Environmental Science Study Words

**Scientific Analysis, Observing the Natural World**

qualitative/quantitative  
hypothesis

Earth’s Systems

chlorophyll  
density  
chemical energy  
potential energy  
kinetic energy  
nitrogen cycle  
carbon cycle  
phosphorous cycle  
solar energy  
photosynthesis  
fermentation low, high quality energy  
spontaneous  
CO2(from the air) + water + sun’s energy (light) —-> C6H12O6 (glucose)

Atmosphere, Weather, Air Quality

barometric pressure  
isobars  
condensation  
wind  
tornado  
vortex  
latitude  
Fujita scale  
convection cell  
Coriolis effect  
El Nino Southern Oscillation (ENSO)  
Nor’easter  
tropical depression  
typhoon, monsoon  
hurricane nor’easter  
eye, eye wall  
Saffir/Simpson  
storm surge  
marine climate  
continental  
orographic effect (Chinook winds)  
stratosphere  
troposphere  
jet stream  
turbulence  
ozone, ozone layer  
anthropogenic  
combustion  
fossil fuels  
acid rain  
pH scale  
spectrum  
UV radiation  
CFC (Chlorofluorocarbons)  
Montreal Protocol  
Clean Air Act  
dissemination  
hydroxyl radical (OH-)  
smog – photochemical, industrial  
National Ambient Air Quality Standards  
temperature inversions  
auto emissions standards  
open burning  
stack emissions  
precipitators  
suspended particulate matter (SPM)  
aerosols  
PM-10  
carbon monoxide (CO)  
volatile organic compounds (VOC’s)  
Reasonably Available Control Technology  
scrubbers  
electrostatic  
nitrogen oxides (NOx)  
sulfur oxides  
catalytic converter  
command and control  
lead  
criteria pollutants  
radon? asbestos  
Sick Building Syndrome  
Legionnaires Disease  
microwave

Ecosystems, Biomes, Populations

biomass  
species  
ecosystem  
self-regulating  
producers  
consumers  
energy cycle  
food web  
food chain  
trophic levels  
inaccessible  
niches  
self-regulating  
energy cycle  
food web  
food chain  
inaccessible  
niches  
community  
population  
primary producers  
herbivores  
carnivores  
consumers  
decomposers  
detritus feeders  
omnivores  
abiotic factor  
biome  
conifer  
evergreen  
deciduous forests  
adapted  
coral reefs  
dynamic state of equilibrium  
fluctuations  
population dieback  
population explosion  
genetic diversity  
population crash  
carrying capacity  
habitat  
exponential curve  
J-shaped curve  
S-shaped curve  
species  
catastrophic  
optimal  
fertility  
mortality  
migration  
fragmentation  
biodiversity  
exotic species  
isolated  
extinction  
uncontrolled  
sport hunting  
commercial harvesting  
commercial breeding  
gene pools  
CITES treaty  
endangered  
breeding  
zebra mussel  
ballast  
recreational fishing  
introduced species  
native species  
estuaries  
extinction  
threatened

Human Population Dynamics

famine  
fertility rate  
family planning  
birth control  
“baby boom”  
histogram  
demographics  
plague  
demographic transition  
total fertility rate

Global Changes

greenhouse gas  
hydrocarbons  
photosynthesis  
refracted  
reflected  
scattered  
aerosol  
climate  
albedo  
carbon cycle  
carbon sinks  
global nitrogen cycle  
regional consequences  
anaerobic  
urban heat island  
Kyoto Conference  
phytoplankton  
anomalies  
upwelling

Water

zone of saturation  
groundwater  
aquifer  
artesian wells  
karst  
topography  
pore spaces  
hard water  
gray, black water  
brackish water  
potable water  
Ogallala Aquifer  
desalinization  
drought  
tributary  
aqueduct  
drought cycle  
recharge zones  
evaporation  
evapotranspiration reverse osmosis  
distillation  
1976 flood control devices  
condensation  
percolation  
transpiration  
sublimation  
runoff  
subsoil  
porosity  
capillary water  
zone of aeration  
caprock  
infiltration  
sink hole  
watershed/basin  
consumptive  
water table  
reservoir/aqueduct  
permafrost  
storm water  
residence time  
overdrawn  
offset  
channelization  
Tennessee Valley Authority  
xeroscaping  
spillways  
meander  
Aswan High Dam  
Three Gorges Dam  
Mono Lake  
lake effect snow

Land

desertification  
topsoil  
erosion  
contour plowing  
fertilization  
strip farming  
siltation  
drip irrigation

Environmental Quality

contaminants  
soluble  
concentration  
relative  
residue  
oxidation  
absorption  
distillation  
disinfection  
feces  
ammonia  
phosphates  
nitrates  
bacteria  
chlorine  
underutilized  
heavy metals  
resistant  
point, non-point  
tertiary  
DDT  
pathogenic organisms  
heavy metals  
hemoglobin  
dose threshold level  
bioaccumulation  
Bhopal, India  
pesticide  
acute, chronic  
carcinogenic  
teratogens  
mutagens  
toxic  
hazardous chemicals  
thermal pollution  
coliform bacteria  
routinely monitored  
mutate  
pathogenic  
algae  
aqueduct  
systems  
discharges  
dissolved oxygen (DO)  
cultural eutrophication  
nutrient

Waste

municipal sewage  
sludge  
Love Canal  
waste lagoons  
landfills  
secure landfills  
incinerator  
ash  
leachate  
impervious  
clay  
waste stream  
intermittent  
proximity  
tipping fee  
biodegradable  
mutagenic, corrosive  
National Priority List (NPL)  
CERCLA (Superfund) Act of 1980  
Resource Conservation & Recovery Act (RCRA)  
Primary sewage treatment  
organic matter  
transparent

Energy

entropy  
thermodynamics  
heat tax  
alternative renewable energy  
conventional energy  
energy crisis  
abated  
kinetic energy  
petrochemicals  
OPEC  
oil glut  
energy reserves  
synfuels  
fuel cells  
photovoltaic cells  
proven reserves  
estimated reserves  
home energy audits  
Alaska pipeline  
salt domes  
watt, kilowatt  
tax incentive  
convert  
coal liquefaction  
cogeneration  
eutectic fluid  
fuel wood  
dung  
distillation/cracking  
hydrocarbons  
containment building  
viscous  
diesel  
gasoline  
kerosene  
friction  
U-238  
Yucca Mountain, NV  
breeder reactor  
depository  
stabilize  
enriched uranium  
moderators  
low level waste  
high level waste  
spent fuel  
casks  
seismic activity  
leukemia  
sterilization  
REM  
parent  
daughter  
hidden energy  
nucleus  
radioactive decay  
Chernobyl  
Three Mile Island  
isotopes, neutrons  
half-lives  
radioactive waste  
strip mining  
black lung disease  
heat exchanger  
steam generator  
melt down  
cooling water  
lignite  
bituminous  
tar sands  
oil shale  
gas hydrates  
synfuels  
methane  
ethanol  
Surface Mining Control & Reclamation Act  
General Mining Law of 1872  
resource recovery  
cogeneration  
gasification  
entombed  
dismantle  
tidal power  
radioactive waste  
refineries  
joule  
hydropower  
first law of thermodynamics  
dissipates  
law of conservation of matter  
steam turbine  
reactor core  
passive solar heating  
roof overhangs  
solar collectors on roof  
drapes  
insulated  
biogas  
geothermal  
photovoltaics  
conservation/efficiency  
differential heat  
deuterium  
tritium  
turbines  
ocean thermal electric conversions (OTEC)  
ethanol  
gasohol  
hydroelectric?James Bay Project  
BTU, QUAD, calorie  
REM  
cooling systems  
chain reactions  
sustainable development  
fuel rods  
cooling towers  
airborne particulates  
thermal pollution  
operating efficiency  
mitigate  
industrial revolution  
Arab oil embargo  
depletion  
regional  
blackouts  
insulation  
greenhouse effect  
infrared radiation  
terrestrial reradiation  
utility companies  
incentive programs  
finite resources  
global warming  
dominant  
Public Utility  
Regulatory Policies Act of 1978( PURPA)  
tidal power? tsunamis  
peak  
uranium  
plutonium  
fuel assembly?encased  
nuclear fission

Choices for the Future

ecotourism  
utilitarian  
conservationists  
biosphere  
conservation  
aesthetic values  
Wilderness Act