Glossary

TOOLS OF ENVIRONMENTAL SCIENCE

C

conceptual model a verbal or graphical explanation for how a system works or is organized

control group in an experiment, a group that serves as a standard of comparison with another group to which the control group is identical except for one factor

correlation the linear dependence between two variables

D

data any pieces of information acquired through observation or experimentation

decision-making model a conceptual model that provides a systematic process for making decisions

distribution the relative arrangement of the members of a statistical population; usually shown in a graph

E

experiment a procedure that is carried out under controlled conditions to discover, demonstrate, or test a fact, theory, or general truth

experimental group in an experiment, a group that is identical to a control group except for one factor and that is compared with the control group

H

hypothesis (hie PATH uh sis) a theory or explanation that is based on observations and that can be tested

M

mathematical model one or more equations that represent the way a system or process works

mean the number obtained by adding up the data for a given characteristic and dividing this sum by the number of individuals

model a pattern, plan, representation, or description designed to show the structure or workings of an object, system, or concept

O

observation the process of obtaining information by using the senses; the information obtained by using the senses

P

prediction a statement made in advance that expresses the results that will be obtained from testing a hypothesis if the hypothesis is supported; the expected outcome if a hypothesis is accurate

probability the likelihood that a possible future event will occur in any given instance of the event; the mathematical ratio of the number of times one outcome of any event is likely to occur to the number of possible outcomes of the event

R

risk the probability of an unwanted outcome

S

sample the group of individuals or events selected to represent a statistical population

statistics the collection and classification of data that are in the form of numbers

V

value a principle or standard that an individual considers to be important

variable (VER ee uh buhl) a factor that changes in an experiment in order to test a hypothesis