

Science Related Concepts

Related concepts promote depth of learning and add coherence to the understanding of academic subjects and disciplines. They are grounded in specific subjects and disciplines, and they are useful for exploring key concepts in greater detail. Inquiry into related concepts helps students to develop more complex and sophisticated conceptual understanding. Related concepts may arise from the subject matter of a unit or the craft of a subject—its features and processes.

Balance

The dynamic equilibrium that exists among members of a stable natural community; the regulation of the internal environment of an organism. (biology specific)

A state of equilibrium or stable distribution. (chemistry specific)

Consequences

The observable or quantifiable effects, results, or outcomes correlated with an earlier event or events.

Energy

The capacity of an object to do work or transfer heat.

Environment

All of the biotic and abiotic factors that act on an organism, population or community and influence its survival, evolution and development. (biology specific)

A description of the universe or a closed system through the application of the laws of physics; the complex of physical conditions or climate affecting a habitat or community. (physics specific)

Evidence

Support for a proposition derived from observation and interpretation of data.

Form

The features of an object that can be observed, identified, described, classified and categorized.

Function

A purpose, a role or a way of behaving that can be investigated; a mathematical relationship between variables.

Interaction

The effect or effects two or more systems, bodies, substances or organisms have on one another, so that the overall result is not simply the sum of the separate effects.

Models

Representations used for testing scientific theories or proposals that can be accurately repeated and validated; simulations used for explaining or predicting processes which may not be observable or to understand the dynamics of multiple underlying phenomena of a complex system.

Movement

The act, process, or result of displacing from one location or position to another within a defined frame of reference.

Patterns

The distribution of variables in time or space; sequences of events or features.

Transformation

Differentiation of a cell; change of energy form, including at a molecular level; alteration of molecules and metabolism and/or genetic make-up of an organism or species and consequently a community, relative to external factors. (biology specific)

A change from one well-defined state to another well-defined state; an alteration in form or condition, including energy and particle nature. (physics specific)