



Science Vocabulary

How much of this science vocabulary do you know? Find out with these category and matching games. These new and review words, mostly from the Academic Word List, explain what scientists do. (After the answers to the first section there will be sentences to fill in to practice the same vocabulary.)

Put this Science Vocabulary into the Categories below:

assess, assessment, data, elements, energy, equation, erroneous, evaluate, evaluation, evidence, factors, formula, hypothesis, interpret, interpretation, invalid, irrelevant, irreproducible, monitor, predict, prediction, random, relevant, reliable, reproducible, unreliable, unverifiable, valid, variables, verifiable

Categories

1. Verbs for aspects of the thinking process :
2. Products or outcomes of thinking:
3. The raw materials and information that scientists use for their research:
4. Words describing the validity of data. Data can be:

Match these Science Verbs with their Meanings:

assess	to watch closely
equate	to say or guess what will happen in the future
estimate	to explain or show the meaning of something
evolve	to control
function	to evaluate; determine the value of
interpret	to guess the approximate amount of something
monitor	to state that two things are equal or very similar
predict	to work as intended; to be able to do a job
regulate	to change over time

Match these Science Nouns with their Meanings: Part 1

assessment	an expression in symbols of a rule or a chemical combination
bias	slow change or development
data	a mistake
equation	one of several influences that can affect results
error	use or purpose
estimate	a preference for or against a certain result or kind of people
evolution	valuation
factor	a mathematical statement that two expressions are equal
formula	a guess about the quantity of something
function	the facts on a subject; information collected

Match these Science Nouns with their Meanings: Part 2

implications	an area within a larger unit
interpretation	a statement about future expectations
outcome	a symbol that may represent various numbers
monitor	ideas that go along with something or can be inferred from it
prediction	a rule or a way of controlling something
region	result
regulation	an explanation of what something means
variable	a machine that measures and watches what's happening

Match these Adjectives with their Meanings

equivalent	related to the subject being considered
functional	changeable
intrinsic	able to keep things functioning without outside control
ongoing	equal to something; can be substituted for it
random	large or important enough to make a difference in the results
relevant	working properly
predictable	factors under the surface
self-regulating	chance, not predictable
significant	continuing
underlying	inside of something; a basic part of its nature
variable	expected

Match these Scientific Fields with their Definitions:

astronomy	the study of chemical reactions
biology	the study of the earth and its components (rocks, etc.)
chemistry	the study of the interactions of matter and energy
geology	the study of the human mind
physics	the study of the stars and planets
psychology	the study of life

Answers

Put this Science Vocabulary into Categories:

1. Verbs for aspects of the thinking process:

assess, evaluate, interpret, monitor, predict

2. Products or outcomes of thinking:

assessment, equation, evaluation, formula, hypothesis, interpretation, prediction

3. The raw materials and information that scientists use for their research:

data, elements, energy, evidence, factors, variables

4. Words describing the validity of data. Data can be:

erroneous, invalid, irrelevant, irreproducible, random, relevant, reliable, reproducible, unreliable, unverifiable, valid, verifiable

Match these Science Verbs with their Meanings:

assess- to evaluate; determine the value of

equate - to state that two things are equal or very similar

estimate- to guess the approximate amount of something

evolve- to change over time

function- to work as intended; to be able to do a job

interpret- to explain or show the meaning of something

monitor- to watch closely

predict- to say or guess what will happen in the future

regulate- to control

Match these Science Nouns with their Meanings: Part 1

assessment- valuation

bias- a preference for or against a certain result or kind of people

equation- a mathematical statement that two expressions are equal

error- a mistake

estimate- a guess about the quantity of something

evolution- slow change or development

data-the facts on a subject; information collected

factor- one of several influences that can affect results

formula- an expression in symbols of a rule or a chemical combination (It can also mean a pattern of words always used together)

function- use or purpose (It also has a specialized mathematical meaning.)

Match these Science Nouns with their Meanings: Part 2

implications- ideas that go along with something or can be inferred from it

interpretation- an explanation of what something means

outcome- result

monitor- a machine that measures and watches what's happening (also, the part of a computer that you can watch: the screen and its frame)

prediction- a statement about future expectations

region- an area within a larger unit

regulation- a rule or a way of controlling something

variable- a symbol in an equation that may represent various numbers (also part of an experiment that may change.)

Match these Adjectives with their Meanings

equivalent- equal to something; can be substituted for it

functional- working properly

intrinsic- inside of something; a basic part of its nature

random- chance, not predictable

relevant- related to the subject being considered

ongoing- continuing

predictable- expected

self-regulating- able to keep things functioning without outside control

significant- large or important enough to make a difference in the results

underlying- factors under the surface

variable- changeable

Match these Scientific Fields with their Definitions:

astronomy- the study of the stars and planets

biology- the study of life

chemistry- the study of chemical reactions

geology- the study of the earth and its components (rocks, etc.)

physics- the study of the interactions of matter and energy

psychology- the study of the human mind

Science Words Sentence Fill-ins

Use the science words above each section to fill in the blanks in the “news articles” below:

assess, energy, equations, formula, functions, ignore, implications, intelligent, region, underlying

Mathematical _____ range from very simple statements like $2+2=4$ or $A+2b=c$ (where unknowns are shown by letters) to complex expressions that need several lines or fill a blackboard. A famous physics' equation is Einstein's $E=MC^2$. It is a _____ for converting matter into energy, which can be read, "_____ equals Matter times the speed of light (C) squared."

“We can no longer _____ the important _____ of this research on the frontal lobe _____ of the brain. It demonstrates the _____ mechanisms of rational thought, whereby people are able to _____ their options and (in theory) make _____ decisions. (Of course, researchers are still trying to understand why people so often make irrational, foolish decisions instead. They will continue to study the _____ of different areas of the brain, hoping to understand intelligence better.)”

evolution, intrinsic, ongoing, prediction, regulate, significant, temporarily

In an interview with a researcher studying bacteria, the reporter quoted his _____, “In the future we hope to _____ bacterial _____ and eventually conquer some of these diseases that still cause _____ loss of life. We are beginning to understand the mechanisms that enable dangerous bacteria to evolve so quickly. In our _____ research we hope to find new ways to prevent that, not just _____ delay it by killing the weaker bacteria. The better we understand the _____ processes that lead to bacterial evolution, the sooner we can find ways to stop it.”

adult, automatically, commitment, data, interpret, monitor, participants, random, undergo

The Millview Evernew Lab needs _____ volunteers to participate in ongoing trials of a possible new medicine for high blood pressure. _____ must be at least 21 years old, in generally good health except for borderline or high blood pressure, and able to _____ multiple tests over a period of two to three hours. They must make a _____ to return every three weeks for a year to be evaluated.

Researchers will _____ the experiments at all times to ensure participant safety. _____ from each week's tests will be input into the main computer every Friday, and the output will be _____ generated and recorded over the weekend, as an additional safety measure. Any evidence of dangerous side-effects will lead to a temporary suspension of the trials while the data is thoroughly evaluated.

These are double-blind, _____ trials in which neither the participants nor the researchers know who is receiving the experimental drug and who is receiving a placebo instead. This guarantees that the researchers will _____ the results without being biased by their expectations.

Sentence Fill-in Answers

assess, energy, equations, formula, functions, ignore, implications, intelligent, region, underlying

Mathematical equations range from very simple statements like $2+2=4$ or $A+2b=c$ (where unknowns are shown by letters) to complex expressions that need several lines or fill a blackboard. A famous physics' equation is Einstein's $E=MC^2$. It is a formula for converting matter into energy, which can be read, "Energy equals Matter times the speed of light (C) squared."

"We can no longer ignore the important implications of this research on the frontal lobe region of the brain. It demonstrates the underlying mechanisms of rational thought, whereby people are able to assess their options and (in theory) make intelligent decisions. (Of course, researchers are still trying to understand why people so often make irrational, foolish decisions instead. They will continue to study the functions of different areas of the brain, hoping to understand intelligence better.)"

evolution, intrinsic, ongoing, prediction, regulate, significant, temporarily

In an interview with a researcher studying bacteria, the reporter quoted his prediction, "In the future we hope to regulate bacterial evolution and eventually conquer some of these diseases that still cause significant loss of life. We are beginning to understand the mechanisms that enable dangerous bacteria to evolve so quickly. In our ongoing research we hope to find new ways to prevent that, not just temporarily delay it by killing the weaker bacteria. The better we understand the intrinsic processes that lead to bacterial evolution, the sooner we can find ways to stop it."

adult, automatically, commitment, data, interpret, monitor, participants, random, undergo

The Millview Evernew Lab needs adult volunteers to participate in ongoing trials of a possible new medicine for high blood pressure. Participants must be at least 21 years old, in generally good health except for borderline or high blood pressure, and able to undergo multiple tests over a period of two to three hours. They must make a commitment to return every three weeks for a year to be evaluated.

Researchers will monitor the experiments at all times to ensure participant safety. Data from each week's tests will be input into the main computer every Friday, and the output will be automatically generated and recorded over the weekend, as an additional safety measure. Any evidence of dangerous side-effects will lead to a temporary suspension of the trials while the data is thoroughly evaluated.

These are double-blind, random trials in which neither the participants nor the researchers know who is receiving the experimental drug and who is receiving a placebo instead. This guarantees that the researchers will interpret the results without being biased.