K-12 Science Curriculum
Framework Vocabulary Appendix

Introduction

The Science, Technology & Engineering, and Environmental Literacy & Sustainability (STEELS) Standards guide the study of the natural and human-made world through inquiry, problem-solving, critical thinking, and authentic exploration. This appendix is the K-12 vocabulary companion to the STEELS Science Curriculum Frameworks. It compiles every Life (3.1), Physical (3.2), and Earth & Space (3.3) Science vocabulary term from the Kindergarten through Grade 12 framework documents, along with the Crosscutting Concept (CCC) and Science and Engineering Practice (SEP) vocabulary used at each grade band. Terms are organized by grade level and course, followed by a combined, alphabetized K-12 list. The appendix supports vertical alignment of academic language across grade levels and content areas and helps educators plan an intentional, progressive introduction of science vocabulary.

Science Long Term Transfer Goals

In support of the Curriculum Framework, Long Term Transfer Goals (LTTG) provide the overarching practices that ground the foundation for a robust curriculum; thus, all curricula should relate to one or more of the LTTGs detailed below – as they highlight the effective uses of understanding, knowledge, and skill that we seek in the long run; i.e., what we want students to be able to do when they confront new challenges – both in and outside of school.

Students will be able to engage as scientifically literate members of a global society, using their learning to:

1. Approach science as a reliable and tentative way of knowing and explaining the natural world and designed world.
2. Weigh evidence and use scientific approaches to ask questions, investigate, and make informed decisions.
3. Make and use observations to analyze relationships and patterns in order to explain phenomena, develop models, and make predictions.
4. Evaluate systems, in order to connect how form determines function and how any change to one component affects the entire system.
5. Explain how the natural and designed worlds are interrelated and the application of scientific knowledge and technology can have beneficial, detrimental, or unintended consequences.

Why These Words, and When to Introduce Them

The terms in this appendix are the words students need to name, explain, and apply the concepts in the STEELS Standards, engage in the Science and Engineering Practices, and use the Crosscutting Concepts. These are the terms to explicitly teach and assess, but **they are not meant to be pre-taught or taught as an isolated list.** As WIDA's *Words for Science Learning: Which Words and When?* (MacDonald et al., 2023) explains, scientific understanding develops through connections among concepts, experiences, and language, not through individual words alone. **Other words students come across while reading, discussing, and investigating are a natural part of science learning, but unlike the terms in this appendix, they do not need to be explicitly taught and assessed.**

Students should first explore phenomena, investigate questions, and share their initial ideas in familiar, everyday language. Educators introduce a scientific term only after students have some experience with the concept, at the point where precise language helps them describe patterns, explain relationships, and communicate their thinking. Everyday language should continue to be valued alongside scientific terms as students refine their understanding. Names of tools and materials students can see and handle (such as beaker, ruler, or thermometer) and simple procedural words that can be demonstrated (such as pour, measure, or stir) may be introduced in advance when students need them for an investigation.

When planning vocabulary instruction, educators should ask WIDA's guiding question: "When do students need to know a term, and why?" The tables in this appendix show where each term first appears and where it recurs across grade levels and courses, so educators can build on what students already know and develop vocabulary intentionally over time.

MacDonald, R., Wilfrid, J., & Crowther, D. (2023). *Words for science learning: Which words and when?* [Focus bulletin]. WIDA. https://wida.wisc.edu/resources/words-science-learning-which-words-and-when

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Kindergarten Science Vocabulary Summary

This table lists vocabulary terms aligned to the Kindergarten Science Curriculum Framework, in alphabetical order, along with the standard code(s) where each term appears and its content area.

Vocabulary Term	Standard Code(s)	Content Area
animal	3.1.K.A	*Life Science*
direction	3.2.K.A	*Physical Science*
environment	3.3.K.B	*Earth & Space Science*
grow	3.1.K.A	*Life Science*
impact	3.3.K.E	*Earth & Space Science*
motion	3.2.K.B	*Physical Science*
plant	3.1.K.A	*Life Science*
pull	3.2.K.A	*Physical Science*
push	3.2.K.A	*Physical Science*
reduce	3.3.K.E	*Earth & Space Science*
resource	3.1.K.A	*Life Science*
severe weather	3.3.K.D	*Earth & Space Science*
speed	3.2.K.A	*Physical Science*
sunlight	3.2.K.C	*Physical Science*
surface	3.2.K.C	*Physical Science*
survive	3.1.K.A 3.3.K.B	*Life Science* *Earth & Space Science*
weather	3.3.K.A	*Earth & Space Science*
weather forecast	3.3.K.D	*Earth & Space Science*

Grade 1 Science Vocabulary Summary

This table lists vocabulary terms aligned to the Grade 1 Science Curriculum Framework, in alphabetical order, along with the standard code(s) where each term appears, its content area, and any earlier grade where it also appears.

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced
behavior	3.1.1.B	*Life Science*	N/A
communicate	3.2.1.D	*Physical Science*	N/A
distance	3.2.1.D	*Physical Science*	N/A
external	3.1.1.A	*Life Science*	N/A
flower	3.1.1.A	*Life Science*	N/A
fruit	3.1.1.A	*Life Science*	N/A
illuminate	3.2.1.B	*Physical Science*	N/A
leaf	3.1.1.A	*Life Science*	N/A
mimic	3.1.1.A	*Life Science*	N/A
moon	3.3.1.A	*Earth & Space Science*	N/A
offspring	3.1.1.B	*Life Science*	N/A
opaque	3.2.1.C	*Physical Science*	N/A
parent	3.1.1.B	*Life Science*	N/A
reflective	3.2.1.C	*Physical Science*	N/A
root	3.1.1.A	*Life Science*	N/A
season	3.3.1.B	*Earth & Space Science*	N/A
sound	3.2.1.A	*Physical Science*	N/A
star	3.3.1.A	*Earth & Space Science*	N/A
stem	3.1.1.A	*Life Science*	N/A
sun	3.3.1.A	*Earth & Space Science*	N/A
sunrise	3.3.1.B	*Earth & Space Science*	N/A
sunset	3.3.1.B	*Earth & Space Science*	N/A
survive	3.1.1.B	*Life Science*	Grade K *(3.1.K.A; 3.3.K.B)*
translucent	3.2.1.C	*Physical Science*	N/A
transparent	3.2.1.C	*Physical Science*	N/A
vibration	3.2.1.A	*Physical Science*	N/A

Grade 2 Science Vocabulary Summary

This table lists vocabulary terms aligned to the Grade 2 Science Curriculum Framework, in alphabetical order, along with the standard code(s) where each term appears, its content area, and any earlier grade where it also appears.

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced
color	3.2.2.A	*Physical Science*	N/A
disperse	3.1.2.B	*Life Science*	N/A
diversity	3.1.2.C	*Life Science*	N/A
Earth	3.3.2.A	*Earth & Space Science*	N/A
erosion	3.3.2.A	*Earth & Space Science*	N/A
flexibility	3.2.2.A	*Physical Science*	N/A
grow	3.1.2.A	*Life Science*	Grade K *(3.1.K.A)*
habitat	3.1.2.C	*Life Science*	N/A
hardness	3.2.2.A	*Physical Science*	N/A
landform	3.3.2.A	*Earth & Space Science*	N/A
liquid	3.3.2.D	*Earth & Space Science*	N/A
map	3.3.2.C	*Earth & Space Science*	N/A
pollinate	3.1.2.B	*Life Science*	N/A
properties	3.2.2.A	*Physical Science*	N/A
reversible	3.2.2.D	*Physical Science*	N/A
seed	3.1.2.B	*Life Science*	N/A
solid	3.3.2.D	*Earth & Space Science*	N/A
texture	3.2.2.A	*Physical Science*	N/A

Grade 3 Science Vocabulary Summary

This table lists vocabulary terms aligned to the Grade 3 Science Curriculum Framework, in alphabetical order, along with the standard code(s) where each term appears, its content area, and any earlier grade where it also appears.

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced
adaptation	3.1.3.G	*Life Science*	N/A
balanced force	3.2.3.B	*Physical Science*	N/A
birth	3.1.3.A	*Life Science*	N/A
climate	3.3.3.B	*Earth & Space Science*	N/A
death	3.1.3.A	*Life Science*	N/A
electric interaction	3.2.3.C	*Physical Science*	N/A
environment	3.1.3.E 3.1.3.H	*Life Science* *Life Science*	Grade K *(3.3.K.B)*
extinction	3.1.3.E	*Life Science*	N/A
force	3.2.3.C	*Physical Science*	N/A
fossil	3.1.3.E	*Life Science*	N/A
growth	3.1.3.A	*Life Science*	N/A
habitat	3.1.3.G	*Life Science*	Grade 2 *(3.1.2.C)*
inheritance	3.1.3.C	*Life Science*	N/A
life cycle	3.1.3.A	*Life Science*	N/A
magnet	3.2.3.C	*Physical Science*	N/A
magnetic force	3.2.3.D	*Physical Science*	N/A
magnetic interaction	3.2.3.C	*Physical Science*	N/A
motion	3.2.3.A 3.2.3.B	*Physical Science* *Physical Science*	Grade K *(3.2.K.B)*
natural hazard	3.3.3.C	*Earth & Space Science*	N/A
organism	3.1.3.A 3.1.3.C 3.1.3.E 3.1.3.G	*Life Science* *Life Science* *Life Science* *Life Science*	N/A
population	3.1.3.H	*Life Science*	N/A
precipitation	3.3.3.A	*Earth & Space Science*	N/A
predator	3.1.3.F	*Life Science*	N/A
predict	3.3.3.A	*Earth & Space Science*	N/A
prey	3.1.3.F	*Life Science*	N/A
region	3.3.3.B	*Earth & Space Science*	N/A

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced
reproduction	3.1.3.A 3.1.3.F	*Life Science* *Life Science*	N/A
season	3.3.3.A	*Earth & Space Science*	Grade 1 *(3.3.1.B)*
species	3.1.3.F	*Life Science*	N/A
static electricity	3.2.3.C	*Physical Science*	N/A
survive	3.1.3.B 3.1.3.F 3.1.3.G	*Life Science* *Life Science* *Life Science*	Grade K *(3.1.K.A; 3.3.K.B)* Grade 1 *(3.1.1.B)*
temperature	3.3.3.A	*Earth & Space Science*	N/A
trait	3.1.3.C 3.1.3.D	*Life Science* *Life Science*	N/A
unbalanced force	3.2.3.B	*Physical Science*	N/A
variation	3.1.3.C 3.1.3.F	*Life Science* *Life Science*	N/A
weather	3.3.3.A	*Earth & Space Science*	Grade K *(3.3.K.A)*
wind	3.3.3.A	*Earth & Space Science*	N/A

Grade 4 Science Vocabulary Summary

This table lists vocabulary terms aligned to the Grade 4 Science Curriculum Framework, in alphabetical order, along with the standard code(s) where each term appears, its content area, and any earlier grade where it also appears.

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced
amplitude	3.2.4.E	*Physical Science*	N/A
blizzard	3.3.4.E	*Earth & Space Science*	N/A
brain	3.1.4.B	*Life Science*	N/A
collision	3.2.4.C	*Physical Science*	N/A
convert	3.2.4.D	*Physical Science*	N/A
earthquake	3.3.4.E	*Earth & Space Science*	N/A
electric current	3.2.4.B	*Physical Science*	N/A
energy	3.2.4.A 3.2.4.C 3.2.4.D 3.3.4.D	*Physical Science* *Physical Science* *Physical Science* *Earth & Space Science*	N/A
energy transfer	3.2.4.B	*Physical Science*	N/A
erosion	3.3.4.B	*Earth & Space Science*	Grade 2 *(3.3.2.A)*
external structure	3.1.4.A	*Life Science*	N/A
flood	3.3.4.E	*Earth & Space Science*	N/A
fossil fuel	3.3.4.D	*Earth & Space Science*	N/A
fossil types	3.3.4.A	*Earth & Space Science*	N/A
heat energy	3.2.4.B	*Physical Science*	N/A
hurricane	3.3.4.E	*Earth & Space Science*	N/A
internal structure	3.1.4.A	*Life Science*	N/A
landform	3.3.4.C	*Earth & Space Science*	Grade 2 *(3.3.2.A)*
landscape	3.3.4.A	*Earth & Space Science*	N/A
light energy	3.2.4.B	*Physical Science*	N/A
marine	3.3.4.A	*Earth & Space Science*	N/A
natural resource	3.3.4.D	*Earth & Space Science*	N/A
nonrenewable resource	3.3.4.D	*Earth & Space Science*	N/A
refine	3.2.4.D	*Physical Science*	N/A
reflection	3.2.4.F	*Physical Science*	N/A
renewable resource	3.3.4.D	*Earth & Space Science*	N/A
rock formations	3.3.4.A	*Earth & Space Science*	N/A
rock layers	3.3.4.A	*Earth & Space Science*	N/A

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced
sediment	3.3.4.B	*Earth & Space Science*	N/A
senses	3.1.4.B	*Life Science*	N/A
sensory receptor	3.1.4.B	*Life Science*	N/A
sound energy	3.2.4.B	*Physical Science*	N/A
speed	3.2.4.A	*Physical Science*	Grade K *(3.2.K.A)*
transfer	3.2.4.G	*Physical Science*	N/A
tsunami	3.3.4.E	*Earth & Space Science*	N/A
vegetation	3.3.4.B	*Earth & Space Science*	N/A
volcanic eruption	3.3.4.E	*Earth & Space Science*	N/A
wave	3.2.4.E	*Physical Science*	N/A
wavelength	3.2.4.E	*Physical Science*	N/A
weathering	3.3.4.B	*Earth & Space Science*	N/A

Grade 5 Science Vocabulary Summary

This table lists vocabulary terms aligned to the Grade 5 Science Curriculum Framework, in alphabetical order, along with the standard code(s) where each term appears, its content area, and any earlier grade where it also appears.

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced
apparent brightness	3.3.5.A	*Earth & Space Science*	N/A
atmosphere	3.3.5.C	*Earth & Space Science*	N/A
axis	3.3.5.B	*Earth & Space Science*	N/A
bacteria	3.1.5.B	*Life Science*	N/A
biosphere	3.3.5.C	*Earth & Space Science*	N/A
conservation	3.3.5.D	*Earth & Space Science*	N/A
consumer	3.1.5.B	*Life Science*	N/A
decomposer	3.1.5.B	*Life Science*	N/A
ecosystem	3.1.5.B	*Life Science*	N/A
energy	3.1.5.B	*Life Science*	Grade 4 *(3.2.4.A; 3.2.4.C; 3.2.4.D; 3.3.4.D)*
energy flow	3.2.5.G	*Physical Science*	N/A
environmental impact	3.3.5.E	*Earth & Space Science*	N/A
food web	3.1.5.B	*Life Science*	N/A
freshwater	3.3.5.D	*Earth & Space Science*	N/A
fungi	3.1.5.B	*Life Science*	N/A
geosphere	3.3.5.C	*Earth & Space Science*	N/A
glacier	3.3.5.D	*Earth & Space Science*	N/A
gravitational force	3.2.5.F	*Physical Science*	N/A
gravity	3.2.5.F	*Physical Science*	N/A
groundwater	3.3.5.D	*Earth & Space Science*	N/A
habitat restoration	3.3.5.F	*Earth & Space Science*	N/A
hydrosphere	3.3.5.C	*Earth & Space Science*	N/A
matter	3.1.5.A 3.2.5.A	*Life Science* *Physical Science*	N/A
microbe	3.1.5.B	*Life Science*	N/A
mineral	3.2.5.B	*Physical Science*	N/A
North Pole	3.3.5.B	*Earth & Space Science*	N/A
orbit	3.3.5.B	*Earth & Space Science*	N/A
particle	3.2.5.A	*Physical Science*	N/A
planet	3.2.5.F	*Physical Science*	N/A

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced
pollution	3.3.5.E	*Earth & Space Science*	N/A
producer	3.1.5.B	*Life Science*	N/A
properties	3.2.5.C	*Physical Science*	Grade 2 *(3.2.2.A)*
recycle	3.3.5.F	*Earth & Space Science*	N/A
reduce	3.3.5.F	*Earth & Space Science*	Grade K *(3.3.K.E)*
relative distance	3.3.5.A	*Earth & Space Science*	N/A
reservoir	3.3.5.D	*Earth & Space Science*	N/A
resource management	3.3.5.E	*Earth & Space Science*	N/A
reuse	3.3.5.F	*Earth & Space Science*	N/A
rotation	3.3.5.B	*Earth & Space Science*	N/A
saltwater	3.3.5.D	*Earth & Space Science*	N/A
shadow	3.3.5.B	*Earth & Space Science*	N/A
South Pole	3.3.5.B	*Earth & Space Science*	N/A
substance	3.2.5.E	*Physical Science*	N/A
surface water	3.3.5.D	*Earth & Space Science*	N/A
waste management	3.3.5.F	*Earth & Space Science*	N/A
weight	3.2.5.D	*Physical Science*	N/A

Grades 6-8 Life Science Vocabulary Summary

This table lists vocabulary terms aligned to the Grades 6-8 Life Science Curriculum Framework, in alphabetical order, along with the standard code(s) where each term appears, its content area, and any earlier grade or other Grades 6-8 course where it also appears.

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 6-8 Course
abiotic	3.1.6-8.J	*Life Science*	N/A
abiotic component	3.1.6-8.L	*Life Science*	N/A
adaptation	3.1.6-8.T	*Life Science*	Grade 3 *(3.1.3.G)*
algae	3.1.6-8.F	*Life Science*	N/A
allele	3.1.6-8.N	*Life Science*	N/A
anatomical	3.1.6-8.P	*Life Science*	N/A
aquatic ecosystem	3.1.6-8.K	*Life Science*	N/A
asexual reproduction	3.1.6-8.N	*Life Science*	N/A
behavior	3.1.6-8.D	*Life Science*	Grade 1 *(3.1.1.B)*
biodiversity	3.1.6-8.U	*Life Science*	N/A
biology	3.1.6-8.A	*Life Science*	N/A
biotic	3.1.6-8.J	*Life Science*	N/A
biotic component	3.1.6-8.L	*Life Science*	N/A
carbon dioxide	3.1.6-8.F	*Life Science*	Grades 6-8 Earth & Space Science *(3.3.6-8.O)*
cell	3.1.6-8.A	*Life Science*	N/A
cell membrane	3.1.6-8.B	*Life Science*	N/A
cell wall	3.1.6-8.B	*Life Science*	N/A
cellular respiration	3.1.6-8.G	*Life Science*	N/A
chemical input	3.1.6-8.H	*Life Science*	N/A
chemical reaction	3.1.6-8.G	*Life Science*	Grades 6-8 Physical Science *(3.2.6-8.D; 3.2.6-8.E)*
chloroplast	3.1.6-8.B	*Life Science*	N/A
chromosome	3.1.6-8.M	*Life Science*	N/A
chronological	3.1.6-8.O	*Life Science*	N/A
circulatory system	3.1.6-8.C	*Life Science*	N/A
conservation of matter	3.1.6-8.G	*Life Science*	Grades 6-8 Physical Science *(3.2.6-8.E)*
consumer	3.1.6-8.K	*Life Science*	Grade 5 *(3.1.5.B)*
decomposer	3.1.6-8.K	*Life Science*	Grade 5 *(3.1.5.B)*
development	3.1.6-8.E	*Life Science*	N/A
digestive system	3.1.6-8.C	*Life Science*	N/A
disruption	3.1.6-8.L	*Life Science*	N/A
dominant	3.1.6-8.N	*Life Science*	N/A
ecosystem	3.1.6-8.I	*Life Science*	Grade 5 *(3.1.5.B)*

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 6-8 Course
electromagnetic input	3.1.6-8.H	*Life Science*	N/A
embryo	3.1.6-8.Q	*Life Science*	N/A
energy	3.1.6-8.F	*Life Science*	Grade 4 *(3.2.4.A; 3.2.4.C; 3.2.4.D; 3.3.4.D)* Grade 5 *(3.1.5.B)*
energy flow	3.1.6-8.K	*Life Science*	Grade 5 *(3.2.5.G)*
environmental factors	3.1.6-8.E	*Life Science*	N/A
evolution	3.1.6-8.P	*Life Science*	N/A
excretory system	3.1.6-8.C	*Life Science*	N/A
extinction	3.1.6-8.O	*Life Science*	Grade 3 *(3.1.3.E)* Grades 6-8 Earth & Space Science *(3.3.6-8.M)*
fossil	3.1.6-8.O	*Life Science*	Grade 3 *(3.1.3.E)*
gene	3.1.6-8.M 3.1.6-8.N	*Life Science* *Life Science*	N/A
generation	3.1.6-8.T	*Life Science*	N/A
genetic engineering	3.1.6-8.R	*Life Science*	N/A
genetic factors	3.1.6-8.E	*Life Science*	N/A
genetic variation	3.1.6-8.N	*Life Science*	N/A
growth	3.1.6-8.E	*Life Science*	Grade 3 *(3.1.3.A)*
interdependent	3.1.6-8.J	*Life Science*	N/A
limiting factors	3.1.6-8.I	*Life Science*	N/A
matter	3.1.6-8.F	*Life Science*	Grade 5 *(3.1.5.A; 3.2.5.A)* Grades 6-8 Physical Science *(3.2.6-8.N)*
matter cycling	3.1.6-8.K	*Life Science*	N/A
mechanical input	3.1.6-8.H	*Life Science*	N/A
microorganism	3.1.6-8.F	*Life Science*	N/A
mitochondria	3.1.6-8.B	*Life Science*	N/A
molecule	3.1.6-8.G	*Life Science*	Grades 6-8 Physical Science *(3.2.6-8.A)*
multicellular	3.1.6-8.A	*Life Science*	N/A
muscular system	3.1.6-8.C	*Life Science*	N/A
mutation	3.1.6-8.M	*Life Science*	N/A
natural selection	3.1.6-8.S	*Life Science*	N/A
nerve cell	3.1.6-8.H	*Life Science*	N/A
nervous system	3.1.6-8.C	*Life Science*	N/A
nonliving	3.1.6-8.I	*Life Science*	N/A
nucleus	3.1.6-8.B	*Life Science*	N/A
offspring	3.1.6-8.N	*Life Science*	Grade 1 *(3.1.1.B)*

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 6-8 Course
organ	3.1.6-8.C	*Life Science*	N/A
organelle	3.1.6-8.B	*Life Science*	N/A
organism	3.1.6-8.A	*Life Science*	Grade 3 *(3.1.3.A; 3.1.3.C; 3.1.3.E; 3.1.3.G)*
oxygen	3.1.6-8.F	*Life Science*	N/A
photosynthesis	3.1.6-8.F	*Life Science*	N/A
physical component	3.1.6-8.L	*Life Science*	N/A
population	3.1.6-8.I	*Life Science*	Grade 3 *(3.1.3.H)* Grades 6-8 Earth & Space Science *(3.3.6-8.N)*
producer	3.1.6-8.K	*Life Science*	Grade 5 *(3.1.5.B)*
protein	3.1.6-8.M	*Life Science*	N/A
Punnett square	3.1.6-8.N	*Life Science*	N/A
radioactive dating	3.1.6-8.O	*Life Science*	N/A
recessive	3.1.6-8.N	*Life Science*	N/A
reproduction	3.1.6-8.D	*Life Science*	Grade 3 *(3.1.3.A; 3.1.3.F)*
respiratory system	3.1.6-8.C	*Life Science*	N/A
sedimentary layers	3.1.6-8.O	*Life Science*	N/A
selective breeding	3.1.6-8.R	*Life Science*	N/A
sensory receptor	3.1.6-8.H	*Life Science*	Grade 4 *(3.1.4.B)*
sexual reproduction	3.1.6-8.N	*Life Science*	N/A
stimuli	3.1.6-8.H	*Life Science*	N/A
sugar	3.1.6-8.F	*Life Science*	N/A
terrestrial ecosystem	3.1.6-8.K	*Life Science*	N/A
tissue	3.1.6-8.C	*Life Science*	N/A
unicellular	3.1.6-8.A	*Life Science*	N/A

Grades 6-8 Physical Science Vocabulary Summary

This table lists vocabulary terms aligned to the Grades 6-8 Physical Science Curriculum Framework, in alphabetical order, along with the standard code(s) where each term appears, its content area, and any earlier grade or other Grades 6-8 course where it also appears.

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 6-8 Course
absorption	3.2.6-8.R	*Physical Science*	N/A
amplitude	3.2.6-8.Q	*Physical Science*	Grade 4 *(3.2.4.E)*
analog signal	3.2.6-8.S	*Physical Science*	N/A
atom	3.2.6-8.A	*Physical Science*	N/A
attract	3.2.6-8.I 3.2.6-8.J	*Physical Science* *Physical Science*	N/A
balanced force	3.2.6-8.H	*Physical Science*	Grade 3 *(3.2.3.B)*
boiling point	3.2.6-8.D	*Physical Science*	N/A
chemical properties	3.2.6-8.D	*Physical Science*	N/A
chemical reaction	3.2.6-8.D 3.2.6-8.E	*Physical Science* *Physical Science*	Grades 6-8 Life Science *(3.1.6-8.G)*
collision	3.2.6-8.G	*Physical Science*	Grade 4 *(3.2.4.C)*
compound	3.2.6-8.A	*Physical Science*	N/A
conservation of matter	3.2.6-8.E	*Physical Science*	Grades 6-8 Life Science *(3.1.6-8.G)*
density	3.2.6-8.D	*Physical Science*	Grades 6-8 Earth & Space Science *(3.3.6-8.I)*
digital signal	3.2.6-8.S	*Physical Science*	N/A
electric force	3.2.6-8.I	*Physical Science*	N/A
electric motor	3.2.6-8.I	*Physical Science*	N/A
electromagnet	3.2.6-8.I	*Physical Science*	N/A
electromagnetic field	3.2.6-8.K	*Physical Science*	N/A
encode	3.2.6-8.S	*Physical Science*	N/A
energy transfer	3.2.6-8.M 3.2.6-8.O	*Physical Science* *Physical Science*	Grade 4 *(3.2.4.B)*
flammability	3.2.6-8.D	*Physical Science*	N/A
force	3.2.6-8.G 3.2.6-8.K	*Physical Science* *Physical Science*	Grade 3 *(3.2.3.C)*
frequency	3.2.6-8.Q	*Physical Science*	N/A
gas	3.2.6-8.B	*Physical Science*	N/A
generator	3.2.6-8.I	*Physical Science*	N/A
gravitational force	3.2.6-8.J	*Physical Science*	Grade 5 *(3.2.5.F)*
heat	3.2.6-8.B	*Physical Science*	N/A

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 6-8 Course
kinetic energy	3.2.6-8.B 3.2.6-8.L 3.2.6-8.N 3.2.6-8.O	*Physical Science* *Physical Science* *Physical Science* *Physical Science*	N/A
liquid	3.2.6-8.B	*Physical Science*	Grade 2 *(3.3.2.D)*
magnetic force	3.2.6-8.I	*Physical Science*	Grade 3 *(3.2.3.D)*
mass	3.2.6-8.H 3.2.6-8.J 3.2.6-8.L 3.2.6-8.N	*Physical Science* *Physical Science* *Physical Science* *Physical Science*	N/A
matter	3.2.6-8.N	*Physical Science*	Grade 5 *(3.1.5.A; 3.2.5.A)* Grades 6-8 Life Science *(3.1.6-8.F)*
melting point	3.2.6-8.D	*Physical Science*	N/A
molecule	3.2.6-8.A	*Physical Science*	Grades 6-8 Life Science *(3.1.6-8.G)*
natural resource	3.2.6-8.C	*Physical Science*	Grade 4 *(3.3.4.D)* Grades 6-8 Earth & Space Science *(3.3.6-8.N)*
Newton's First Law of Motion	3.2.6-8.H	*Physical Science*	N/A
Newton's Second Law of Motion	3.2.6-8.H	*Physical Science*	N/A
Newton's Third Law of Motion	3.2.6-8.G	*Physical Science*	N/A
odor	3.2.6-8.D	*Physical Science*	N/A
phase change	3.2.6-8.B	*Physical Science*	N/A
physical properties	3.2.6-8.D	*Physical Science*	N/A
potential energy	3.2.6-8.P	*Physical Science*	N/A
product	3.2.6-8.D	*Physical Science*	N/A
reactant	3.2.6-8.D	*Physical Science*	N/A
reflection	3.2.6-8.R	*Physical Science*	Grade 4 *(3.2.4.F)*
repel	3.2.6-8.I	*Physical Science*	N/A
solid	3.2.6-8.B	*Physical Science*	Grade 2 *(3.3.2.D)*
solubility	3.2.6-8.D	*Physical Science*	N/A
speed	3.2.6-8.L	*Physical Science*	Grade K *(3.2.K.A)* Grade 4 *(3.2.4.A)*
synthetic material	3.2.6-8.C	*Physical Science*	N/A

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 6-8 Course
temperature	3.2.6-8.B 3.2.6-8.N	*Physical Science* *Physical Science*	Grade 3 *(3.3.3.A)* Grades 6-8 Earth & Space Science *(3.3.6-8.J)*
thermal energy	3.2.6-8.B 3.2.6-8.F 3.2.6-8.M	*Physical Science* *Physical Science* *Physical Science*	Grades 6-8 Earth & Space Science *(3.3.6-8.I)*
transmission	3.2.6-8.R	*Physical Science*	N/A
transmit	3.2.6-8.S	*Physical Science*	N/A
unbalanced force	3.2.6-8.H	*Physical Science*	Grade 3 *(3.2.3.B)*
wave	3.2.6-8.Q	*Physical Science*	Grade 4 *(3.2.4.E)*
wavelength	3.2.6-8.Q	*Physical Science*	Grade 4 *(3.2.4.E)*

Grades 6-8 Earth & Space Science Vocabulary Summary

This table lists vocabulary terms aligned to the Grades 6-8 Earth & Space Science Curriculum Framework, in alphabetical order, along with the standard code(s) where each term appears, its content area, and any earlier grade or other Grades 6-8 course where it also appears.

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 6-8 Course
air mass	3.3.6-8.J	*Earth & Space Science*	N/A
altitude	3.3.6-8.I	*Earth & Space Science*	N/A
axis	3.3.6-8.A	*Earth & Space Science*	Grade 5 *(3.3.5.B)*
biosphere	3.3.6-8.K	*Earth & Space Science*	Grade 5 *(3.3.5.C)*
carbon dioxide	3.3.6-8.O	*Earth & Space Science*	Grades 6-8 Life Science *(3.1.6-8.F)*
circulation	3.3.6-8.I	*Earth & Space Science*	N/A
climate	3.3.6-8.O	*Earth & Space Science*	Grade 3 *(3.3.3.B)*
condensation	3.3.6-8.H	*Earth & Space Science*	N/A
Coriolis effect	3.3.6-8.I	*Earth & Space Science*	N/A
crystallization	3.3.6-8.F 3.3.6-8.H	*Earth & Space Science* *Earth & Space Science*	N/A
deformation	3.3.6-8.F	*Earth & Space Science*	N/A
density	3.3.6-8.I	*Earth & Space Science*	Grades 6-8 Physical Science *(3.2.6-8.D)*
deposition	3.3.6-8.E	*Earth & Space Science*	N/A
Earth's tilt	3.3.6-8.A	*Earth & Space Science*	N/A
earthquake	3.3.6-8.E	*Earth & Space Science*	Grade 4 *(3.3.4.E)*
eclipse	3.3.6-8.A	*Earth & Space Science*	N/A
erosion	3.3.6-8.E	*Earth & Space Science*	Grade 2 *(3.3.2.A)* Grade 4 *(3.3.4.B)*
evaporation	3.3.6-8.H	*Earth & Space Science*	N/A
extinction	3.3.6-8.M	*Earth & Space Science*	Grade 3 *(3.1.3.E)* Grades 6-8 Life Science *(3.1.6-8.O)*
fossil record	3.3.6-8.D	*Earth & Space Science*	N/A
galaxy	3.3.6-8.B	*Earth & Space Science*	N/A
geologic time scale	3.3.6-8.D	*Earth & Space Science*	N/A
geological forces	3.3.6-8.L	*Earth & Space Science*	N/A
geoscience processes	3.3.6-8.E 3.3.6-8.K	*Earth & Space Science* *Earth & Space Science*	N/A
gravity	3.3.6-8.B 3.3.6-8.H	*Earth & Space Science* *Earth & Space Science*	Grade 5 *(3.2.5.F)*
greenhouse gas	3.3.6-8.O	*Earth & Space Science*	N/A
high pressure	3.3.6-8.J	*Earth & Space Science*	N/A

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 6-8 Course
human activity	3.3.6-8.O	*Earth & Space Science*	N/A
humidity	3.3.6-8.J	*Earth & Space Science*	N/A
hydrologic cycle	3.3.6-8.H	*Earth & Space Science*	N/A
land usage	3.3.6-8.M	*Earth & Space Science*	N/A
latitude	3.3.6-8.I	*Earth & Space Science*	N/A
low pressure	3.3.6-8.J	*Earth & Space Science*	N/A
lunar phases	3.3.6-8.A	*Earth & Space Science*	N/A
melting	3.3.6-8.F	*Earth & Space Science*	N/A
natural habitat	3.3.6-8.M	*Earth & Space Science*	N/A
natural hazard	3.3.6-8.L	*Earth & Space Science*	Grade 3 *(3.3.3.C)*
natural processes	3.3.6-8.O	*Earth & Space Science*	N/A
natural resource	3.3.6-8.N	*Earth & Space Science*	Grade 4 *(3.3.4.D)* Grades 6-8 Physical Science *(3.2.6-8.C)*
nonrenewable resource	3.3.6-8.K	*Earth & Space Science*	Grade 4 *(3.3.4.D)*
orbit	3.3.6-8.B	*Earth & Space Science*	Grade 5 *(3.3.5.B)*
per-capita consumption	3.3.6-8.N	*Earth & Space Science*	N/A
pollution	3.3.6-8.M	*Earth & Space Science*	Grade 5 *(3.3.5.E)*
population	3.3.6-8.N	*Earth & Space Science*	Grade 3 *(3.1.3.H)* Grades 6-8 Life Science *(3.1.6-8.I)*
precipitation	3.3.6-8.H	*Earth & Space Science*	Grade 3 *(3.3.3.A)*
pressure	3.3.6-8.J	*Earth & Space Science*	N/A
relative age	3.3.6-8.D	*Earth & Space Science*	N/A
renewable resource	3.3.6-8.K	*Earth & Space Science*	Grade 4 *(3.3.4.D)*
revolution	3.3.6-8.A	*Earth & Space Science*	N/A
ridge	3.3.6-8.G	*Earth & Space Science*	N/A
rotation	3.3.6-8.A	*Earth & Space Science*	Grade 5 *(3.3.5.B)*
salinity	3.3.6-8.I	*Earth & Space Science*	N/A
seafloor spreading	3.3.6-8.G	*Earth & Space Science*	N/A
sedimentation	3.3.6-8.F	*Earth & Space Science*	N/A
solar system	3.3.6-8.B	*Earth & Space Science*	N/A
strata	3.3.6-8.D	*Earth & Space Science*	N/A
tectonic plate	3.3.6-8.G	*Earth & Space Science*	N/A

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 6-8 Course
temperature	3.3.6-8.J	*Earth & Space Science*	Grade 3 *(3.3.3.A)* Grades 6-8 Physical Science *(3.2.6-8.B; 3.2.6-8.N)*
thermal energy	3.3.6-8.I	*Earth & Space Science*	Grades 6-8 Physical Science *(3.2.6-8.B; 3.2.6-8.F; 3.2.6-8.M)*
transpiration	3.3.6-8.H	*Earth & Space Science*	N/A
trench	3.3.6-8.G	*Earth & Space Science*	N/A
volcano	3.3.6-8.E	*Earth & Space Science*	N/A
water usage	3.3.6-8.M	*Earth & Space Science*	N/A
weather conditions	3.3.6-8.J	*Earth & Space Science*	N/A
weathering	3.3.6-8.E 3.3.6-8.F	*Earth & Space Science* *Earth & Space Science*	Grade 4 *(3.3.4.B)*

Grades 9-12 Life Science Vocabulary Summary

This table lists vocabulary terms aligned to the Grades 9-12 Life Science Curriculum Framework, in alphabetical order, along with the standard code(s) where each term appears, its content area, and any earlier grade or other Grades 9-12 course where it also appears.

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 9-12 Course
10% rule	3.1.9-12.H	*Life Science*	N/A
abiotic	3.1.9-12.W	*Life Science*	Grades 6-8 Life Science *(3.1.6-8.J)*
adaptation	3.1.9-12.U	*Life Science*	Grade 3 *(3.1.3.G)* Grades 6-8 Life Science *(3.1.6-8.T)*
aerobic	3.1.9-12.J	*Life Science*	N/A
amino acid	3.1.9-12.F	*Life Science*	N/A
anaerobic	3.1.9-12.J	*Life Science*	N/A
anatomical structure	3.1.9-12.S	*Life Science*	N/A
atmosphere	3.1.9-12.K	*Life Science*	Grade 5 *(3.3.5.C)* Grades 9-12 Earth & Space Science *(3.3.9-12.L; 3.3.9-12.M; 3.3.9-12.N)*
ATP	3.1.9-12.G	*Life Science*	N/A
biodiversity	3.1.9-12.L	*Life Science*	Grades 6-8 Life Science *(3.1.6-8.U)* Grades 9-12 Earth & Space Science *(3.3.9-12.Q)*
biological fitness	3.1.9-12.T	*Life Science*	N/A
biomass	3.1.9-12.H	*Life Science*	N/A
biosphere	3.1.9-12.K	*Life Science*	Grade 5 *(3.3.5.C)* Grades 6-8 Earth & Space Science *(3.3.6-8.K)* Grades 9-12 Earth & Space Science *(3.3.9-12.L; 3.3.9-12.M; 3.3.9-12.N)*
biotic	3.1.9-12.W	*Life Science*	Grades 6-8 Life Science *(3.1.6-8.J)*
carbon cycle	3.1.9-12.K	*Life Science*	N/A
carbon-based molecule	3.1.9-12.F	*Life Science*	N/A
carrying capacity	3.1.9-12.I	*Life Science*	N/A
cell	3.1.9-12.B	*Life Science*	Grades 6-8 Life Science *(3.1.6-8.A)*
cellular respiration	3.1.9-12.G 3.1.9-12.K	*Life Science* *Life Science*	Grades 6-8 Life Science *(3.1.6-8.G)*
chemical bond	3.1.9-12.G	*Life Science*	N/A
chemical energy	3.1.9-12.E	*Life Science*	N/A

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 9-12 Course
chromosome	3.1.9-12.P	*Life Science*	Grades 6-8 Life Science *(3.1.6-8.M)*
climate	3.1.9-12.I	*Life Science*	Grade 3 *(3.3.3.B)* Grades 6-8 Earth & Space Science *(3.3.6-8.O)* Grades 9-12 Earth & Space Science *(3.3.9-12.E; 3.3.9-12.H)*
climate change	3.1.9-12.N 3.1.9-12.X	*Life Science* *Life Science*	N/A
common ancestor	3.1.9-12.S	*Life Science*	N/A
competition	3.1.9-12.I 3.1.9-12.L	*Life Science* *Life Science*	N/A
conservation of energy	3.1.9-12.H	*Life Science*	Grades 9-12 Physical Science *(3.2.9-12.O)*
conservation of matter	3.1.9-12.H	*Life Science*	Grades 6-8 Life Science *(3.1.6-8.G)* Grades 6-8 Physical Science *(3.2.6-8.E)*
deforestation	3.1.9-12.X	*Life Science*	N/A
differentiation	3.1.9-12.D	*Life Science*	N/A
DNA	3.1.9-12.A 3.1.9-12.P	*Life Science* *Life Science*	N/A
DNA replication	3.1.9-12.Q	*Life Science*	N/A
drought	3.1.9-12.X	*Life Science*	N/A
ecosystem	3.1.9-12.I 3.1.9-12.M	*Life Science* *Life Science*	Grade 5 *(3.1.5.B)* Grades 6-8 Life Science *(3.1.6-8.I)*
ecosystem disturbance	3.1.9-12.M	*Life Science*	N/A
embryological development	3.1.9-12.S	*Life Science*	N/A
endangered species	3.1.9-12.V	*Life Science*	N/A
energy transfer	3.1.9-12.G	*Life Science*	Grade 4 *(3.2.4.B)* Grades 6-8 Physical Science *(3.2.6-8.M; 3.2.6-8.O)*
evolution	3.1.9-12.S	*Life Science*	Grades 6-8 Life Science *(3.1.6-8.P)*
extinction	3.1.9-12.N 3.1.9-12.X	*Life Science* *Life Science*	Grade 3 *(3.1.3.E)* Grades 6-8 Life Science *(3.1.6-8.O)* Grades 6-8 Earth & Space Science *(3.3.6-8.M)*
food chain	3.1.9-12.H	*Life Science*	N/A

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 9-12 Course
food web	3.1.9-12.H	*Life Science*	Grade 5 *(3.1.5.B)*
gene	3.1.9-12.A 3.1.9-12.P	*Life Science* *Life Science*	Grades 6-8 Life Science *(3.1.6-8.M; 3.1.6-8.N)*
gene frequency	3.1.9-12.W	*Life Science*	N/A
genetic variation	3.1.9-12.V	*Life Science*	Grades 6-8 Life Science *(3.1.6-8.N)*
geosphere	3.1.9-12.K	*Life Science*	Grade 5 *(3.3.5.C)* Grades 9-12 Earth & Space Science *(3.3.9-12.L; 3.3.9-12.M)*
habitat destruction	3.1.9-12.N	*Life Science*	N/A
hierarchical organization	3.1.9-12.B	*Life Science*	N/A
homeostasis	3.1.9-12.C	*Life Science*	N/A
hydrocarbon backbone	3.1.9-12.F	*Life Science*	N/A
hydrosphere	3.1.9-12.K	*Life Science*	Grade 5 *(3.3.5.C)* Grades 9-12 Earth & Space Science *(3.3.9-12.L; 3.3.9-12.M)*
inheritance	3.1.9-12.P	*Life Science*	Grade 3 *(3.1.3.C)*
interdependent factor	3.1.9-12.I	*Life Science*	N/A
invasive species	3.1.9-12.N	*Life Science*	N/A
light energy	3.1.9-12.E	*Life Science*	Grade 4 *(3.2.4.B)*
macromolecule	3.1.9-12.F	*Life Science*	N/A
matter	3.1.9-12.E	*Life Science*	Grade 5 *(3.1.5.A; 3.2.5.A)* Grades 6-8 Life Science *(3.1.6-8.F)* Grades 6-8 Physical Science *(3.2.6-8.N)*
meiosis	3.1.9-12.Q	*Life Science*	N/A
mitosis	3.1.9-12.D	*Life Science*	N/A
molecule	3.1.9-12.F	*Life Science*	Grades 6-8 Life Science *(3.1.6-8.G)* Grades 6-8 Physical Science *(3.2.6-8.A)*
monomer	3.1.9-12.F	*Life Science*	N/A
multicellular	3.1.9-12.B	*Life Science*	Grades 6-8 Life Science *(3.1.6-8.A)*
mutation	3.1.9-12.Q	*Life Science*	Grades 6-8 Life Science *(3.1.6-8.M)*
natural selection	3.1.9-12.T	*Life Science*	Grades 6-8 Life Science *(3.1.6-8.S)*
negative feedback loop	3.1.9-12.C	*Life Science*	N/A

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 9-12 Course
net transfer	3.1.9-12.G	*Life Science*	N/A
organ	3.1.9-12.B	*Life Science*	Grades 6-8 Life Science *(3.1.6-8.C)*
organ system	3.1.9-12.B	*Life Science*	N/A
organism	3.1.9-12.B	*Life Science*	Grade 3 *(3.1.3.A; 3.1.3.C; 3.1.3.E; 3.1.3.G)* Grades 6-8 Life Science *(3.1.6-8.A)*
overexploitation	3.1.9-12.N	*Life Science*	N/A
photosynthesis	3.1.9-12.E 3.1.9-12.K	*Life Science* *Life Science*	Grades 6-8 Life Science *(3.1.6-8.F)* Grades 9-12 Earth & Space Science *(3.3.9-12.N)*
pollution	3.1.9-12.N	*Life Science*	Grade 5 *(3.3.5.E)* Grades 6-8 Earth & Space Science *(3.3.6-8.M)*
polymer	3.1.9-12.F	*Life Science*	N/A
population	3.1.9-12.L 3.1.9-12.Q	*Life Science* *Life Science*	Grade 3 *(3.1.3.H)* Grades 6-8 Life Science *(3.1.6-8.I)* Grades 6-8 Earth & Space Science *(3.3.6-8.N)*
positive feedback loop	3.1.9-12.C	*Life Science*	N/A
predation	3.1.9-12.L	*Life Science*	N/A
protein	3.1.9-12.A 3.1.9-12.P	*Life Science* *Life Science*	Grades 6-8 Life Science *(3.1.6-8.M)*
specialized cell	3.1.9-12.A	*Life Science*	N/A
speciation	3.1.9-12.N	*Life Science*	N/A
species	3.1.9-12.L	*Life Science*	Grade 3 *(3.1.3.F)*
stimuli	3.1.9-12.C	*Life Science*	Grades 6-8 Life Science *(3.1.6-8.H)*
threatened species	3.1.9-12.V	*Life Science*	N/A
tissue	3.1.9-12.B	*Life Science*	Grades 6-8 Life Science *(3.1.6-8.C)*
trait	3.1.9-12.P	*Life Science*	Grade 3 *(3.1.3.C; 3.1.3.D)*
transformation	3.1.9-12.E	*Life Science*	N/A
trophic level	3.1.9-12.H	*Life Science*	N/A

Grades 9-12 Physical Science Vocabulary Summary

This table lists vocabulary terms aligned to the Grades 9-12 Physical Science Curriculum Framework, in alphabetical order, along with the standard code(s) where each term appears, its content area, and any earlier grade or other Grades 9-12 course where it also appears.

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 9-12 Course
acceleration	3.2.9-12.I	*Physical Science*	N/A
atom	3.2.9-12.A	*Physical Science*	Grades 6-8 Physical Science *(3.2.6-8.A)*
bond energy	3.2.9-12.D	*Physical Science*	N/A
chemical properties	3.2.9-12.B	*Physical Science*	Grades 6-8 Physical Science *(3.2.6-8.D)*
closed system	3.2.9-12.R	*Physical Science*	N/A
collision	3.2.9-12.E 3.2.9-12.K	*Physical Science* *Physical Science*	Grade 4 *(3.2.4.C)* Grades 6-8 Physical Science *(3.2.6-8.G)*
concentration	3.2.9-12.E	*Physical Science*	N/A
conservation of energy	3.2.9-12.O	*Physical Science*	Grades 9-12 Life Science *(3.1.9-12.H)*
Coulomb's law	3.2.9-12.L 3.2.9-12.M	*Physical Science* *Physical Science*	N/A
digital	3.2.9-12.U	*Physical Science*	N/A
dynamic equilibrium	3.2.9-12.F	*Physical Science*	N/A
electric current	3.2.9-12.M	*Physical Science*	Grade 4 *(3.2.4.B)*
electric field	3.2.9-12.L 3.2.9-12.O	*Physical Science* *Physical Science*	N/A
electric force	3.2.9-12.B 3.2.9-12.L 3.2.9-12.M 3.2.9-12.N	*Physical Science* *Physical Science* *Physical Science* *Physical Science*	Grades 6-8 Physical Science *(3.2.6-8.I)*
electrical charge	3.2.9-12.L 3.2.9-12.M 3.2.9-12.N	*Physical Science* *Physical Science* *Physical Science*	N/A
electrical energy	3.2.9-12.M	*Physical Science*	N/A
electromagnetic field	3.2.9-12.S	*Physical Science*	Grades 6-8 Physical Science *(3.2.6-8.K)*
electromagnetic radiation	3.2.9-12.W	*Physical Science*	Grades 9-12 Earth & Space Science *(3.3.9-12.A; 3.3.9-12.E)*
electron	3.2.9-12.A 3.2.9-12.B	*Physical Science* *Physical Science*	N/A
electrostatic force	3.2.9-12.L 3.2.9-12.M	*Physical Science* *Physical Science*	N/A

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 9-12 Course
element	3.2.9-12.A	*Physical Science*	Grades 9-12 Earth & Space Science *(3.3.9-12.C*)
energy	3.2.9-12.Q	*Physical Science*	Grade 4 *(3.2.4.A; 3.2.4.C; 3.2.4.D; 3.3.4.D)* Grade 5 *(3.1.5.B)* Grades 6-8 Life Science *(3.1.6-8.F)*
fission	3.2.9-12.H	*Physical Science*	N/A
force	3.2.9-12.I 3.2.9-12.K	*Physical Science* *Physical Science*	Grade 3 *(3.2.3.C)* Grades 6-8 Physical Science *(3.2.6-8.G; 3.2.6-8.K)*
forward reaction	3.2.9-12.F	*Physical Science*	N/A
frequency	3.2.9-12.T	*Physical Science*	Grades 6-8 Physical Science *(3.2.6-8.Q)*
fusion	3.2.9-12.H	*Physical Science*	N/A
gravitational field	3.2.9-12.L 3.2.9-12.O	*Physical Science* *Physical Science*	N/A
gravitational force	3.2.9-12.L	*Physical Science*	Grade 5 *(3.2.5.F)* Grades 6-8 Physical Science *(3.2.6-8.J)*
impulse	3.2.9-12.K	*Physical Science*	N/A
interference	3.2.9-12.V	*Physical Science*	N/A
ion	3.2.9-12.B	*Physical Science*	N/A
ionization energy	3.2.9-12.A	*Physical Science*	N/A
isotope	3.2.9-12.H	*Physical Science*	Grades 9-12 Earth & Space Science *(3.3.9-12.I)*
kinetic energy	3.2.9-12.O	*Physical Science*	Grades 6-8 Physical Science *(3.2.6-8.B; 3.2.6-8.L; 3.2.6-8.N; 3.2.6-8.O)*
macroscopic scale	3.2.9-12.P	*Physical Science*	N/A
magnetic field	3.2.9-12.M 3.2.9-12.O	*Physical Science* *Physical Science*	Grades 9-12 Earth & Space Science *(3.3.9-12.I)*
magnetic force	3.2.9-12.L 3.2.9-12.M	*Physical Science* *Physical Science*	Grade 3 *(3.2.3.D)* Grades 6-8 Physical Science *(3.2.6-8.I)*
mass	3.2.9-12.I 3.2.9-12.J	*Physical Science* *Physical Science*	Grades 6-8 Physical Science *(3.2.6-8.H; 3.2.6-8.J; 3.2.6-8.L; 3.2.6-8.N)*
medium	3.2.9-12.T	*Physical Science*	N/A
molar mass	3.2.9-12.G	*Physical Science*	N/A
mole	3.2.9-12.G	*Physical Science*	N/A
molecular structure	3.2.9-12.N	*Physical Science*	N/A

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 9-12 Course
momentum	3.2.9-12.J 3.2.9-12.K	*Physical Science* *Physical Science*	N/A
net force	3.2.9-12.I 3.2.9-12.J	*Physical Science* *Physical Science*	N/A
neutron	3.2.9-12.A 3.2.9-12.H	*Physical Science* *Physical Science*	N/A
Newton's law of gravitation	3.2.9-12.L	*Physical Science*	N/A
Newton's Second Law of Motion	3.2.9-12.I	*Physical Science*	Grades 6-8 Physical Science *(3.2.6-8.H)*
nucleus	3.2.9-12.A 3.2.9-12.B 3.2.9-12.H	*Physical Science* *Physical Science* *Physical Science*	N/A
photoelectric	3.2.9-12.X	*Physical Science*	N/A
photoelectric effect	3.2.9-12.V	*Physical Science*	N/A
photon	3.2.9-12.W	*Physical Science*	N/A
physical properties	3.2.9-12.B	*Physical Science*	Grades 6-8 Physical Science *(3.2.6-8.D)*
pixel	3.2.9-12.X	*Physical Science*	N/A
potential energy	3.2.9-12.O	*Physical Science*	Grades 6-8 Physical Science *(3.2.6-8.P)*
proton	3.2.9-12.A 3.2.9-12.B 3.2.9-12.H	*Physical Science* *Physical Science* *Physical Science*	N/A
radiation	3.2.9-12.P	*Physical Science*	N/A
radioactive decay (alpha, beta, and gamma)	3.2.9-12.H	*Physical Science*	Grades 9-12 Earth & Space Science *(3.3.9-12.F; 3.3.9-12.G; 3.3.9-12.I)*
rate of reaction	3.2.9-12.E	*Physical Science*	N/A
reactant	3.2.9-12.D 3.2.9-12.G	*Physical Science* *Physical Science*	Grades 6-8 Physical Science *(3.2.6-8.D)*
resonance	3.2.9-12.V	*Physical Science*	N/A
reverse reaction	3.2.9-12.F	*Physical Science*	N/A
second law of thermodynamics	3.2.9-12.R	*Physical Science*	N/A
speed	3.2.9-12.T	*Physical Science*	Grade K *(3.2.K.A)* Grade 4 *(3.2.4.A)* Grades 6-8 Physical Science *(3.2.6-8.L)*

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 9-12 Course
temperature	3.2.9-12.E	*Physical Science*	Grade 3 *(3.3.3.A)* Grades 6-8 Physical Science *(3.2.6-8.B; 3.2.6-8.N)* Grades 6-8 Earth & Space Science *(3.3.6-8.J)*
thermal energy	3.2.9-12.O 3.2.9-12.P 3.2.9-12.R	*Physical Science* *Physical Science* *Physical Science*	Grades 6-8 Physical Science *(3.2.6-8.B; 3.2.6-8.F; 3.2.6-8.M)* Grades 6-8 Earth & Space Science *(3.3.6-8.I)*
uncontrolled systems	3.2.9-12.R	*Physical Science*	N/A
valence electron	3.2.9-12.A	*Physical Science*	N/A
velocity	3.2.9-12.I 3.2.9-12.J	*Physical Science* *Physical Science*	N/A
wave pulses	3.2.9-12.U	*Physical Science*	N/A
wavelength	3.2.9-12.T	*Physical Science*	Grade 4 *(3.2.4.E)* Grades 6-8 Physical Science *(3.2.6-8.Q)*

Grades 9-12 Earth & Space Science Vocabulary Summary

This table lists vocabulary terms aligned to the Grades 9-12 Earth & Space Science Curriculum Framework, in alphabetical order, along with the standard code(s) where each term appears, its content area, and any earlier grade or other Grades 9-12 course where it also appears.

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 9-12 Course
asteroid	3.3.9-12.G	*Earth & Space Science*	N/A
atmosphere	3.3.9-12.L 3.3.9-12.M 3.3.9-12.N	*Earth & Space Science* *Earth & Space Science* *Earth & Space Science*	Grade 5 *(3.3.5.C)* Grades 9-12 Life Science *(3.1.9-12.K)*
atomic nuclei	3.3.9-12.C	*Earth & Space Science*	N/A
Big Bang Theory	3.3.9-12.B	*Earth & Space Science*	N/A
biodiversity	3.3.9-12.Q	*Earth & Space Science*	Grades 6-8 Life Science *(3.1.6-8.U)* Grades 9-12 Life Science *(3.1.9-12.L)*
biosphere	3.3.9-12.L 3.3.9-12.M 3.3.9-12.N	*Earth & Space Science* *Earth & Space Science* *Earth & Space Science*	Grade 5 *(3.3.5.C)* Grades 6-8 Earth & Space Science *(3.3.6-8.K)* Grades 9-12 Life Science *(3.1.9-12.K)*
chemical weathering	3.3.9-12.K	*Earth & Space Science*	N/A
climate	3.3.9-12.E 3.3.9-12.H	*Earth & Space Science* *Earth & Space Science*	Grade 3 *(3.3.3.B)* Grades 6-8 Earth & Space Science *(3.3.6-8.O)* Grades 9-12 Life Science *(3.1.9-12.I)*
climate model outputs	3.3.9-12.S	*Earth & Space Science*	N/A
coastal erosion	3.3.9-12.H	*Earth & Space Science*	N/A
coevolution	3.3.9-12.N	*Earth & Space Science*	N/A
constructive forces	3.3.9-12.J	*Earth & Space Science*	N/A
continental crust	3.3.9-12.F	*Earth & Space Science*	N/A
cosmic microwave background	3.3.9-12.B	*Earth & Space Science*	N/A
cost-benefit ratio	3.3.9-12.P	*Earth & Space Science*	N/A
cryosphere	3.3.9-12.M	*Earth & Space Science*	N/A
density	3.3.9-12.K	*Earth & Space Science*	Grades 6-8 Physical Science *(3.2.6-8.D)* Grades 6-8 Earth & Space Science *(3.3.6-8.I)*
deposition	3.3.9-12.K	*Earth & Space Science*	Grades 6-8 Earth & Space Science *(3.3.6-8.E)*
destructive mechanisms	3.3.9-12.J	*Earth & Space Science*	N/A
ecosystem degradation	3.3.9-12.R	*Earth & Space Science*	N/A

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 9-12 Course
electromagnetic energy	3.3.9-12.B	*Earth & Space Science*	N/A
electromagnetic radiation	3.3.9-12.A 3.3.9-12.E	*Earth & Space Science* *Earth & Space Science*	Grades 9-12 Physical Science *(3.2.9-12.W)*
element	3.3.9-12.C	*Earth & Space Science*	Grades 9-12 Physical Science *(3.2.9-12.A)*
elliptical path	3.3.9-12.D	*Earth & Space Science*	N/A
erosion	3.3.9-12.G	*Earth & Space Science*	Grade 2 *(3.3.2.A)* Grade 4 *(3.3.4.B)* Grades 6-8 Earth & Space Science *(3.3.6-8.E)*
feedback	3.3.9-12.N	*Earth & Space Science*	N/A
flow of energy	3.3.9-12.E	*Earth & Space Science*	N/A
frost wedging	3.3.9-12.K	*Earth & Space Science*	N/A
geosphere	3.3.9-12.L 3.3.9-12.M	*Earth & Space Science* *Earth & Space Science*	Grade 5 *(3.3.5.C)* Grades 9-12 Life Science *(3.1.9-12.K)*
glacial ice	3.3.9-12.H	*Earth & Space Science*	N/A
glacial ice volume	3.3.9-12.S	*Earth & Space Science*	N/A
Global Climate Models	3.3.9-12.M	*Earth & Space Science*	N/A
greenhouse gas	3.3.9-12.H	*Earth & Space Science*	Grades 6-8 Earth & Space Science *(3.3.6-8.O)*
groundwater	3.3.9-12.H	*Earth & Space Science*	Grade 5 *(3.3.5.D)*
helium	3.3.9-12.C	*Earth & Space Science*	N/A
human migration	3.3.9-12.O	*Earth & Space Science*	N/A
humidity	3.3.9-12.H	*Earth & Space Science*	Grades 6-8 Earth & Space Science *(3.3.6-8.J)*
hydrogen	3.3.9-12.C	*Earth & Space Science*	N/A
hydrologic cycle	3.3.9-12.K	*Earth & Space Science*	Grades 6-8 Earth & Space Science *(3.3.6-8.H)*
hydrosphere	3.3.9-12.L 3.3.9-12.M	*Earth & Space Science* *Earth & Space Science*	Grade 5 *(3.3.5.C)* Grades 9-12 Life Science *(3.1.9-12.K)*
intensity	3.3.9-12.E	*Earth & Space Science*	N/A
interstellar	3.3.9-12.B	*Earth & Space Science*	N/A
isotope	3.3.9-12.I	*Earth & Space Science*	Grades 9-12 Physical Science *(3.2.9-12.H)*
Kepler's laws of orbital motion	3.3.9-12.D	*Earth & Space Science*	N/A
light spectra	3.3.9-12.B	*Earth & Space Science*	N/A
lunar	3.3.9-12.G	*Earth & Space Science*	N/A
magnetic field	3.3.9-12.I	*Earth & Space Science*	Grades 9-12 Physical Science *(3.2.9-12.M; 3.2.9-12.O)*

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 9-12 Course
mantle	3.3.9-12.I	*Earth & Space Science*	N/A
mechanical weathering	3.3.9-12.K	*Earth & Space Science*	N/A
meteorite	3.3.9-12.G	*Earth & Space Science*	N/A
mid-oceanic ridge	3.3.9-12.F	*Earth & Space Science*	N/A
mineral resources	3.3.9-12.P	*Earth & Space Science*	N/A
natural hazard	3.3.9-12.O	*Earth & Space Science*	Grade 3 *(3.3.3.C)* Grades 6-8 Earth & Space Science *(3.3.6-8.L)*
natural resource	3.3.9-12.O 3.3.9-12.Q	*Earth & Space Science* *Earth & Space Science*	Grade 4 *(3.3.4.D)* Grades 6-8 Physical Science *(3.2.6-8.C)* Grades 6-8 Earth & Space Science *(3.3.6-8.N)*
Newton's law of universal gravitation	3.3.9-12.D	*Earth & Space Science*	N/A
nuclear fusion	3.3.9-12.A	*Earth & Space Science*	N/A
nucleosynthesis	3.3.9-12.C	*Earth & Space Science*	N/A
ocean circulation	3.3.9-12.E	*Earth & Space Science*	N/A
oceanic crust	3.3.9-12.F	*Earth & Space Science*	N/A
orbit	3.3.9-12.D	*Earth & Space Science*	Grade 5 *(3.3.5.B)* Grades 6-8 Earth & Space Science *(3.3.6-8.B)*
photosynthesis	3.3.9-12.N	*Earth & Space Science*	Grades 6-8 Life Science *(3.1.6-8.F)* Grades 9-12 Life Science *(3.1.9-12.E; 3.1.9-12.K)*
plate tectonics	3.3.9-12.F 3.3.9-12.G	*Earth & Space Science* *Earth & Space Science*	N/A
precipitation	3.3.9-12.S	*Earth & Space Science*	Grade 3 *(3.3.3.A)* Grades 6-8 Earth & Space Science *(3.3.6-8.H)*
radial layers	3.3.9-12.I	*Earth & Space Science*	N/A
radioactive decay	3.3.9-12.F 3.3.9-12.G 3.3.9-12.I	*Earth & Space Science* *Earth & Space Science* *Earth & Space Science*	Grades 9-12 Physical Science *(3.2.9-12.H)*
radiometric dating	3.3.9-12.F 3.3.9-12.G	*Earth & Space Science* *Earth & Space Science*	N/A
red shift	3.3.9-12.B	*Earth & Space Science*	N/A
satellite	3.3.9-12.D	*Earth & Space Science*	N/A
sea level	3.3.9-12.S	*Earth & Space Science*	N/A
sediment	3.3.9-12.H	*Earth & Space Science*	Grade 4 *(3.3.4.B)*

Vocabulary Term	Standard Code(s)	Content Area	Prior Grade Introduced or Other 9-12 Course
seismic wave	3.3.9-12.I	*Earth & Space Science*	N/A
solar flare	3.3.9-12.A	*Earth & Space Science*	N/A
solubility	3.3.9-12.K	*Earth & Space Science*	Grades 6-8 Physical Science *(3.2.6-8.D)*
spatial scale	3.3.9-12.J	*Earth & Space Science*	N/A
subduction	3.3.9-12.F	*Earth & Space Science*	N/A
sunspot	3.3.9-12.A	*Earth & Space Science*	N/A
supernova	3.3.9-12.C	*Earth & Space Science*	N/A
sustainability	3.3.9-12.Q	*Earth & Space Science*	N/A
technological solution	3.3.9-12.R	*Earth & Space Science*	N/A
temporal scale	3.3.9-12.J	*Earth & Space Science*	N/A
thermal convection	3.3.9-12.I	*Earth & Space Science*	N/A
timescale	3.3.9-12.E	*Earth & Space Science*	N/A
unintended consequences	3.3.9-12.R	*Earth & Space Science*	N/A
universe	3.3.9-12.B	*Earth & Space Science*	N/A
viscosity	3.3.9-12.K	*Earth & Space Science*	N/A
wetlands	3.3.9-12.H	*Earth & Space Science*	N/A

Crosscutting Concept (CCC) Vocabulary Summary

This table lists the Crosscutting Concept (CCC) vocabulary used at each grade band, in alphabetical order. Each column is a separate list.

Grades K-2	Grades 3-5	Grades 6-8	Grades 9-12
collect	cause	accumulate	approximation
length	component	algebraic expression/equation	assumption
measure	cycle	atomic structure	boundaries
parts	differences	causation	causal relationship
pattern	effect	composition	closed system
phenomena	function	correlation	correlation relationship
system	inputs	equilibrium	destabilize
test	interaction	feedback mechanism	direct observation
	outputs	gradual change	equilibrium
	phenomena	human designed system	exponential growth
	prediction	information flow	indirect observation
	properties	magnitude	initial condition
	relationship	natural designed system	limit
	scale	probability	linear growth
	similarities	processes	mathematical representation
	stable	proportion	negative feedback
	structure	rates of change	open system
	system model	ratio	orders of magnitude
		stability	positive feedback
		sub-system	precision
		sudden event	reliability
			simulate

Science & Engineering Practice (SEP) Vocabulary Summary

This table lists the Science and Engineering Practice (SEP) vocabulary used at each grade band, in alphabetical order. Each column is a separate list.

Grades K-2	Grades 3-5	Grades 6-8	Grades 9-12
data	analogy	accuracy	authoritative source
evidence	argument	algorithm	confounding variable
investigation	claim	bias	correlation coefficient for linear fit
model	conditions	causal relationship	directional hypothesis
observation	constraint	correlational relationship	ethical framework
pattern	criteria	credibility	feasible
prediction	design	critique	manipulation
problem	limitation	dependent variable	mechanism
question	non-testable	hypothesis	qualitative claim
relationship	prototype	independent variable	quantitative claim
solution	revise	linear relationship	reliability
	testable	nonlinear relationship	validity
	tradeoff	optimal	verify
	variable	precision	
		predictable factor	
		range of conditions	
		refute	
		reliable evidence	
		scientific idea	
		scientific law	
		scientific theory	
		trends	
		unobservable mechanism	
		unobservable scale	
		validity	

K-12 Science Vocabulary Summary

This table lists vocabulary terms aligned across the Kindergarten through Grade 12 STEELS Science Curriculum Frameworks, in alphabetical order, along with the standard code(s) where each term appears and its content area. Crosscutting Concept (CCC) and Science and Engineering Practice (SEP) vocabulary terms are included alongside content-specific vocabulary and are identified by grade band (K-2, 3-5, 6-8, or 9-12). CCC and SEP terms show N/A in the Standard Code(s) column.

Vocabulary Term	Standard Code(s)	Content Area
10% rule	3.1.9-12.H	*Life Science*
abiotic	3.1.6-8.J 3.1.9-12.W	*Life Science* *Life Science*
abiotic component	3.1.6-8.L	*Life Science*
absorption	3.2.6-8.R	*Physical Science*
acceleration	3.2.9-12.I	*Physical Science*
accumulate	N/A	*Grades 6-8 CCC*
accuracy	N/A	*Grades 6-8 SEP*
adaptation	3.1.3.G 3.1.6-8.T 3.1.9-12.U	*Life Science* *Life Science* *Life Science*
aerobic	3.1.9-12.J	*Life Science*
air mass	3.3.6-8.J	*Earth & Space Science*
algae	3.1.6-8.F	*Life Science*
algebraic expression/equation	N/A	*Grades 6-8 CCC*
algorithm	N/A	*Grades 6-8 SEP*
allele	3.1.6-8.N	*Life Science*
altitude	3.3.6-8.I	*Earth & Space Science*
amino acid	3.1.9-12.F	*Life Science*
amplitude	3.2.4.E 3.2.6-8.Q	*Physical Science* *Physical Science*
anaerobic	3.1.9-12.J	*Life Science*
analog signal	3.2.6-8.S	*Physical Science*
analogy	N/A	*Grades 3-5 SEP*
anatomical	3.1.6-8.P	*Life Science*
anatomical structure	3.1.9-12.S	*Life Science*
animal	3.1.K.A	*Life Science*
apparent brightness	3.3.5.A	*Earth & Space Science*
approximation	N/A	*Grades 9-12 CCC*
aquatic ecosystem	3.1.6-8.K	*Life Science*

Vocabulary Term	Standard Code(s)	Content Area
argument	N/A	*Grades 3-5 SEP*
asexual reproduction	3.1.6-8.N	*Life Science*
assumption	N/A	*Grades 9-12 CCC*
asteroid	3.3.9-12.G	*Earth & Space Science*
atmosphere	3.3.5.C 3.1.9-12.K 3.3.9-12.L 3.3.9-12.M 3.3.9-12.N	*Earth & Space Science* *Life Science* *Earth & Space Science* *Earth & Space Science* *Earth & Space Science*
atom	3.2.6-8.A 3.2.9-12.A	*Physical Science* *Physical Science*
atomic nuclei	3.3.9-12.C	*Earth & Space Science*
atomic structure	N/A	*Grades 6-8 CCC*
ATP	3.1.9-12.G	*Life Science*
attract	3.2.6-8.I 3.2.6-8.J	*Physical Science* *Physical Science*
authoritative source	N/A	*Grades 9-12 SEP*
axis	3.3.5.B 3.3.6-8.A	*Earth & Space Science* *Earth & Space Science*
bacteria	3.1.5.B	*Life Science*
balanced force	3.2.3.B 3.2.6-8.H	*Physical Science* *Physical Science*
behavior	3.1.1.B 3.1.6-8.D	*Life Science* *Life Science*
bias	N/A	*Grades 6-8 SEP*
Big Bang Theory	3.3.9-12.B	*Earth & Space Science*
biodiversity	3.1.6-8.U 3.1.9-12.L 3.3.9-12.Q	*Life Science* *Life Science* *Earth & Space Science*
biological fitness	3.1.9-12.T	*Life Science*
biology	3.1.6-8.A	*Life Science*
biomass	3.1.9-12.H	*Life Science*

Vocabulary Term	Standard Code(s)	Content Area
biosphere	3.3.5.C	*Earth & Space Science*
	3.3.6-8.K	*Earth & Space Science*
	3.1.9-12.K	*Life Science*
	3.3.9-12.L	*Earth & Space Science*
	3.3.9-12.M	*Earth & Space Science*
	3.3.9-12.N	*Earth & Space Science*
biotic	3.1.6-8.J	*Life Science*
	3.1.9-12.W	*Life Science*
biotic component	3.1.6-8.L	*Life Science*
birth	3.1.3.A	*Life Science*
blizzard	3.3.4.E	*Earth & Space Science*
boiling point	3.2.6-8.D	*Physical Science*
bond energy	3.2.9-12.D	*Physical Science*
boundaries	N/A	*Grades 9-12 CCC*
brain	3.1.4.B	*Life Science*
carbon cycle	3.1.9-12.K	*Life Science*
carbon dioxide	3.1.6-8.F	*Life Science*
	3.3.6-8.O	*Earth & Space Science*
carbon-based molecule	3.1.9-12.F	*Life Science*
carrying capacity	3.1.9-12.I	*Life Science*
causal relationship	N/A	*Grades 6-8 SEP*
	N/A	*Grades 9-12 CCC*
causation	N/A	*Grades 6-8 CCC*
cause	N/A	*Grades 3-5 CCC*
cell	3.1.6-8.A	*Life Science*
	3.1.9-12.B	*Life Science*
cell membrane	3.1.6-8.B	*Life Science*
cell wall	3.1.6-8.B	*Life Science*
cellular respiration	3.1.6-8.G	*Life Science*
	3.1.9-12.G	*Life Science*
	3.1.9-12.K	*Life Science*
chemical bond	3.1.9-12.G	*Life Science*
chemical energy	3.1.9-12.E	*Life Science*
chemical input	3.1.6-8.H	*Life Science*
chemical properties	3.2.6-8.D	*Physical Science*
	3.2.9-12.B	*Physical Science*

Vocabulary Term	Standard Code(s)	Content Area
chemical reaction	3.1.6-8.G	*Life Science*
	3.2.6-8.D	*Physical Science*
	3.2.6-8.E	*Physical Science*
chemical weathering	3.3.9-12.K	*Earth & Space Science*
chloroplast	3.1.6-8.B	*Life Science*
chromosome	3.1.6-8.M	*Life Science*
	3.1.9-12.P	*Life Science*
chronological	3.1.6-8.O	*Life Science*
circulation	3.3.6-8.I	*Earth & Space Science*
circulatory system	3.1.6-8.C	*Life Science*
claim	N/A	*Grades 3-5 SEP*
climate	3.3.3.B	*Earth & Space Science*
	3.3.6-8.O	*Earth & Space Science*
	3.1.9-12.I	*Life Science*
	3.3.9-12.E	*Earth & Space Science*
	3.3.9-12.H	*Earth & Space Science*
climate change	3.1.9-12.N	*Life Science*
	3.1.9-12.X	*Life Science*
climate model outputs	3.3.9-12.S	*Earth & Space Science*
closed system	3.2.9-12.R	*Physical Science*
	N/A	*Grades 9-12 CCC*
coastal erosion	3.3.9-12.H	*Earth & Space Science*
coevolution	3.3.9-12.N	*Earth & Space Science*
collect	N/A	*Grades K-2 CCC*
collision	3.2.4.C	*Physical Science*
	3.2.6-8.G	*Physical Science*
	3.2.9-12.E	*Physical Science*
	3.2.9-12.K	*Physical Science*
color	3.2.2.A	*Physical Science*
common ancestor	3.1.9-12.S	*Life Science*
communicate	3.2.1.D	*Physical Science*
competition	3.1.9-12.I	*Life Science*
	3.1.9-12.L	*Life Science*
component	N/A	*Grades 3-5 CCC*
composition	N/A	*Grades 6-8 CCC*
compound	3.2.6-8.A	*Physical Science*

Vocabulary Term	Standard Code(s)	Content Area
concentration	3.2.9-12.E	*Physical Science*
condensation	3.3.6-8.H	*Earth & Space Science*
conditions	N/A	*Grades 3-5 SEP*
confounding variable	N/A	*Grades 9-12 SEP*
conservation	3.3.5.D	*Earth & Space Science*
conservation of energy	3.1.9-12.H 3.2.9-12.O	*Life Science* *Physical Science*
conservation of matter	3.1.6-8.G 3.2.6-8.E 3.1.9-12.H	*Life Science* *Physical Science* *Life Science*
constraint	N/A	*Grades 3-5 SEP*
constructive forces	3.3.9-12.J	*Earth & Space Science*
consumer	3.1.5.B 3.1.6-8.K	*Life Science* *Life Science*
continental crust	3.3.9-12.F	*Earth & Space Science*
convert	3.2.4.D	*Physical Science*
Coriolis effect	3.3.6-8.I	*Earth & Space Science*
correlation	N/A	*Grades 6-8 CCC*
correlation coefficient for linear fit	N/A	*Grades 9-12 SEP*
correlation relationship	N/A	*Grades 9-12 CCC*
correlational relationship	N/A	*Grades 6-8 SEP*
cosmic microwave background	3.3.9-12.B	*Earth & Space Science*
cost-benefit ratio	3.3.9-12.P	*Earth & Space Science*
Coulomb's law	3.2.9-12.L 3.2.9-12.M	*Physical Science* *Physical Science*
credibility	N/A	*Grades 6-8 SEP*
criteria	N/A	*Grades 3-5 SEP*
critique	N/A	*Grades 6-8 SEP*
cryosphere	3.3.9-12.M	*Earth & Space Science*
crystallization	3.3.6-8.F 3.3.6-8.H	*Earth & Space Science* *Earth & Space Science*
cycle	N/A	*Grades 3-5 CCC*
data	N/A	*Grades K-2 SEP*
death	3.1.3.A	*Life Science*
decomposer	3.1.5.B 3.1.6-8.K	*Life Science* *Life Science*

Vocabulary Term	Standard Code(s)	Content Area
deforestation	3.1.9-12.X	*Life Science*
deformation	3.3.6-8.F	*Earth & Space Science*
density	3.2.6-8.D 3.3.6-8.I 3.3.9-12.K	*Physical Science* *Earth & Space Science* *Earth & Space Science*
dependent variable	N/A	*Grades 6-8 SEP*
deposition	3.3.6-8.E 3.3.9-12.K	*Earth & Space Science* *Earth & Space Science*
design	N/A	*Grades 3-5 SEP*
destabilize	N/A	*Grades 9-12 CCC*
destructive mechanisms	3.3.9-12.J	*Earth & Space Science*
development	3.1.6-8.E	*Life Science*
differences	N/A	*Grades 3-5 CCC*
differentiation	3.1.9-12.D	*Life Science*
digestive system	3.1.6-8.C	*Life Science*
digital	3.2.9-12.U	*Physical Science*
digital signal	3.2.6-8.S	*Physical Science*
direct observation	N/A	*Grades 9-12 CCC*
direction	3.2.K.A	*Physical Science*
directional hypothesis	N/A	*Grades 9-12 SEP*
disperse	3.1.2.B	*Life Science*
disruption	3.1.6-8.L	*Life Science*
distance	3.2.1.D	*Physical Science*
diversity	3.1.2.C	*Life Science*
DNA	3.1.9-12.A 3.1.9-12.P	*Life Science* *Life Science*
DNA replication	3.1.9-12.Q	*Life Science*
dominant	3.1.6-8.N	*Life Science*
drought	3.1.9-12.X	*Life Science*
dynamic equilibrium	3.2.9-12.F	*Physical Science*
Earth	3.3.2.A	*Earth & Space Science*
Earth's tilt	3.3.6-8.A	*Earth & Space Science*
earthquake	3.3.4.E 3.3.6-8.E	*Earth & Space Science* *Earth & Space Science*
eclipse	3.3.6-8.A	*Earth & Space Science*

Vocabulary Term	Standard Code(s)	Content Area
ecosystem	3.1.5.B	*Life Science*
	3.1.6-8.I	*Life Science*
	3.1.9-12.I	*Life Science*
	3.1.9-12.M	*Life Science*
ecosystem degradation	3.3.9-12.R	*Earth & Space Science*
ecosystem disturbance	3.1.9-12.M	*Life Science*
effect	N/A	*Grades 3-5 CCC*
electric current	3.2.4.B	*Physical Science*
	3.2.9-12.M	*Physical Science*
electric field	3.2.9-12.L	*Physical Science*
	3.2.9-12.O	*Physical Science*
electric force	3.2.6-8.I	*Physical Science*
	3.2.9-12.B	*Physical Science*
	3.2.9-12.L	*Physical Science*
	3.2.9-12.M	*Physical Science*
	3.2.9-12.N	*Physical Science*
electric interaction	3.2.3.C	*Physical Science*
electric motor	3.2.6-8.I	*Physical Science*
electrical charge	3.2.9-12.L	*Physical Science*
	3.2.9-12.M	*Physical Science*
	3.2.9-12.N	*Physical Science*
electrical energy	3.2.9-12.M	*Physical Science*
electromagnet	3.2.6-8.I	*Physical Science*
electromagnetic energy	3.3.9-12.B	*Earth & Space Science*
electromagnetic field	3.2.6-8.K	*Physical Science*
	3.2.9-12.S	*Physical Science*
electromagnetic input	3.1.6-8.H	*Life Science*
electromagnetic radiation	3.2.9-12.W	*Physical Science*
	3.3.9-12.A	*Earth & Space Science*
	3.3.9-12.E	*Earth & Space Science*
electron	3.2.9-12.A	*Physical Science*
	3.2.9-12.B	*Physical Science*
electrostatic force	3.2.9-12.L	*Physical Science*
	3.2.9-12.M	*Physical Science*
element	3.2.9-12.A	*Physical Science*
	3.3.9-12.C	*Earth & Space Science*

Vocabulary Term	Standard Code(s)	Content Area
elliptical path	3.3.9-12.D	*Earth & Space Science*
embryo	3.1.6-8.Q	*Life Science*
embryological development	3.1.9-12.S	*Life Science*
encode	3.2.6-8.S	*Physical Science*
endangered species	3.1.9-12.V	*Life Science*
energy	3.2.4.A	*Physical Science*
	3.2.4.C	*Physical Science*
	3.2.4.D	*Physical Science*
	3.3.4.D	*Earth & Space Science*
	3.1.5.B	*Life Science*
	3.1.6-8.F	*Life Science*
	3.2.9-12.Q	*Physical Science*
energy flow	3.2.5.G	*Physical Science*
	3.1.6-8.K	*Life Science*
energy transfer	3.2.4.B	*Physical Science*
	3.2.6-8.M	*Physical Science*
	3.2.6-8.O	*Physical Science*
	3.1.9-12.G	*Life Science*
environment	3.3.K.B	*Earth & Space Science*
	3.1.3.E	*Life Science*
	3.1.3.H	*Life Science*
environmental factors	3.1.6-8.E	*Life Science*
environmental impact	3.3.5.E	*Earth & Space Science*
equilibrium	N/A	*Grades 6-8 CCC*
	N/A	*Grades 9-12 CCC*
erosion	3.3.2.A	*Earth & Space Science*
	3.3.4.B	*Earth & Space Science*
	3.3.6-8.E	*Earth & Space Science*
	3.3.9-12.G	*Earth & Space Science*
ethical framework	N/A	*Grades 9-12 SEP*
evaporation	3.3.6-8.H	*Earth & Space Science*
evidence	N/A	*Grades K-2 SEP*
evolution	3.1.6-8.P	*Life Science*
	3.1.9-12.S	*Life Science*
excretory system	3.1.6-8.C	*Life Science*
exponential growth	N/A	*Grades 9-12 CCC*

Vocabulary Term	Standard Code(s)	Content Area
external	3.1.1.A	*Life Science*
external structure	3.1.4.A	*Life Science*
extinction	3.1.3.E 3.1.6-8.O 3.3.6-8.M 3.1.9-12.N 3.1.9-12.X	*Life Science* *Life Science* *Earth & Space Science* *Life Science* *Life Science*
feasible	N/A	*Grades 9-12 SEP*
feedback	3.3.9-12.N	*Earth & Space Science*
feedback mechanism	N/A	*Grades 6-8 CCC*
fission	3.2.9-12.H	*Physical Science*
flammability	3.2.6-8.D	*Physical Science*
flexibility	3.2.2.A	*Physical Science*
flood	3.3.4.E	*Earth & Space Science*
flow of energy	3.3.9-12.E	*Earth & Space Science*
flower	3.1.1.A	*Life Science*
food chain	3.1.9-12.H	*Life Science*
food web	3.1.5.B 3.1.9-12.H	*Life Science* *Life Science*
force	3.2.3.C 3.2.6-8.G 3.2.6-8.K 3.2.9-12.I 3.2.9-12.K	*Physical Science* *Physical Science* *Physical Science* *Physical Science* *Physical Science*
forward reaction	3.2.9-12.F	*Physical Science*
fossil	3.1.3.E 3.1.6-8.O	*Life Science* *Life Science*
fossil fuel	3.3.4.D	*Earth & Space Science*
fossil record	3.3.6-8.D	*Earth & Space Science*
fossil types	3.3.4.A	*Earth & Space Science*
frequency	3.2.6-8.Q 3.2.9-12.T	*Physical Science* *Physical Science*
freshwater	3.3.5.D	*Earth & Space Science*
frost wedging	3.3.9-12.K	*Earth & Space Science*
fruit	3.1.1.A	*Life Science*
function	N/A	*Grades 3-5 CCC*

Vocabulary Term	Standard Code(s)	Content Area
fungi	3.1.5.B	*Life Science*
fusion	3.2.9-12.H	*Physical Science*
galaxy	3.3.6-8.B	*Earth & Space Science*
gas	3.2.6-8.B	*Physical Science*
gene	3.1.6-8.M	*Life Science*
	3.1.6-8.N	*Life Science*
	3.1.9-12.A	*Life Science*
	3.1.9-12.P	*Life Science*
gene frequency	3.1.9-12.W	*Life Science*
generation	3.1.6-8.T	*Life Science*
generator	3.2.6-8.I	*Physical Science*
genetic engineering	3.1.6-8.R	*Life Science*
genetic factors	3.1.6-8.E	*Life Science*
genetic variation	3.1.6-8.N	*Life Science*
	3.1.9-12.V	*Life Science*
geologic time scale	3.3.6-8.D	*Earth & Space Science*
geological forces	3.3.6-8.L	*Earth & Space Science*
geoscience processes	3.3.6-8.E	*Earth & Space Science*
	3.3.6-8.K	*Earth & Space Science*
geosphere	3.3.5.C	*Earth & Space Science*
	3.1.9-12.K	*Life Science*
	3.3.9-12.L	*Earth & Space Science*
	3.3.9-12.M	*Earth & Space Science*
glacial ice	3.3.9-12.H	*Earth & Space Science*
glacial ice volume	3.3.9-12.S	*Earth & Space Science*
glacier	3.3.5.D	*Earth & Space Science*
Global Climate Models	3.3.9-12.M	*Earth & Space Science*
gradual change	N/A	*Grades 6-8 CCC*
gravitational field	3.2.9-12.L	*Physical Science*
	3.2.9-12.O	*Physical Science*
gravitational force	3.2.5.F	*Physical Science*
	3.2.6-8.J	*Physical Science*
	3.2.9-12.L	*Physical Science*
gravity	3.2.5.F	*Physical Science*
	3.3.6-8.B	*Earth & Space Science*
	3.3.6-8.H	*Earth & Space Science*

Vocabulary Term	Standard Code(s)	Content Area
greenhouse gas	3.3.6-8.O 3.3.9-12.H	*Earth & Space Science* *Earth & Space Science*
groundwater	3.3.5.D 3.3.9-12.H	*Earth & Space Science* *Earth & Space Science*
grow	3.1.K.A 3.1.2.A	*Life Science* *Life Science*
growth	3.1.3.A 3.1.6-8.E	*Life Science* *Life Science*
habitat	3.1.2.C 3.1.3.G	*Life Science* *Life Science*
habitat destruction	3.1.9-12.N	*Life Science*
habitat restoration	3.3.5.F	*Earth & Space Science*
hardness	3.2.2.A	*Physical Science*
heat	3.2.6-8.B	*Physical Science*
heat energy	3.2.4.B	*Physical Science*
helium	3.3.9-12.C	*Earth & Space Science*
hierarchical organization	3.1.9-12.B	*Life Science*
high pressure	3.3.6-8.J	*Earth & Space Science*
homeostasis	3.1.9-12.C	*Life Science*
human activity	3.3.6-8.O	*Earth & Space Science*
human designed system	N/A	*Grades 6-8 CCC*
human migration	3.3.9-12.O	*Earth & Space Science*
humidity	3.3.6-8.J 3.3.9-12.H	*Earth & Space Science* *Earth & Space Science*
hurricane	3.3.4.E	*Earth & Space Science*
hydrocarbon backbone	3.1.9-12.F	*Life Science*
hydrogen	3.3.9-12.C	*Earth & Space Science*
hydrologic cycle	3.3.6-8.H 3.3.9-12.K	*Earth & Space Science* *Earth & Space Science*
hydrosphere	3.3.5.C 3.1.9-12.K 3.3.9-12.L 3.3.9-12.M	*Earth & Space Science* *Life Science* *Earth & Space Science* *Earth & Space Science*
hypothesis	N/A	*Grades 6-8 SEP*
illuminate	3.2.1.B	*Physical Science*
impact	3.3.K.E	*Earth & Space Science*

Vocabulary Term	Standard Code(s)	Content Area
impulse	3.2.9-12.K	*Physical Science*
independent variable	N/A	*Grades 6-8 SEP*
indirect observation	N/A	*Grades 9-12 CCC*
information flow	N/A	*Grades 6-8 CCC*
inheritance	3.1.3.C 3.1.9-12.P	*Life Science* *Life Science*
initial condition	N/A	*Grades 9-12 CCC*
inputs	N/A	*Grades 3-5 CCC*
intensity	3.3.9-12.E	*Earth & Space Science*
interaction	N/A	*Grades 3-5 CCC*
interdependent	3.1.6-8.J	*Life Science*
interdependent factor	3.1.9-12.I	*Life Science*
interference	3.2.9-12.V	*Physical Science*
internal structure	3.1.4.A	*Life Science*
interstellar	3.3.9-12.B	*Earth & Space Science*
invasive species	3.1.9-12.N	*Life Science*
investigation	N/A	*Grades K-2 SEP*
ion	3.2.9-12.B	*Physical Science*
ionization energy	3.2.9-12.A	*Physical Science*
isotope	3.2.9-12.H 3.3.9-12.I	*Physical Science* *Earth & Space Science*
Kepler's laws of orbital motion	3.3.9-12.D	*Earth & Space Science*
kinetic energy	3.2.6-8.B 3.2.6-8.L 3.2.6-8.N 3.2.6-8.O 3.2.9-12.O	*Physical Science* *Physical Science* *Physical Science* *Physical Science* *Physical Science*
land usage	3.3.6-8.M	*Earth & Space Science*
landform	3.3.2.A 3.3.4.C	*Earth & Space Science* *Earth & Space Science*
landscape	3.3.4.A	*Earth & Space Science*
latitude	3.3.6-8.I	*Earth & Space Science*
leaf	3.1.1.A	*Life Science*
length	N/A	*Grades K-2 CCC*
life cycle	3.1.3.A	*Life Science*

Vocabulary Term	Standard Code(s)	Content Area
light energy	3.2.4.B 3.1.9-12.E	*Physical Science* *Life Science*
light spectra	3.3.9-12.B	*Earth & Space Science*
limit	N/A	*Grades 9-12 CCC*
limitation	N/A	*Grades 3-5 SEP*
limiting factors	3.1.6-8.I	*Life Science*
linear growth	N/A	*Grades 9-12 CCC*
linear relationship	N/A	*Grades 6-8 SEP*
liquid	3.3.2.D 3.2.6-8.B	*Earth & Space Science* *Physical Science*
low pressure	3.3.6-8.J	*Earth & Space Science*
lunar	3.3.9-12.G	*Earth & Space Science*
lunar phases	3.3.6-8.A	*Earth & Space Science*
macromolecule	3.1.9-12.F	*Life Science*
macroscopic scale	3.2.9-12.P	*Physical Science*
magnet	3.2.3.C	*Physical Science*
magnetic field	3.2.9-12.M 3.2.9-12.O 3.3.9-12.I	*Physical Science* *Physical Science* *Earth & Space Science*
magnetic force	3.2.3.D 3.2.6-8.I 3.2.9-12.L 3.2.9-12.M	*Physical Science* *Physical Science* *Physical Science* *Physical Science*
magnetic interaction	3.2.3.C	*Physical Science*
magnitude	N/A	*Grades 6-8 CCC*
manipulation	N/A	*Grades 9-12 SEP*
mantle	3.3.9-12.I	*Earth & Space Science*
map	3.3.2.C	*Earth & Space Science*
marine	3.3.4.A	*Earth & Space Science*
mass	3.2.6-8.H 3.2.6-8.J 3.2.6-8.L 3.2.6-8.N 3.2.9-12.I 3.2.9-12.J	*Physical Science* *Physical Science* *Physical Science* *Physical Science* *Physical Science* *Physical Science*
mathematical representation	N/A	*Grades 9-12 CCC*

Vocabulary Term	Standard Code(s)	Content Area
matter	3.1.5.A 3.2.5.A 3.1.6-8.F 3.2.6-8.N 3.1.9-12.E	*Life Science* *Physical Science* *Life Science* *Physical Science* *Life Science*
matter cycling	3.1.6-8.K	*Life Science*
measure	N/A	*Grades K-2 CCC*
mechanical input	3.1.6-8.H	*Life Science*
mechanical weathering	3.3.9-12.K	*Earth & Space Science*
mechanism	N/A	*Grades 9-12 SEP*
medium	3.2.9-12.T	*Physical Science*
meiosis	3.1.9-12.Q	*Life Science*
melting	3.3.6-8.F	*Earth & Space Science*
melting point	3.2.6-8.D	*Physical Science*
meteorite	3.3.9-12.G	*Earth & Space Science*
microbe	3.1.5.B	*Life Science*
microorganism	3.1.6-8.F	*Life Science*
mid-oceanic ridge	3.3.9-12.F	*Earth & Space Science*
mimic	3.1.1.A	*Life Science*
mineral	3.2.5.B	*Physical Science*
mineral resources	3.3.9-12.P	*Earth & Space Science*
mitochondria	3.1.6-8.B	*Life Science*
mitosis	3.1.9-12.D	*Life Science*
model	N/A	*Grades K-2 SEP*
molar mass	3.2.9-12.G	*Physical Science*
mole	3.2.9-12.G	*Physical Science*
molecular structure	3.2.9-12.N	*Physical Science*
molecule	3.1.6-8.G 3.2.6-8.A 3.1.9-12.F	*Life Science* *Physical Science* *Life Science*
momentum	3.2.9-12.J 3.2.9-12.K	*Physical Science* *Physical Science*
monomer	3.1.9-12.F	*Life Science*
moon	3.3.1.A	*Earth & Space Science*

Vocabulary Term	Standard Code(s)	Content Area
motion	3.2.K.B	*Physical Science*
	3.2.3.A	*Physical Science*
	3.2.3.B	*Physical Science*
multicellular	3.1.6-8.A	*Life Science*
	3.1.9-12.B	*Life Science*
muscular system	3.1.6-8.C	*Life Science*
mutation	3.1.6-8.M	*Life Science*
	3.1.9-12.Q	*Life Science*
natural designed system	N/A	*Grades 6-8 CCC*
natural habitat	3.3.6-8.M	*Earth & Space Science*
natural hazard	3.3.3.C	*Earth & Space Science*
	3.3.6-8.L	*Earth & Space Science*
	3.3.9-12.O	*Earth & Space Science*
natural processes	3.3.6-8.O	*Earth & Space Science*
natural resource	3.3.4.D	*Earth & Space Science*
	3.2.6-8.C	*Physical Science*
	3.3.6-8.N	*Earth & Space Science*
	3.3.9-12.O	*Earth & Space Science*
	3.3.9-12.Q	*Earth & Space Science*
natural selection	3.1.6-8.S	*Life Science*
	3.1.9-12.T	*Life Science*
negative feedback	N/A	*Grades 9-12 CCC*
negative feedback loop	3.1.9-12.C	*Life Science*
nerve cell	3.1.6-8.H	*Life Science*
nervous system	3.1.6-8.C	*Life Science*
net force	3.2.9-12.I	*Physical Science*
	3.2.9-12.J	*Physical Science*
net transfer	3.1.9-12.G	*Life Science*
neutron	3.2.9-12.A	*Physical Science*
	3.2.9-12.H	*Physical Science*
Newton's First Law of Motion	3.2.6-8.H	*Physical Science*
Newton's law of gravitation	3.2.9-12.L	*Physical Science*
Newton's law of universal gravitation	3.3.9-12.D	*Earth & Space Science*
Newton's Second Law of Motion	3.2.6-8.H	*Physical Science*
	3.2.9-12.I	*Physical Science*
Newton's Third Law of Motion	3.2.6-8.G	*Physical Science*

Vocabulary Term	Standard Code(s)	Content Area
non-testable	N/A	*Grades 3-5 SEP*
nonlinear relationship	N/A	*Grades 6-8 SEP*
nonliving	3.1.6-8.I	*Life Science*
nonrenewable resource	3.3.4.D 3.3.6-8.K	*Earth & Space Science* *Earth & Space Science*
North Pole	3.3.5.B	*Earth & Space Science*
nuclear fusion	3.3.9-12.A	*Earth & Space Science*
nucleosynthesis	3.3.9-12.C	*Earth & Space Science*
nucleus (atom)	3.2.9-12.A 3.2.9-12.B 3.2.9-12.H	*Physical Science* *Physical Science* *Physical Science*
nucleus (cell)	3.1.6-8.B	*Life Science*
observation	N/A	*Grades K-2 SEP*
ocean circulation	3.3.9-12.E	*Earth & Space Science*
oceanic crust	3.3.9-12.F	*Earth & Space Science*
odor	3.2.6-8.D	*Physical Science*
offspring	3.1.1.B 3.1.6-8.N	*Life Science* *Life Science*
opaque	3.2.1.C	*Physical Science*
open system	N/A	*Grades 9-12 CCC*
optimal	N/A	*Grades 6-8 SEP*
orbit	3.3.5.B 3.3.6-8.B 3.3.9-12.D	*Earth & Space Science* *Earth & Space Science* *Earth & Space Science*
orders of magnitude	N/A	*Grades 9-12 CCC*
organ	3.1.6-8.C 3.1.9-12.B	*Life Science* *Life Science*
organ system	3.1.9-12.B	*Life Science*
organelle	3.1.6-8.B	*Life Science*
organism	3.1.3.A 3.1.3.C 3.1.3.E 3.1.3.G 3.1.6-8.A 3.1.9-12.B	*Life Science* *Life Science* *Life Science* *Life Science* *Life Science* *Life Science*
outputs	N/A	*Grades 3-5 CCC*

Vocabulary Term	Standard Code(s)	Content Area
overexploitation	3.1.9-12.N	*Life Science*
oxygen	3.1.6-8.F	*Life Science*
parent	3.1.1.B	*Life Science*
particle	3.2.5.A	*Physical Science*
parts	N/A	*Grades K-2 CCC*
pattern	N/A N/A	*Grades K-2 CCC* *Grades K-2 SEP*
per-capita consumption	3.3.6-8.N	*Earth & Space Science*
phase change	3.2.6-8.B	*Physical Science*
phenomena	N/A N/A	*Grades K-2 CCC* *Grades 3-5 CCC*
photoelectric	3.2.9-12.X	*Physical Science*
photoelectric effect	3.2.9-12.V	*Physical Science*
photon	3.2.9-12.W	*Physical Science*
photosynthesis	3.1.6-8.F 3.1.9-12.E 3.1.9-12.K 3.3.9-12.N	*Life Science* *Life Science* *Life Science* *Earth & Space Science*
physical component	3.1.6-8.L	*Life Science*
physical properties	3.2.6-8.D 3.2.9-12.B	*Physical Science* *Physical Science*
pixel	3.2.9-12.X	*Physical Science*
planet	3.2.5.F	*Physical Science*
plant	3.1.K.A	*Life Science*
plate tectonics	3.3.9-12.F 3.3.9-12.G	*Earth & Space Science* *Earth & Space Science*
pollinate	3.1.2.B	*Life Science*
pollution	3.3.5.E 3.3.6-8.M 3.1.9-12.N	*Earth & Space Science* *Earth & Space Science* *Life Science*
polymer	3.1.9-12.F	*Life Science*
population	3.1.3.H 3.1.6-8.I 3.3.6-8.N 3.1.9-12.L 3.1.9-12.Q	*Life Science* *Life Science* *Earth & Space Science* *Life Science* *Life Science*

Vocabulary Term	Standard Code(s)	Content Area
positive feedback	N/A	*Grades 9-12 CCC*
positive feedback loop	3.1.9-12.C	*Life Science*
potential energy	3.2.6-8.P	*Physical Science*
	3.2.9-12.O	*Physical Science*
precipitation	3.3.3.A	*Earth & Space Science*
	3.3.6-8.H	*Earth & Space Science*
	3.3.9-12.S	*Earth & Space Science*
precision	N/A	*Grades 6-8 SEP*
	N/A	*Grades 9-12 CCC*
predation	3.1.9-12.L	*Life Science*
predator	3.1.3.F	*Life Science*
predict	3.3.3.A	*Earth & Space Science*
predictable factor	N/A	*Grades 6-8 SEP*
prediction	N/A	*Grades K-2 SEP*
	N/A	*Grades 3-5 CCC*
pressure	3.3.6-8.J	*Earth & Space Science*
prey	3.1.3.F	*Life Science*
probability	N/A	*Grades 6-8 CCC*
problem	N/A	*Grades K-2 SEP*
processes	N/A	*Grades 6-8 CCC*
producer	3.1.5.B	*Life Science*
	3.1.6-8.K	*Life Science*
product	3.2.6-8.D	*Physical Science*
properties	3.2.2.A	*Physical Science*
	3.2.5.C	*Physical Science*
	N/A	*Grades 3-5 CCC*
proportion	N/A	*Grades 6-8 CCC*
protein	3.1.6-8.M	*Life Science*
	3.1.9-12.A	*Life Science*
	3.1.9-12.P	*Life Science*
proton	3.2.9-12.A	*Physical Science*
	3.2.9-12.B	*Physical Science*
	3.2.9-12.H	*Physical Science*
prototype	N/A	*Grades 3-5 SEP*
pull	3.2.K.A	*Physical Science*
Punnett square	3.1.6-8.N	*Life Science*

Vocabulary Term	Standard Code(s)	Content Area
push	3.2.K.A	*Physical Science*
qualitative claim	N/A	*Grades 9-12 SEP*
quantitative claim	N/A	*Grades 9-12 SEP*
question	N/A	*Grades K-2 SEP*
radial layers	3.3.9-12.I	*Earth & Space Science*
radiation	3.2.9-12.P	*Physical Science*
radioactive dating	3.1.6-8.O	*Life Science*
radioactive decay	3.3.9-12.F 3.3.9-12.G 3.3.9-12.I	*Earth & Space Science* *Earth & Space Science* *Earth & Space Science*
radioactive decay (alpha, beta, and gamma)	3.2.9-12.H	*Physical Science*
radiometric dating	3.3.9-12.F 3.3.9-12.G	*Earth & Space Science* *Earth & Space Science*
range of conditions	N/A	*Grades 6-8 SEP*
rate of reaction	3.2.9-12.E	*Physical Science*
rates of change	N/A	*Grades 6-8 CCC*
ratio	N/A	*Grades 6-8 CCC*
reactant	3.2.6-8.D 3.2.9-12.D 3.2.9-12.G	*Physical Science* *Physical Science* *Physical Science*
recessive	3.1.6-8.N	*Life Science*
recycle	3.3.5.F	*Earth & Space Science*
red shift	3.3.9-12.B	*Earth & Space Science*
reduce	3.3.K.E 3.3.5.F	*Earth & Space Science* *Earth & Space Science*
refine	3.2.4.D	*Physical Science*
reflection	3.2.4.F 3.2.6-8.R	*Physical Science* *Physical Science*
reflective	3.2.1.C	*Physical Science*
refute	N/A	*Grades 6-8 SEP*
region	3.3.3.B	*Earth & Space Science*
relationship	N/A N/A	*Grades K-2 SEP* *Grades 3-5 CCC*
relative age	3.3.6-8.D	*Earth & Space Science*
relative distance	3.3.5.A	*Earth & Space Science*

Vocabulary Term	Standard Code(s)	Content Area
reliability	N/A	*Grades 9-12 CCC*
	N/A	*Grades 9-12 SEP*
reliable evidence	N/A	*Grades 6-8 SEP*
renewable resource	3.3.4.D	*Earth & Space Science*
	3.3.6-8.K	*Earth & Space Science*
repel	3.2.6-8.I	*Physical Science*
reproduction	3.1.3.A	*Life Science*
	3.1.3.F	*Life Science*
	3.1.6-8.D	*Life Science*
reservoir	3.3.5.D	*Earth & Space Science*
resonance	3.2.9-12.V	*Physical Science*
resource	3.1.K.A	*Life Science*
resource management	3.3.5.E	*Earth & Space Science*
respiratory system	3.1.6-8.C	*Life Science*
reuse	3.3.5.F	*Earth & Space Science*
reverse reaction	3.2.9-12.F	*Physical Science*
reversible	3.2.2.D	*Physical Science*
revise	N/A	*Grades 3-5 SEP*
revolution	3.3.6-8.A	*Earth & Space Science*
ridge	3.3.6-8.G	*Earth & Space Science*
rock formations	3.3.4.A	*Earth & Space Science*
rock layers	3.3.4.A	*Earth & Space Science*
root	3.1.1.A	*Life Science*
rotation	3.3.5.B	*Earth & Space Science*
	3.3.6-8.A	*Earth & Space Science*
salinity	3.3.6-8.I	*Earth & Space Science*
saltwater	3.3.5.D	*Earth & Space Science*
satellite	3.3.9-12.D	*Earth & Space Science*
scale	N/A	*Grades 3-5 CCC*
scientific idea	N/A	*Grades 6-8 SEP*
scientific law	N/A	*Grades 6-8 SEP*
scientific theory	N/A	*Grades 6-8 SEP*
sea level	3.3.9-12.S	*Earth & Space Science*
seafloor spreading	3.3.6-8.G	*Earth & Space Science*
season	3.3.1.B	*Earth & Space Science*
	3.3.3.A	*Earth & Space Science*

Vocabulary Term	Standard Code(s)	Content Area
second law of thermodynamics	3.2.9-12.R	*Physical Science*
sediment	3.3.4.B	*Earth & Space Science*
	3.3.9-12.H	*Earth & Space Science*
sedimentary layers	3.1.6-8.O	*Life Science*
sedimentation	3.3.6-8.F	*Earth & Space Science*
seed	3.1.2.B	*Life Science*
seismic wave	3.3.9-12.I	*Earth & Space Science*
selective breeding	3.1.6-8.R	*Life Science*
senses	3.1.4.B	*Life Science*
sensory receptor	3.1.4.B	*Life Science*
	3.1.6-8.H	*Life Science*
severe weather	3.3.K.D	*Earth & Space Science*
sexual reproduction	3.1.6-8.N	*Life Science*
shadow	3.3.5.B	*Earth & Space Science*
similarities	N/A	*Grades 3-5 CCC*
simulate	N/A	*Grades 9-12 CCC*
solar flare	3.3.9-12.A	*Earth & Space Science*
solar system	3.3.6-8.B	*Earth & Space Science*
solid	3.3.2.D	*Earth & Space Science*
	3.2.6-8.B	*Physical Science*
solubility	3.2.6-8.D	*Physical Science*
	3.3.9-12.K	*Earth & Space Science*
solution	N/A	*Grades K-2 SEP*
sound	3.2.1.A	*Physical Science*
sound energy	3.2.4.B	*Physical Science*
South Pole	3.3.5.B	*Earth & Space Science*
spatial scale	3.3.9-12.J	*Earth & Space Science*
specialized cell	3.1.9-12.A	*Life Science*
speciation	3.1.9-12.N	*Life Science*
species	3.1.3.F	*Life Science*
	3.1.9-12.L	*Life Science*
speed	3.2.K.A	*Physical Science*
	3.2.4.A	*Physical Science*
	3.2.6-8.L	*Physical Science*
	3.2.9-12.T	*Physical Science*
stability	N/A	*Grades 6-8 CCC*

Vocabulary Term	Standard Code(s)	Content Area
stable	N/A	*Grades 3-5 CCC*
star	3.3.1.A	*Earth & Space Science*
static electricity	3.2.3.C	*Physical Science*
stem	3.1.1.A	*Life Science*
stimuli	3.1.6-8.H 3.1.9-12.C	*Life Science* *Life Science*
strata	3.3.6-8.D	*Earth & Space Science*
structure	N/A	*Grades 3-5 CCC*
sub-system	N/A	*Grades 6-8 CCC*
subduction	3.3.9-12.F	*Earth & Space Science*
substance	3.2.5.E	*Physical Science*
sudden event	N/A	*Grades 6-8 CCC*
sugar	3.1.6-8.F	*Life Science*
sun	3.3.1.A	*Earth & Space Science*
sunlight	3.2.K.C	*Physical Science*
sunrise	3.3.1.B	*Earth & Space Science*
sunset	3.3.1.B	*Earth & Space Science*
sunspot	3.3.9-12.A	*Earth & Space Science*
supernova	3.3.9-12.C	*Earth & Space Science*
surface	3.2.K.C	*Physical Science*
surface water	3.3.5.D	*Earth & Space Science*
survive	3.1.K.A 3.3.K.B 3.1.1.B 3.1.3.B 3.1.3.F 3.1.3.G	*Life Science* *Earth & Space Science* *Life Science* *Life Science* *Life Science* *Life Science*
sustainability	3.3.9-12.Q	*Earth & Space Science*
synthetic material	3.2.6-8.C	*Physical Science*
system	N/A	*Grades K-2 CCC*
system model	N/A	*Grades 3-5 CCC*
technological solution	3.3.9-12.R	*Earth & Space Science*
tectonic plate	3.3.6-8.G	*Earth & Space Science*

Vocabulary Term	Standard Code(s)	Content Area
temperature	3.3.3.A	*Earth & Space Science*
	3.2.6-8.B	*Physical Science*
	3.2.6-8.N	*Physical Science*
	3.3.6-8.J	*Earth & Space Science*
	3.2.9-12.E	*Physical Science*
temporal scale	3.3.9-12.J	*Earth & Space Science*
terrestrial ecosystem	3.1.6-8.K	*Life Science*
test	N/A	*Grades K-2 CCC*
testable	N/A	*Grades 3-5 SEP*
texture	3.2.2.A	*Physical Science*
thermal convection	3.3.9-12.I	*Earth & Space Science*
thermal energy	3.2.6-8.B	*Physical Science*
	3.2.6-8.F	*Physical Science*
	3.2.6-8.M	*Physical Science*
	3.3.6-8.I	*Earth & Space Science*
	3.2.9-12.O	*Physical Science*
	3.2.9-12.P	*Physical Science*
	3.2.9-12.R	*Physical Science*
threatened species	3.1.9-12.V	*Life Science*
timescale	3.3.9-12.E	*Earth & Space Science*
tissue	3.1.6-8.C	*Life Science*
	3.1.9-12.B	*Life Science*
tradeoff	N/A	*Grades 3-5 SEP*
trait	3.1.3.C	*Life Science*
	3.1.3.D	*Life Science*
	3.1.9-12.P	*Life Science*
transfer	3.2.4.G	*Physical Science*
transformation	3.1.9-12.E	*Life Science*
translucent	3.2.1.C	*Physical Science*
transmission	3.2.6-8.R	*Physical Science*
transmit	3.2.6-8.S	*Physical Science*
transparent	3.2.1.C	*Physical Science*
transpiration	3.3.6-8.H	*Earth & Space Science*
trench	3.3.6-8.G	*Earth & Space Science*
trends	N/A	*Grades 6-8 SEP*
trophic level	3.1.9-12.H	*Life Science*

Vocabulary Term	Standard Code(s)	Content Area
tsunami	3.3.4.E	*Earth & Space Science*
unbalanced force	3.2.3.B 3.2.6-8.H	*Physical Science* *Physical Science*
uncontrolled systems	3.2.9-12.R	*Physical Science*
unicellular	3.1.6-8.A	*Life Science*
unintended consequences	3.3.9-12.R	*Earth & Space Science*
universe	3.3.9-12.B	*Earth & Space Science*
unobservable mechanism	N/A	*Grades 6-8 SEP*
unobservable scale	N/A	*Grades 6-8 SEP*
valence electron	3.2.9-12.A	*Physical Science*
validity	N/A N/A	*Grades 6-8 SEP* *Grades 9-12 SEP*
variable	N/A	*Grades 3-5 SEP*
variation	3.1.3.C 3.1.3.F	*Life Science* *Life Science*
vegetation	3.3.4.B	*Earth & Space Science*
velocity	3.2.9-12.I 3.2.9-12.J	*Physical Science* *Physical Science*
verify	N/A	*Grades 9-12 SEP*
vibration	3.2.1.A	*Physical Science*
viscosity	3.3.9-12.K	*Earth & Space Science*
volcanic eruption	3.3.4.E	*Earth & Space Science*
volcano	3.3.6-8.E	*Earth & Space Science*
waste management	3.3.5.F	*Earth & Space Science*
water usage	3.3.6-8.M	*Earth & Space Science*
wave	3.2.4.E 3.2.6-8.Q	*Physical Science* *Physical Science*
wave pulses	3.2.9-12.U	*Physical Science*
wavelength	3.2.4.E 3.2.6-8.Q 3.2.9-12.T	*Physical Science* *Physical Science* *Physical Science*
weather	3.3.K.A 3.3.3.A	*Earth & Space Science* *Earth & Space Science*
weather conditions	3.3.6-8.J	*Earth & Space Science*
weather forecast	3.3.K.D	*Earth & Space Science*

Vocabulary Term	Standard Code(s)	Content Area
weathering	3.3.4.B 3.3.6-8.E 3.3.6-8.F	*Earth & Space Science* *Earth & Space Science* *Earth & Space Science*
weight	3.2.5.D	*Physical Science*
wetlands	3.3.9-12.H	*Earth & Space Science*
wind	3.3.3.A	*Earth & Space Science*