun
3. Changes in gravity
4. Earth's tilt on its axis

### Q130 - Science - Astronomy

Which planet has the hottest surface temperature?

1. Venus
2. Mercury
3. Mars
4. Jupiter

### Q131 - Science - Astronomy

What phase is the Moon in when it is fully illuminated?

1. New Moon
2. Full Moon
3. Crescent Moon
4. Half Moon

### Q132 - Science - Astronomy

During which season does the Northern Hemisphere receive the most direct sunlight?

1. Autumn
2. Winter
3. Spring
4. Summer

## 2cool4school - Grade 6 Science Worksheet

### Q133 - Science - Astronomy

What is the phase of the Moon when it is completely dark?

1. Full Moon
2. New Moon
3. First Quarter
4. Last Quarter

### Q134 - Science - Astronomy

Which planet is known as the Red Planet?

1. Venus
2. Jupiter
3. Mars
4. Saturn

### Q135 - Science - Astronomy

Which planet has the largest storm in the solar system?

1. Mars
2. Earth
3. Jupiter
4. Neptune

### Q136 - Science - Units and measurement

What is the basic unit of length in the metric system?

1. Meter
2. Kilogram
3. Liter
4. Celsius

### Q137 - Science - Units and measurement

Which unit is used to measure pressure?

1. Kelvin
2. Joule
3. Watt
4. Pascal

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### Q138 - Science - Units and measurement

Which unit is used to measure the volume of a liquid?

1. Newton
2. Gram
3. Liter
4. Joule

### Q139 - Science - Units and measurement

Which unit would you use to measure the mass of a textbook?

1. Gram
2. Meter
3. Liter
4. Newton

### Q140 - Science - Units and measurement

Which unit is used to measure force?

1. Pascal
2. Joule
3. Watt
4. Newton

### Q141 - Science - Units and measurement

How many meters are there in a kilometer?

1. 100
2. 1000
3. 10
4. 1

### Q142 - Science - Units and measurement

How many millimeters are there in one centimeter?

1. 10
2. 100
3. 1
4. 1000

## 2cool4school - Grade 6 Science Worksheet

### Q143 - Science - Units and measurement

What is the standard unit of speed in the metric system?

1. Miles per hour
2. Kilometers per hour
3. Meters per second
4. Feet per second

### Q144 - Science - Units and measurement

What unit is used to measure electrical resistance?

1. Ohm
2. Watt
3. Volt
4. Joule

### Q145 - Science - Units and measurement

Which unit is used to measure electric current?

1. Volt
2. Ampere
3. Ohm
4. Coulomb

### Q146 - Science - Units and measurement

Which temperature scale is commonly used in most countries around the world?

1. Celsius
2. Fahrenheit
3. Kelvin
4. Rankine

### Q147 - Science - Units and measurement

What instrument is used to measure mass?

1. Thermometer
2. Balance
3. Barometer
4. Ruler

## 2cool4school - Grade 6 Science Worksheet

### Q148 - Science - Units and measurement

What is the SI unit of time?

1. Hour
2. Minute
3. Second
4. Day

### Q149 - Science - Units and measurement

What instrument is used to measure temperature?

1. Hygrometer
2. Barometer
3. Anemometer
4. Thermometer

### Q150 - Science - Units and measurement

What is the SI unit of energy?

1. Newton
2. Joule
3. Watt
4. Volt

### Q151 - Science - Meteorology and climate

What is the primary focus of meteorology?

1. The study of rocks
2. The study of weather and atmospheric conditions
3. The study of oceans
4. The study of space

### Q152 - Science - Meteorology and climate

Which process in the water cycle involves water vapor cooling and changing into liquid form?

1. Evaporation
2. Condensation
3. Precipitation
4. Transpiration

## 2cool4school - Grade 6 Science Worksheet

### **Q153 - Science - Meteorology and climate**

How is a desert climate typically characterized?

1. High humidity and frequent rainfall
2. Low humidity and minimal rainfall
3. Mild temperatures and moderate rainfall

### **Q154 - Science - Meteorology and climate**

What defines an air mass?

1. A body of air with uniform temperature and humidity
2. A large area of high pressure
3. A region with frequent thunderstorms
4. A zone where two weather fronts meet

### **Q155 - Science - Meteorology and climate**

Which gas is primarily responsible for the greenhouse effect?

1. Oxygen
2. Nitrogen
3. Carbon dioxide
4. Argon

### **Q156 - Science - Meteorology and climate**

What is the process by which water from plants is released into the atmosphere?

1. Transpiration
2. Evaporation
3. Condensation
4. Precipitation

### **Q157 - Science - Meteorology and climate**

Which climate zone is characterized by cold temperatures and ice-covered landscapes?

1. Tropical
2. Temperate
3. Polar
4. Desert



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### Q158 - Science - Meteorology and climate

What term describes the boundary between two different air masses?

1. Front
2. Cyclone
3. Anticyclone
4. Isobar

### Q159 - Science - Meteorology and climate

Which layer of the atmosphere is closest to Earth's surface?

1. Stratosphere
2. Troposphere
3. Mesosphere
4. Exosphere

### Q160 - Science - Meteorology and climate

What type of cloud is typically associated with thunderstorms?

1. Cirrus
2. Cumulonimbus
3. Stratus
4. Nimbostratus

### Q161 - Science - Meteorology and climate

What instrument is used to measure atmospheric pressure?

1. Barometer
2. Thermometer
3. Anemometer
4. Hygrometer

### Q162 - Science - Meteorology and climate

Which global wind pattern affects weather in the United States?

1. Trade winds
2. Jet stream
3. Monsoon winds
4. Polar easterlies

## 2cool4school - Grade 6 Science Worksheet

### Q163 - Science - Meteorology and climate

What is the term for a prolonged period of abnormally low rainfall?

1. Flood
2. Hurricane
3. Drought
4. Tornado

### Q164 - Science - Meteorology and climate

Which factor has the greatest effect on Earth's climate?

1. Latitude
2. Ocean tides
3. Earth's magnetic field
4. Moon phases

### Q165 - Science - Meteorology and climate

What type of front forms when a warm air mass moves over a cold air mass?

1. Cold front
2. Warm front
3. Occluded front
4. Stationary front

### Q166 - Science - The Scientific process

What is the first step in the scientific method?

1. Formulating a hypothesis
2. Conducting an experiment
3. Making observations
4. Asking a question

### Q167 - Science - The Scientific process

In an experiment, which group does not receive the treatment and is used for comparison?

1. Control group
2. Experimental group
3. Independent group
4. Dependent group

## 2cool4school - Grade 6 Science Worksheet

### Q168 - Science - The Scientific process

Which of the following is a testable statement in the scientific method?

1. Observation
2. Hypothesis
3. Theory
4. Conclusion

### Q169 - Science - The Scientific process

Why is it important to repeat experiments?

1. To ensure accuracy
2. To get different results
3. To change the hypothesis
4. To make it harder

### Q170 - Science - The Scientific process

Which variable is observed and measured during an experiment?

1. Independent variable
2. Dependent variable
3. Controlled variable
4. Manipulated variable

### Q171 - Science - The Scientific process

What is the variable called that is changed or manipulated in an experiment?

1. Independent variable
2. Dependent variable
3. Controlled variable
4. Responding variable

### Q172 - Science - The Scientific process

What is the term for a factor that remains constant throughout an experiment?

1. Variable
2. Control
3. Constant
4. Independent

## 2cool4school - Grade 6 Science Worksheet

### Q173 - Science - The Scientific process

Which step of the scientific method involves analyzing data to reach a conclusion?

1. Experimentation
2. Observation
3. Hypothesis
4. Data analysis

### Q174 - Science - The Scientific process

What is the purpose of having a control group in an experiment?

1. To test the effect of the independent variable
2. To serve as a standard for comparison
3. To receive the experimental treatment
4. To ensure the experiment is valid

### Q175 - Science - The Scientific process

What should a scientist do after forming a hypothesis?

1. Conduct an experiment
2. Publish results
3. Ignore it
4. Make a guess

### Q176 - Science - The Scientific process

Which tool is used to magnify tiny objects in scientific investigations?

1. Telescope
2. Microscope
3. Ruler
4. Beaker

### Q177 - Science - The Scientific process

What do scientists use to record and organize data?

1. Notebook
2. Graph
3. Both A and B
4. None of the above

## 2cool4school - Grade 6 Science Worksheet

### Q178 - Science - The Scientific process

What happens if an experiment does not support the hypothesis?

1. The hypothesis is rejected or revised
2. The experiment is wrong
3. The scientist failed
4. The hypothesis is always correct

### Q179 - Science - The Scientific process

Which of the following is a testable statement in the scientific method?

1. Observation
2. Hypothesis
3. Theory
4. Conclusion

### Q180 - Science - The Scientific process

Which tool is commonly used to measure liquid volume in a laboratory?

1. Graduated cylinder
2. Thermometer
3. Balance scale
4. Microscope

### Q181 - Science - Engineering practices

What is the first step in the engineering-design process?

1. Define the problem
2. Test the solution
3. Develop a prototype
4. Communicate results

### Q182 - Science - Engineering practices

What does optimize mean in engineering?

1. To make the best possible design within given limits
2. To avoid making improvements
3. To create as many versions as possible
4. To ignore test results

## 2cool4school - Grade 6 Science Worksheet

### Q183 - Science - Engineering practices

What is a prototype in the engineering-design process?

1. A preliminary model of a product
2. The final version of a product
3. A marketing plan for a product
4. A user manual for a product

### Q184 - Science - Engineering practices

Why is it important to document the engineering-design process?

1. To track changes and improvements
2. To ensure no one else can use the design
3. To make the process more complicated
4. To avoid following any steps

### Q185 - Science - Engineering practices

Which of the following is NOT a step in the engineering-design process?

1. Brainstorming solutions
2. Defining the problem
3. Ignoring constraints
4. Testing prototypes

### Q186 - Science - Engineering practices

How does using data from tests help in the engineering-design process?

1. It helps in refining and improving the design
2. It makes the design look more attractive
3. It increases the cost of the design
4. It reduces the need for brainstorming

### Q187 - Science - Engineering practices

1. What is the purpose of brainstorming in the engineering-design process? To finalize the best solution
2. To generate a wide range of possible solutions
3. To test the prototype
4. To define the problem

## 2cool4school - Grade 6 Science Worksheet

### Q188 - Science - Engineering practices

Why do engineers build multiple prototypes?

1. To test different design ideas
2. To avoid making final decisions
3. To slow down the process
4. To waste materials

### Q189 - Science - Engineering practices

Why is teamwork important in the engineering-design process?

1. It makes the process take longer
2. It allows engineers to collaborate and improve ideas
3. It ensures only one idea is considered
4. It eliminates the need for problem-solving

### Q190 - Science - Engineering practices

Which of the following is an example of a constraint in engineering?

1. Limited materials available
2. Conducting research
3. Brainstorming ideas
4. Testing a prototype

### Q191 - Science - Engineering practices

What is the role of failure in the engineering-design process?

1. Failure means starting over completely
2. Failure provides valuable learning opportunities
3. Failure should always be avoided
4. Failure has no impact on design improvements

### Q192 - Science - Engineering practices

What happens after a prototype is tested?

1. The design is improved based on test results
2. The prototype is thrown away
3. The prototype is immediately mass-produced
4. No changes are made to the design

## 2cool4school - Grade 6 Science Worksheet

### Q193 - Science - Engineering practices

Why is it important to test and compare engineering-design solutions?

1. To find the most cost-effective solution
2. To determine which solution looks the best
3. To see which solution is the most popular
4. To identify the solution with the most features

### Q194 - Science - Engineering practices

Which of the following best describes a trade-off in engineering?

1. Sacrificing one benefit to gain another
2. Ignoring cost limitations
3. Choosing the most expensive option
4. Keeping all design features

### Q195 - Science - Engineering practices

What is an example of an ethical concern in engineering?

1. Ensuring safety in product design
2. Keeping test results secret
3. Ignoring environmental impact
4. Making a design as expensive as possible

### Q196 - Science - Chemistry

What is the smallest unit of an element that retains the properties of that element?

1. Atom
2. Molecule
3. Compound
4. Mixture

### Q197 - Science - Chemistry

What happens to the temperature of a substance during a phase change?

1. Becomes zero
2. Increases
3. Decreases
4. Stays the same



## 2cool4school - Grade 6 Science Worksheet

### Q198 - Science - Chemistry

Which particle in an atom has a positive charge?

1. Proton
2. Neutron
3. Electron
4. Photon

### Q199 - Science - Chemistry

What is the chemical symbol for water?

1. O<sub>2</sub>
2. H<sub>2</sub>O
3. CO<sub>2</sub>
4. NaCl

### Q200 - Science - Chemistry

Which element is known as the 'building block of life'?

1. Nitrogen
2. Oxygen
3. Hydrogen
4. Carbon

### Q201 - Science - Chemistry

What type of bond is formed when atoms share electrons?

1. Covalent
2. Ionic
3. Metallic
4. Hydrogen

### Q202 - Science - Chemistry

Which gas is essential for human respiration?

1. Nitrogen
2. Carbon Dioxide
3. Oxygen
4. Hydrogen

## 2cool4school - Grade 6 Science Worksheet

### Q203 - Science - Chemistry

Which of the following substances is a compound?

1. Water
2. Oxygen
3. Gold
4. Iron

### Q204 - Science - Chemistry

Which of the following is a chemical change?

1. Melting of ice
2. Rusting of iron
3. Tearing of paper
4. Boiling water

### Q205 - Science - Chemistry

What is the charge of an electron?

1. Neutral
2. Positive
3. Negative
4. No charge

### Q206 - Science - Chemistry

What is the pH value of a neutral substance?

1. 0
2. 7
3. 14
4. 1

### Q207 - Science - Chemistry

Which state of matter has a definite shape and volume?

1. Solid
2. Liquid
3. Gas
4. Plasma

## 2cool4school - Grade 6 Science Worksheet

### Q208 - Science - Chemistry

What is the most abundant gas in Earth's atmosphere?

1. Carbon Dioxide
2. Oxygen
3. Nitrogen
4. Argon

### Q209 - Science - Chemistry

What is the process called when a solid turns directly into a gas?

1. Freezing
2. Evaporation
3. Condensation
4. Sublimation

### Q210 - Science - Chemistry

Which of the following is an example of a mixture?

1. Salt
2. Water
3. Air
4. Gold

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### Answer Key

- Q1: Concentration
- Q2: The concentration of water on each side
- Q3: A semipermeable membrane
- Q4: It spreads the particles and increases contact between them
- Q5: The movement of particles from high to low concentration
- Q6: Diffusion
- Q7: Saturated
- Q8: Molarity
- Q9: Osmosis involves water; diffusion involves any type of molecules
- Q10: Color of particles
- Q11: Increasing the temperature
- Q12: Dilute
- Q13: The substance that is dissolved
- Q14: It increases
- Q15: It increases
- Q16: Algae and fungi
- Q17: A rabbit
- Q18: Temperate deciduous forest
- Q19: The parasite
- Q20: Spores
- Q21: Rotational grazing
- Q22: Carbon dioxide
- Q23: It depletes fish populations faster than they can reproduce
- Q24: A community of interacting organisms and their environment
- Q25: A food web shows multiple connections between organisms
- Q26: Mutualism
- Q27: Grass Rabbit Fox
- Q28: They break down dead material and recycle nutrients
- Q29: A gradual change in ecosystems over time
- Q30: Pollution
- Q31:  $\text{Speed} = \text{Distance} / \text{Time}$
- Q32: 0 N
- Q33: meters per second (m/s)

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- Q34: A moving car coming to a stop
- Q35: 0 m/s
- Q36: Gravity
- Q37: Friction
- Q38: It decreases
- Q39: Distance = Speed Time
- Q40: 2 m/s
- Q41: 500 meters
- Q42: 60 km/h
- Q43: Time = Distance / Speed
- Q44: Centripetal force
- Q45: It continues moving at the same speed or stays at rest
- Q46: Igneous
- Q47: Plate Tectonics
- Q48: Divergent
- Q49: Sedimentary
- Q50: Pangaea
- Q51: Metamorphism
- Q52: Movement of tectonic plates
- Q53: Mantle
- Q54: Metamorphism
- Q55: The Rock Cycle
- Q56: Weathering
- Q57: Inner Core
- Q58: Magma
- Q59: Metamorphic
- Q60: Lithification
- Q61: Carbohydrates
- Q62: Cell
- Q63: Energy storage
- Q64: Chlorophyll
- Q65: Store and transfer energy
- Q66: Cellular respiration
- Q67: Proteins
- Q68: Stores genetic information

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- Q69: Mitochondria
- Q70: Photosynthesis
- Q71: Hydrogen bond
- Q72: Cell wall
- Q73: Nucleic acids
- Q74: Carbon
- Q75: Speed up reactions
- Q76: Gravitational potential energy
- Q77: Energy transformation
- Q78: Line graph
- Q79: From hotter to colder objects
- Q80: Color
- Q81: It decreases
- Q82: Chemical energy
- Q83: The Sun
- Q84: Electrical to thermal
- Q85: A moving car
- Q86: Sound energy
- Q87: Heat from a campfire warming your hands
- Q88: A ball resting on the ground
- Q89: Its speed
- Q90: Metal conducts heat away from your hand faster than wood
- Q91: Evaporation
- Q92: Being warm-blooded
- Q93: Mars
- Q94: Gravity
- Q95: Chemical energy
- Q96: Carbon Dioxide
- Q97: Chemical energy
- Q98: A plant that makes its own food
- Q99: Heart
- Q100: Solid
- Q101: Break down dead material
- Q102: Copper
- Q103: To keep warm

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- Q104: Their cell structure
- Q105: Bernoullis Principle
- Q106: Lungs
- Q107: Pancreas
- Q108: To break down food into nutrients
- Q109: Send electrical signals
- Q110: Liver
- Q111: Natural selection
- Q112: Occipital lobe
- Q113: Sexual reproduction
- Q114: Phenotype
- Q115: Amino acids
- Q116: Circulatory system
- Q117: Punnett square
- Q118: Mutation
- Q119: Transport oxygen
- Q120: Dominant
- Q121: Earth
- Q122: Winter
- Q123: Neptune
- Q124: Gravity
- Q125: 8
- Q126: About 27 days
- Q127: Saturn
- Q128: The Moon's position relative to the Sun and Earth
- Q129: Earth's tilt on its axis
- Q130: Venus
- Q131: Full Moon
- Q132: Summer
- Q133: New Moon
- Q134: Mars
- Q135: Jupiter
- Q136: Meter
- Q137: Pascal
- Q138: Liter

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- Q139: Gram
- Q140: Newton
- Q141: 1000
- Q142: 10
- Q143: Meters per second
- Q144: Ohm
- Q145: Ampere
- Q146: Celsius
- Q147: Balance
- Q148: Second
- Q149: Thermometer
- Q150: Joule
- Q151: The study of weather and atmospheric conditions
- Q152: Condensation
- Q153: Low humidity and minimal rainfall
- Q154: A body of air with uniform temperature and humidity
- Q155: Carbon dioxide
- Q156: Transpiration
- Q157: Polar
- Q158: Front
- Q159: Troposphere
- Q160: Cumulonimbus
- Q161: Barometer
- Q162: Jet stream
- Q163: Drought
- Q164: Latitude
- Q165: Warm front
- Q166: Asking a question
- Q167: Control group
- Q168: Hypothesis
- Q169: To ensure accuracy
- Q170: Dependent variable
- Q171: Independent variable
- Q172: Constant
- Q173: Data analysis
- Q174: To serve as a standard for comparison



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- Q175: Conduct an experiment
- Q176: Microscope
- Q177: Both A and B
- Q178: The hypothesis is rejected or revised
- Q179: Hypothesis
- Q180: Graduated cylinder
- Q181: Test the solution
- Q182: To ignore test results
- Q183: The final version of a product
- Q184: To make the process more complicated
- Q185: Testing prototypes
- Q186: It makes the design look more attractive
- Q187: To finalize the best solution
- Q188: To waste materials
- Q189: It makes the process take longer
- Q190: Brainstorming ideas
- Q191: Failure means starting over completely
- Q192: The prototype is immediately mass-produced
- Q193: To determine which solution looks the best
- Q194: Choosing the most expensive option
- Q195: Making a design as expensive as possible
- Q196: Atom
- Q197: Stays the same
- Q198: Proton
- Q199: H<sub>2</sub>O
- Q200: Carbon
- Q201: Covalent
- Q202: Oxygen
- Q203: Water
- Q204: Rusting of iron
- Q205: Negative
- Q206: 7
- Q207: Solid
- Q208: Nitrogen
- Q209: Sublimation
- Q210: Air