

# Earth Science Vocabulary

## 1610 Vocabulary Words

### SECTION 1

#### Fields of Science

astronautics  
astronomy  
biology  
chemist  
chemistry  
geologist  
geology  
meteorologist  
meteorology

mineralogist  
mineralogy  
oceanographer  
paleontologist  
petrologist  
petrology  
physics  
seismologist  
technology

#### Metric System

absolute zero  
arc  
area  
calorie  
Celsius  
centi  
centigrade  
centimeter  
classification  
concentration  
deci  
deka  
density

kilogram  
kilometer  
L  
length  
liter  
mass  
matter  
measurement  
meter  
metric system  
milli  
milliliter  
ml

English System  
Fahrenheit  
grams  
gravity  
hecto  
ice  
instrument  
kilo

percent deviation  
percent error  
specific gravity  
square centimeters  
time  
volume  
weight

### Scientific Processes

conclusion  
control  
data  
data collecting  
data table  
direct relationship  
drawing conclusions  
dynamic equilibrium  
error  
hypothesis

inference  
observation  
percent error  
probability  
problem solving  
scientific method  
senses  
theory  
variable

### Chemistry

acids  
atom  
atomic mass  
atomic number  
aurora australis  
aurora borealis  
base  
boiling point  
chemical bonding

melting point  
metal  
mixture  
molecules  
negative ions  
neutron  
nonmetal  
nucleus  
organic

chemical change  
chemical compound  
chemical properties  
compound  
condensation point  
condensation surface  
ductility  
electron  
electron cloud  
element  
energy level  
freezing point  
gas  
inorganic  
malleability

oxidation  
phase  
phase change  
physical change  
physical properties  
physical state  
plasma  
positive ions  
proton  
solid  
solidification  
soluble  
solution  
temperate climate  
temperature

## Weather

absolute humidity  
air pressure  
ammonia  
anemometer  
aneroid barometer  
atmosphere  
atmospheric pressure  
atmospheric variables  
barograph  
barometer  
barometric pressure  
bimetallic thermometer  
blizzard  
carbon dioxide  
Celsius  
Centigrade

low pressure  
magnetosphere  
marine climate  
maritime polar  
maritime tropical  
mercury barometer  
mesopause  
mesosphere  
methane  
millibar  
models  
moisture  
mountains  
nitrogen  
occluded front  
orographic effect

circumpolar whirl  
climate  
clinometer  
cloud  
cloud seeding  
cold front  
condensation  
condensation nuclei  
condense  
conduction  
continental polar  
continental tropical  
convection  
convection current  
corillera  
cumulonimbus clouds  
cyclone  
desert climate  
dew  
dew point  
divergence zone  
doldrum  
dry-bulb thermometer  
exosphere  
eye of cyclones  
fog  
front  
frost  
greenhouse effect  
Hadley cell  
hail  
hailstorms  
high pressure  
horse latitudes  
humidity

oxygen  
ozone layer  
ozonosphere  
Polar northeasterlies  
polar winds  
polar zone  
precipitation  
pressure  
pressure gradient  
prevailing westerlies  
radiation  
rain  
relative humidity  
Sahara Desert  
saturated  
sea breeze  
seasons  
sleet  
sling psychrometer  
snow  
south polar zone  
south temperate zone  
stationary front  
stratopause  
stratosphere  
sublimation  
temperate zones  
thawing  
thermosphere  
thunder  
tornadoes  
trade winds  
Tropic of Cancer  
Tropic of Capricorn  
tropical zone

hurricane  
hygrometer  
inches of mercury  
interior plane  
ionosphere  
isobar  
isoline  
isosurface  
isotherms  
land breeze  
latitude wind cells  
leeward  
lightning  
liquid thermometer

tropics  
tropopause  
troposphere  
Van Allen radiation belt  
warm front  
water vapor  
weather map  
weather station  
weather vane  
westerlies  
wet-bulb thermometer  
wind  
wind vane

## Models

agonic line  
graphic model  
mathematical model  
mechanical model

mental model  
model  
physical model  
scale

## Measuring the Earth

apogee  
arctic circle  
atmosphere  
atmospheric pressure  
atmospheric variables  
average slope  
axis  
bench mark  
chronometer

isosurface  
isotherm  
Landsat  
latitude  
lithosphere  
longitude  
magnetic declination  
magnitude  
map projections

circumference  
computer imaging  
conic projection  
contour interval  
contour line  
contour map  
coordinate system  
coordinates  
crust  
depression contour  
diameter  
distortion  
equator  
Eratosthenes  
field  
field gradient  
field map  
geographic poles  
gnomonic projection  
gradient  
gravimeter  
gravitation  
gravity  
great circle route  
horizontal axis  
hydrosphere  
imaging radar  
isobar  
isoline

map scale  
Mercator  
meridian  
North Pole  
North Star  
oblate spheroid  
orbit  
orbital speed  
orbital velocity  
parallel  
perigee  
photogrammetry  
pneumbra  
polar coordinates  
Polaris  
polyconic  
prime meridian  
profile  
remote sensing  
scalar field  
scale  
sea level  
side looking radar  
slope  
South Pole  
topographic map  
umbra  
vector field  
vertical axis

## Celestial & Terrestrial Observation

altitude  
annual motion

noon  
parallax

apogee  
apparent diameter  
apparent solar day  
apparent solar time  
autumnal equinox  
azimuth  
celestial equator  
celestial navigation  
celestial north pole  
celestial objects  
celestial poles  
Coriolis effect  
declination right ascension  
earth's revolution  
eclipse  
ecliptic plane  
equator  
equinox  
frictional drag  
horizon  
hour circle  
international date line  
latitude  
local noon  
mean solar day  
meridian  
neap tide

period  
prime meridian  
revolution  
rotation  
sidereal day  
sidereal year  
solar day  
solar eclipse  
solar noon  
solar time  
solar year  
solstice  
spring equinox  
spring tides  
standard time  
summer solstice  
sun dial  
sun time  
time  
time meridian  
Van Allen belt  
vernal equinox  
winter solstice  
year  
yearly motion  
zenith

## Moon

1st quarter  
3rd quarter  
annular eclipse  
celestial north pole

new moon  
old crescent  
old gibbous  
penumbra

crescent moon  
eclipse  
full moon  
lunar eclipse  
lunar rocks  
maria  
new crescent moon  
new gibbous

phase  
phases  
precession  
rille  
solar eclipse  
tidal range  
total eclipse  
umbra

## SECTION 2

### Sun - Stars - Galaxies

aphelion  
apparent magnitude  
astronomical unit  
binary stars  
black hole  
Cepheid variable  
constellation  
continuous spectrum  
Copernican model  
corona  
daily motion  
dark line spectra  
Doppler effect  
dwarf stars  
eccentricity  
ellipse  
elliptical galaxy  
energy transformation  
epicycles  
focus

nuclear fusion  
optical telescope  
parallax of a star  
perihelion  
photosphere  
planet deferent  
prism  
prominences  
protoplanet  
protostars  
Ptolemy model  
pulsar  
quasars  
radio astronomy  
radio telescope  
red giants  
red shift  
reflecting telescope  
refracting telescope  
retrograde motion



foucault pendulum  
galaxy  
gaseous core  
geocentric model  
giant star  
globular clusters  
gravity field  
heliocentric model  
inertia  
irregular galaxy  
law of gravitation  
light year  
multiple mirror telescope  
nebulae  
neutron star  
nova

retrograde rotation  
revolution  
rotation  
single mirror reflecting telescope  
solar eclipse  
spiral galaxy  
star  
star clusters  
supergiants  
supernovas  
terrestrial  
terrestrial motion  
terrestrial radiation  
transformation of energy  
variable star

### Solar System - Planets

asteroids  
Earth  
Jovian planets  
Jupiter  
Mars  
Mercury

Neptune  
Pluto  
Saturn  
Sun  
Uranus  
Venus

### Solar System

aphelion  
asteroids  
chromosphere  
comet  
deferent

meteorite craters  
meteorites  
meteors  
meteroid  
Oort cloud

elliptical orbits  
epicycles  
equal area law  
geocentric system  
harmonic law  
heliocentric system  
inner planets  
Kepler's second law  
Kepler's third law  
magnetic storms

orbit  
outer planets  
perihelion  
period  
photosphere  
solar prominences  
solar system  
solar winds  
sunspots

### Space Explorations

apogee  
communication satellite  
geosynchronous orbit  
navigation satellites  
Newton's Third Law  
perigee

rockets  
satellite  
space shuttle  
space station  
stationary orbit  
weather satellite

### Energy & Energy Transfer in Earth Processes

absolute zero  
absorbed  
absorption  
calorie  
closed system  
condensation  
condensation surface  
conduction  
conservation of energy  
convection  
convection cell

heat source  
kinetic energy  
latent heat  
latent heat of fusion  
latent of vaporization  
melting  
open system  
period  
potential energy  
radiation  
reflected

convection current	reflection
crest	refracted
crystal	refraction
crystal structure	scattering
crystalline solid	sink
crystallization	specific heat
electrical energy	swash
electromagnetic energy	temperature
electromagnetic radiation	thermal energy
electromagnetic spectrum	transmitted
energy	transverse wave
evaporation	trough
freezing	tsunami
friction	ultraviolet radiation
gravitational potential energy	vaporization
heat	wave crest
heat energy	wave peak
heat of condensation	wavelength
heat sinks	

## Insolation and the Earth's Surface

absorption	radiation
aerosols	radiative balance
angle of insolation	radioactive dating
Celsius	radioactive decay
conduction	radioactivity
convection	reflection
duration of insolation	reradiation
Fahrenheit	scattering
greenhouse effect	source
half life	southern hemisphere
hemisphere	square centimeter
incoming solar radiation	square meter

insolation  
ionosphere  
latitude  
northern hemisphere

temperature  
temperature inversions  
ultraviolet rays  
x-rays

## Precipitation

barometric pressure  
circumpolar whirl  
cloud  
cloud seeding  
condensation nuclei  
dew  
dew point  
frost  
hail

high pressure  
isobars  
isoline  
low pressure  
meteorologist  
precipitation  
sleet  
supercooled water  
weather

## Cloud Types

advection fog  
altostratus  
cirrocumulus  
cirrostratus  
cirrus clouds  
cloud

cumulonimbus  
cumulus  
fogs  
radiation fog  
stratus

## Types Air Masses

air mass  
air pressure  
anticyclone  
atmospheric transparency

low  
m  
maritime air  
maritime polar mP

blizzard	maritime tropical mT
c	mP
cold front	occluded front
continental air	P
continental polar	polar air
continental tropical	pressure gradient
cP	rawinsonde
cT	source region
cyclone	stationary front
dew-point temperature	T
front	track
gradient	tropical air
high	warm front
humidity	waterspout
jet stream	wind

### Atmospheric Energy Changes

adiabatic change	perpendicular insolation
adiabatic cooling	planetary wind
adiabatic lapse rate	planetary wind belt
adiabatic temperature change	precipitation
advection	relative humidity
aerosols	reradiated
albedo	saturation
chinooks	saturation vapor pressure
circulation cell	solar radiation
combustion	sublimation
condensation	thunderstorms
condensation nuclei	tornadoes
convection	transparency
convection cells	transpiration
convergence zone	tropical cyclone
cyclone	tropical storm

deposition  
dew point  
direct rays  
dry adiabatic  
dynamic equilibrium  
evaporation  
Hadley cell  
hurricanes  
infrared

twister  
typhoon  
vapor pressure  
vertical rays  
vortex  
water vapor  
waterspout  
wet adiabatic

### Moisture and Energy Budgets

actual evapotranspiration  
adhesion  
aeration  
aerobic bacteria  
anaerobic bacteria  
aquifer  
arid climate  
artesian well  
capillary action  
capillary fringe  
capillary migration  
capillary water  
change in soil storage  
cirque  
climate  
cohesion  
continental climate  
crevasse  
deficit  
delta ST  
Ea  
elevation

latitude  
latitudinal climate patterns  
leeward side  
marine climate  
midlatitude climates  
ocean current  
orographic effect  
P + St  
particle shape  
permafrost  
permeability  
permeable  
planetary wind belts  
polar climate  
pollution  
porosity  
potential evapotranspiration  
precipitation  
recharge  
run off  
soil storage  
storage

Ep  
eutrophication  
evaporate  
evapotranspiration  
geysers  
ground water  
humid climate  
hydrologic cycle  
impermeable  
infiltration  
isotherm

subsurface water  
surplus  
tropical climate zone  
usage  
water budget  
water cycle  
water storage  
water table  
windward side  
zone of aeration  
zone of saturation

### Water Availability Factors

aquifer  
geysers  
glaciers  
ground water  
impermeable  
mountain  
permafrost  
permeability

permeability rate  
permeable  
stream  
stream discharge  
subsurface water  
thermal pollution  
water pollution  
windward side

## SECTION 3

### Erosional Process - Weathering

atmosphere  
braided stream  
calcareous  
carbon dioxide + water  
carbon dioxide cycle

leaching  
levees  
lichens  
lithosphere  
mature river

carbonation  
carbonic acid  
chemical weathering  
crystal lattice  
denudation  
desert  
desert soil  
forest soil  
frost action  
frost action  
grassland soil  
hydrolysis  
hydrosphere  
ice wedging  
immature soil  
joint  
landslide

mudflow  
oxidation  
pedalfers  
pedocals  
physical weathering  
plant action  
proton  
root-pry  
rust  
rust  
soil  
soil association  
soil horizon  
soil profile  
tropical soil  
weathering

## Erosion

abrasion  
alluvial fan  
angle of repose  
arctic soil  
base level  
bed load  
buttes  
cave  
cavern  
coastal plain  
continental glaciers  
coral atoll  
coral reefs  
corals

mudflow  
natural bridges  
organic activity  
oxbow lakes  
plain  
playa  
plunge pools  
potholes  
residual sediment  
residual soil  
ripple marks  
river valley  
rock  
rock cycle



creep  
deflation  
delta  
density currents  
desert soil  
divide  
drainage basin  
dunes  
effect of discharge  
erosion by ice  
erosion by waves  
erosion by winds  
erosion  
exfoliation  
fiords  
flood plain  
glacial milk  
glaciers  
gully  
headward erosion  
ice erosion  
ice wedging  
landslide  
leaching  
levee  
mature stream  
meander  
mesas  
mosses

rock flour  
rock formation  
rock resistance  
rock structure  
run off  
sandbar  
sediment  
sinkholes  
slumping  
stalactite  
stalagmite  
stream bed  
stream discharge  
stream drainage pattern  
stream piracy  
talus  
transported sediment  
transported soil  
transporting system  
tributaries  
tributary  
valley glaciers  
velocity  
ventifact  
walking the outcrop  
water gap  
water table  
wind  
wind erosion

### Deposition Process

accretion  
alluvial fan

impermeable  
indirect glacial deposits

braided stream  
buttes  
clay  
colloids  
compression  
cross-bedded  
deposition  
direct glacial deposits  
erosional deposition system  
evaporites  
flocculation  
fluvio-glacial deposits  
graded bedding  
horizontal sorting

joints  
organic deposits  
pore spaces  
precipitates  
precipitation  
recrystallization  
saturated  
sediments  
sorting  
talus  
turbidity current  
unsorted particles  
vertical sorting

#### Rock & Mineral Characteristics

axes of a crystal  
bedrock  
cleavage  
cleavage planes  
gangue  
metal  
mineral  
mixtures  
monomineralic rocks

nonmetal  
ore  
physical properties  
polymineralic  
regolith  
rock  
silicon-oxygen tetrahedron  
specific gravity

#### Rock Identification

cleavage  
color  
conchoidal fracture  
crystal shape

hardness  
luster  
Mohs scale  
streak

fracture

texture

## Rock Types

amphibole  
andesite  
basalt  
batholith  
biotite  
bituminous coal  
bressia  
chalk  
clastic  
coal  
feldspar  
flint  
foliation  
gems  
geodes

halite  
igneous rocks  
intrusions  
intrusive rock  
lava  
metamorphic  
mica  
oxides  
pumice  
pyrite  
rock salt  
sandstone  
sedimentary  
uranium 238

## Crystals

axes of a crystal  
chain silicates  
cleavage  
cleavage planes  
compression  
conchoidal fracture  
crystallization  
crystal  
crystal faces

cubic page  
hexagonal  
isolated tetrahedra  
monoclinic  
orthorhombic  
sheets silicate  
tetragonal  
triclinic

## Rock Formation

banding	nonfoliated
cementation	nonsedimentary rock
clastic	ore mineral
clastic sedimentary rocks	organic sedimentary rock
clastic sediments	original horizontality
compaction	petrology
complex mountains	plutonic rock
concretion	polymineralic rocks
connate water	porphyry
constituent unit	recrystallization
contact metamorphism	regional metamorphism
contact metamorphism zone	regolith
distorted structure	rock cycle
extrusive igneous rock	rock salt
folded strata	sedimentary rock
foliation	silica tetrahedron
fossil fuels	soft coal
igneous rock	thermal metamorphism
intrusion	transition zone
intrusive igneous rock	uranium
lignite	vein
lithified	volcanic ash
magma	volcanic rock
metamorphic rocks	volcano

## Dynamic Crust

active continental margins	mountain
bench mark	ocean floor spreading
braided stream	ocean trenches
caldera	oceanic crust
cinder cone	oozes

climate record  
coastal plain  
composite volcano  
constructive landform  
continental drift  
continental margins  
continental rises  
coprolites  
countercurrents  
craters  
density currents  
diatoms  
dikes  
dome  
earthquake zones  
fault  
faulting  
folded strata  
fossil  
geosyncline  
laccolith  
lava  
lava plateau  
manganese nodules  
mid-ocean ridges

passive continental margins  
phytoplankton  
plains  
plateau  
ring of fire  
rock magnetism  
salinity  
shield volcanoes  
sill  
stock  
strata  
thermocline  
tilted sedimentary beds rocks  
tilted strata  
trench  
turbidity currents  
uplifting forces  
upwelling  
vent  
viscous  
volcanic ash  
volcanic bomb  
volcanic dust  
volcanic mountains  
volcano

## SECTION 4

### Earthquakes

amplitude  
anticlines  
axis of fold

L - wave  
longitudinal wave  
mantle

bedding phase  
block mountain  
body wave  
brittle  
buoyancy  
compressional wave  
continental crust  
convergence zone  
core  
crust  
deep focus  
earthquake  
earthquake waves  
epicenter  
fault  
fault block mountain  
focal depth  
focus  
fracture  
granite  
igneous  
igneous rock  
inner core  
joint system

Mercalli scale  
MOHO  
Mohorovicic discontinuity  
normal fault  
outer core  
P - wave  
primary  
primary wave  
reverse fault  
Richter magnitude scale  
Richter scale  
rift valley  
S - wave  
secondary wave  
seismic waves  
seismograph  
shadow zone  
shallow focus  
shear waves  
strike slip fault  
surface wave  
syncline  
tension  
thrust fault

## Plate Tectonics

asthenosphere  
Basalt-Ecogolite hypothesis  
constructive landform  
continental accretion  
continental drift  
continental growth  
continental rises

isostasy  
isostatic compensation  
lithosphere  
lithosphere plates  
mid-Atlantic Ridge  
midocean ridges  
ocean ridges

continental shelf  
continental shield  
continental slope  
convection cells  
convergence zone  
converging boundary  
craton  
divergence  
diverging boundaries  
eclogite  
geosyncline  
island arcs

ocean-floor sediments  
ocean-floor spreading  
pangala  
plate tectonics  
rift valley  
seafloor spreading  
subduction zone  
transform boundaries  
transform fault  
trenches  
uplifting

## Geologic History

absolute age  
amber  
basement complex  
carbonization  
catastrophes  
correlation  
dikes flat  
extinction  
extrusion  
fossil  
fossil age  
geologic time scale  
guide fossils  
half-life  
igneous extrusion  
index fossil  
intrusion  
intrusion igneous  
laccoliths

mold  
mutations  
outcrop  
paleontologists  
petrified  
pluton  
radioactive dating  
radioactive decay  
radioactive element  
radiometric  
rate of sedimentation  
relative age  
sills  
superposition  
tar pits  
trace fossils  
unconformity  
uniformitarianism  
xenoliths

lava flow

## Nuclear Chemistry

atom  
carbon 14  
carnotite  
chemical compound  
compound  
deuterium  
electron  
half-life

heavy hydrogen  
isotope  
mass number  
neutron  
ordinary hydrogen  
proton  
radioactive dating  
radioactive decay

## Geologic Eras

ammonites  
amphibians  
angiosperms  
Archeozoic Era  
brachiopods  
Cambrian Period  
Carboniferous  
Cenozoic Era  
conifers  
cyads  
Devonium Period  
dinosaurs  
epoch  
era  
gymnosperms  
interglacial ages

nvertebrate  
ammal  
arsupial  
esozoic Era  
ississippiian Period  
aleozoic Era  
ennsylvanian Period  
eriod  
ermian Period  
laeozoic Era  
recambrian Era  
roterozoic Era  
eptiles  
rilobites  
ertebrates



## Correlations & Fossil Records

anticline  
brachiopod  
class  
epoch  
era  
eurypterids  
extinction  
family  
genus  
geologic timetable  
graptolite  
kingdom

natural selection  
order  
organic evolution  
period  
photosynthesis  
phylum  
relative age  
specie  
stromatolites  
syncline  
taxonomy  
trilobites

## Landscape Development

abrading  
acid  
air pollution  
block mountain  
cirque  
cliff  
complex mountains  
continental glacier  
corillera  
debris slope  
desertification  
drainage basin  
drainage density  
drainage patterns  
drift  
drumlins  
environmental factors

lateral moraine  
leveling destructional forces  
leveling forces  
moraine  
nonrenewable resources  
nuclear waste  
nunataks  
outwash plains  
passive solar heating  
photosynthesis  
physiographic provinces  
physiographic region  
plains  
plateau  
pollutant  
renewable resources  
respiration

escarpment  
eskers  
eutrophication  
fault block mountains  
fiords  
free face  
geology  
geothermal energy  
glacial lakes  
gradient  
high  
horns  
icebergs  
kames  
kettle  
kettle lakes  
landscape  
landscape region

rolling mountains  
salinization  
soil depletion  
solar energy  
stream gradient  
striations  
subsidence  
terminal moraine  
till  
topography  
toxic wastes  
valley glacier  
waning slope  
water gap  
water pollution  
water power  
waxing slope  
wind power

## Energy Resources

anthracite coal  
bituminous coal  
coal  
coal gasification  
crude oil  
fission  
fossil fuels  
fusion  
gasohol  
geothermal power  
hydrocarbons  
lignite coal

methane  
natural gas  
nuclear energy  
nuclear fission  
peat  
petroleum  
solar cell  
solar energy  
tidal power  
water power  
wind power

## Environment

acid rain  
air pollution  
chlorofluorocarbon  
contour farming  
crop rotation  
deforestation  
desalination  
EPA  
erosion  
gange  
hazardous waste  
hydrocarbons  
hydroelectric energy  
irrigation  
natural resources  
noise pollution  
nonrenewable resources  
oil pollution

ozone  
ozone layer  
photochemical smog  
purification  
recycling natural resources  
renewable resources  
smog  
strip or open mining  
sulfuric acid  
sulfurous smog  
temperature inversion  
thermal pollution  
transpiration  
tropical forest  
water pollution  
water resources  
windbreak

## Restless water

barrier reef  
bars  
beaches  
caves  
deep ocean currents  
high tide  
low tide  
neap tide  
pore space  
reservoirs

sand bar  
sea cliffs  
spring tide  
surface currents  
surface runoff  
tides  
tsunamis  
turbidity currents  
upwellings  
watershed

rip currents

## Waves

crest  
trough  
wave base  
wave height  
wave peak

wave period  
wavelength  
waves  
wind waves

## Oceans

abyssal plain  
abyssal zone  
aquaculture  
barrier reef  
bathyal zone  
bathyscaph  
bathysphere  
benthos  
buoyancy  
condensation  
condensation surface  
continental margin  
continental rise  
continental shelf  
continental slope  
coral atolls  
coral reefs  
deep zone  
depth of ocean  
diatoms  
echo sounder

lagoon  
marianas trench  
mid-ocean ridge  
nekton  
nertic zone  
ocean plants  
oceanographer  
ooze  
phytoplankton  
plankton  
rift zone  
salinity  
salt marsh  
sea level  
seamounts  
seismograph  
shoreline  
sonar  
speed of sound in water  
submarine canyons  
surface zone

evaporation  
ground water  
guyots  
hydrosphere  
intertidal zone

thermocline  
trenches  
turbidity  
water cycle  
zooplankton