

FOSS Motion and Matter Module

Glossary

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attract to pull toward (SRB, IG)

axis a straight line around which something turns (IG)

axle a shaft that runs through the center of a wheel (IG)

baking soda a solid material in the form of a powder that undergoes a chemical reaction when combined with vinegar (IG)

balanced to be in a stable position (SRB, IG)

bearing a part in a machine that supports or guides a rotating part (IG)

calcium carbonate a solid material; powdered chalk (IG)

carbon dioxide a gas made of carbon and oxygen (SRB, IG)

centimeter (cm) one 100th of a meter; a measurement unit used by scientists to measure distance (IG)

chalk one form of the material calcium carbonate (SRB, IG)

change of motion caused when forces (pushes or pulls) are unbalanced (IG)

chemical reaction an interaction between materials that produces one or more new materials that have different properties than the starting materials (SRB, IG)

cloudy not clear (SRB, IG)

conservation of mass the concept that no mass is lost or gained when mixing and separating materials; the mass of the parts is equal to the mass of the total mixture (IG)

conserve to stay constant during an interaction. Matter can change, but it's always conserved. (SRB)

criteria (singular **criterion**) a rule for evaluating or testing something (SRB, IG)

constraint a restriction or limitation (SRB, IG)

curved round (SRB)

data information collected and recorded as a result of observation (SRB, IG)

direction the path on which something is moving or pointing (SRB, IG)

dissolve to mix a material uniformly into another (SRB, IG)

distance how far it is from one place to another (SRB)

energy the ability to make things happen. Energy can take a number of forms, such as heat and light. (SRB)

engineer a scientist who designs ways to accomplish a goal or solve a problem (SRB, IG)

equal the same as (SRB)

evidence data used to support claims. Evidence is based on observation and scientific data. (SRB, IG)

experiment a test or trial (SRB)

float to be supported on the surface of water or to be suspended in air (SRB)

force a push or a pull (SRB, IG)

friction a force between objects that are touching each other that opposes their motion, slowing them down (SRB, IG)

gas a state of matter with no definite shape or volume; usually invisible (SRB)

gram (g) the basic unit of mass in the metric system (SRB)

gravity a force that pulls objects toward each other. It is the force of gravity that pulls objects toward Earth's center. (SRB, IG)

liquid a state of matter with no definite shape but a definite volume (SRB)

liter (L) the basic unit of liquid volume in the metric system (SRB)

magnet an object that sticks to iron or steel (SRB, IG)

magnetic closure something that closes or shuts using a magnet (SRB)

magnetic field an invisible field around a magnet (SRB, IG)

magnetic force the force produced by a magnetic field (SRB, IG)

magnetism a force that attracts iron and steel (SRB, IG)

mass the amount of material in something (SRB)

matter anything that has mass and takes up space (SRB)

meter (m) the basic unit of distance or length in the metric system (SRB, IG)

metric system a measuring system based on multiples of ten (IG)

mixture two or more materials together (SRB, IG)

model an explanation or representation of an object, system, or process that cannot be easily studied (IG)

motion the act of moving (SRB, IG)

natural history the study of plants and animals in nature (SRB)

observation the act of noticing the properties of an object or event with one or more of the five senses (sight, hearing, touch, smell, and sometimes taste) (SRB)

observe to watch and study (IG)

outcome result (IG)

pattern a consistent and repeating combination of qualities or behaviors (SRB, IG)

pattern of motion the manner in which objects move due to their structure (IG)

pole the end or side of a magnet (magnetic pole) (SRB)

practice to do something repeatedly in order to become better at it (IG)

predict to estimate a future event based on data or experience (SRB, IG)

prediction an estimate of a future event based on data or experience (IG)

property something you can observe about an object or a material. Size, color, shape, texture, and smell are properties. (SRB)

prototype a model (SRB)

pull when you make things move toward you. Pulling is a force. (SRB, IG)

push when you make things move away from you. Pushing is a force. (SRB, IG)

ramp an object that has a slope (IG)

repel to push away from (SRB, IG)

rotate to turn or spin (SRB, IG)

rotation the act of turning around as on an axis (SRB)

rotational force a push or pull given to something turning on an axis (SRB)

salt a solid white material that dissolves in water; also known as sodium chloride (SRB, IG)

science practices guidelines used when conducting an investigation to collect data to reveal a pattern and make a prediction (IG)

screen wire mesh used to separate large and small objects (SRB)

separate to take apart (SRB)

shaft a long, thin structure that can be used as an axle or axis (SRB, IG)

sink to go under water as a result of being more dense than water (SRB)

slope a surface that is higher on one end (IG)

solid a state of matter that has a definite shape and volume (SRB)

spin to move by turning around an axis (SRB)

solution the act of solving a problem. Engineers solve problems. In chemistry, a mixture formed when one or more substances dissolve in another (SRB, IG)

stable steady (SRB)

standard a model established to compare the effect of changing a variable in an experiment (IG)

standard unit a unit that never changes. The meter is the standard unit for measuring distance in the metric system. (IG)

start position where an object begins its descent (IG)

strength the quality of being strong (SRB, IG)

suspend to hang in a liquid or gas (IG)

symmetrical balanced or the same on each side (SRB)

system two or more objects that work together in a meaningful way (SRB, IG)

technology practical use of scientific knowledge to solve problems (SRB)

top a toy that spins (IG)

transparent clear (SRB, IG)

twirly bird a simple winged system that spins when it interacts with air (IG)

unbalanced to be in an unstable position (IG)

uneven not level or flat (SRB)

variable anything you can change in an experiment that might affect the outcome (IG)

vinegar a liquid substance that undergoes a chemical reaction when combined with baking soda (IG)

volume three-dimensional space (SRB)

wheel an object that is a circle in only one direction and can fall over (IG)

wheel-and-axle system a simple machine made of a wheel fixed to a shaft, or axle; both the wheel and axle rotate together (SRB)