APES Vocabulary List 18-19

1 or 10 points Environmentalist – Cover Photo

Economic, Politics, Sustainability, and Environment → 15 Points

2 Natural Resources 5 External Cost

2 Natural Capital 4 Ecosystem services

4 Globalization 5 Environmental Indicators

2 Common 4 Environmental Laws

5 Tragedy of the Commons 5 Environmental Justice

3 Ethics 4 Environmental Economics 1 Human Resources 3 Environmental Literacy

4 Anthropocentrism 3 Environmental Policy

1 Anthropogenic 5 World Bank

5 Bicentrism 4 Ecocentrism 5 Nongovernmental organization – NGO 4 Lobbying

4 Stewardship 4 EPA

5 Sustainable 4 Affluence

5 Cost-Benefit analysis

3 Subsidies 4 Interest Groups

Human Populations Toxicology, and Human Health → 15 Points

5 Zero population growth (ZPG) 4 Developing country

4 Exponential growth 5 Gross domestic product (GDP)

3 Birth rate 5 Gross national product (GNP)

5 Crude birth rate 5 Per capita 5 Crude death rate 5 Rule of 70

4 Replacement level fertility 5 Doubling time

5 Total fertility rate 2 Poverty 3 Baby-boom period 4 Carrying capacity

4 Baby-bust period 2 Immigration

5 Echo boom 2 Emigration

4 Life expectancy 4 Affluence 3 Industrial revolution 1 Urban area

5 Infant mortality rate 2 Rural area 3 Malnourishment 5 WHO

5 Malaria 5 Risk assessment

5 Histogram 3 Mutagens
4 Demographics 3 Teratogens
5 Demographer 3 Carcinogens

5 Demographic transition 5 Toxicology 5 Preindustrial period 5 LD50 / LC50

5 Transitional stage 5 Pandemic 5 Industrial stage 5 Endocrine disruptor

5 Post industrial stage 5 Synergistic effect
5 Population momentum 5 Priority 5 Priority

5 Population momentum 5 Biomagnification 2 Family planning

3 Developed country

Community and Population Ecology → 20 Points

2 Homeostasis 5 Carbon cycle (know steps) 5 Genes 5 Nitrogen cycle (know steps) 5 Phosphorous cycle (know steps) 5 Gene Mutations

1 Inorganic compounds 5 Sulfur cycle (know steps) 2 Law of conservation of matter 5 Evolution

2 Law of conservation of energy 4 Natural selection 2 1st law of thermodynamics 3 Adaptation 3 2nd law of thermodynamics 4 Coevolution

2 Energy efficiency 3 Niche

2 Ecology 3 Generalist species 4 Specialist species 1 Organism 1 Species 5 Extinction 1 Population 3 Native species 4 Nonnative species 2 Habitat 4 Exotic species 2 Community 2 Ecosystem 3 Alien species

3 Biosphere 4 Indicator species 4 Keystone species 4 Ecotone 3 Competition 1 Abiotic

4 Resource partitioning 1 Biotic

2 Predation 3 Zone of tolerance 4 Limiting factor 2 Parasitism 1 Producers 2 Mutualism

1 Autotrophs 2 Commensalisms 1 Photosynthesis 3 Population dynamics 2 Chemosynthesis 1 r-selected species

1 Consumers (primary, secondary, ect.) 1 K-selected species 1 Heterotrophs 3 Wildlife management 1 Herbivore 4 Endangered species 3 Threatened species 1 Carnivore

5 Minimum viable population 1 Omnivore

2 Scavengers 5 H.I.P.P.C.O.

1 Detritivores 3 Habitat fragmentation

2 Decomposers 3 Habitat loss 2 Biodiversity 5 Poaching 3 Genetic diversity 4 Invasive species 3 Species diversity 5 Zebra mussel

2 Ecological diversity 5 Endangered Species Act

4 Food chain 5 Over fishing 5 Biomagnifications 1 Trophic level 5 Bioaccumulation 2 Biomass

4 Pyramid of energy flow 3 Density Dependent factor 4 Pyramid of biomass 3 Density Independent Factor

Climate and Biomes → 15 Points

1 Weather 5 La Nina 3 Cold Front 2 Climate 5 Upwelling 3 Warm Front 5 El Nino 2 Dew point

4 Rain Shadow Effect

4 Microclimates

5 Latitude

3 Altitude

4 Tropical climate

3 Temperate climate 5 Tropical Desert

5 Temperate Desert

5 Cold Desert

5 Tropical Grassland

5 Savanna

2 Temperate Grassland

5 Arctic Tundra

5 Permafrost

4 Alpine Tundra

3 Chaparral

4 Tropical Rainforest

4 Canopy

2 Understory

1 Forest floor

1 Deciduous Forest

1 Broadleaf Deciduous plants

2 Coniferous Forest

2 Boreal Forest

2 Broadleaf Evergreen plants

3 Taiga

4 Ecological succession

4 Pioneer species

4 Primary succession

4 Secondary succession

4 Climax Community

5 Multiple-Use lands

5 National Forest System

5 Bureau of Land Management (BLM)

5 National Park System (NPS)

4 Old growth forest

4 Clear cutting

4 Selective cutting

5 Strip cutting

5 Prescribed Burn

5 Fire suppression

3 Riparian Zone

5 Buffer-zone concept

5 Restoration Ecology

Water, Water Use and Water Pollution → 15 Points

5 Aquatic Life Zones

5 Salinity

4 Turbidity

5 Nekton

5 Benthos

5 Phytoplankton

5 Zooplankton

4 Euphotic Zone

4 Coastal Zone

5 Continental Shelf

4 Estuary

4 Coastal Wetlands

4 Intertidal zone

5 Coral Reefs

5 Bathyal Zone

5 Abyssal Zone

4 Littoral Zone

4 Limnetic Zone

4 Benthic Zone

5 Thermal stratification

3 Hydrologic Cycle

2 Evaporation

2 Condensation

1 Precipitation

4 Transpiration

4 pH

1 Surface runoff

4 Watershed

5 Groundwater

5 Zone of saturation

5 Natural recharge

5 Water table

4 Aquifers

3 Recharge area

4 Consumptive use

5 Nonconsumptive use

4 Drought

4 Land subsidence.

5 Salt water intrusion

5 Cone of depression

5 Aquifer depletion

3 Wetlands

4 Estuaries

3 Reservoirs

3 Dams/Levee

5 Three Gorges Dam

2 Conservation

4 Desalinization

3 Distillation

3 Reverse osmosis

2 Turbidity 5 Ogallala Aquifer 5 Indicator species 3 Drip irrigation 2 Center pivot irrigation 5 Sludge 3 Floodplain 5 Septic tank 1 Erosion 4 Primary Sewage treatment 1 Water pollution 4 Secondary Sewage treatment 2 Coliform bacteria 2 Chlorination 4 Biological Oxygen Demand (BOD) 4 Effluent 1 Point source 4 Cryptosporidium/Giardia 4 Clean Water Act 3 Nonpoint source 5 Oxygen sag curve 5 US Safe Drinking Water Act of 1974 5 Water Quality Act 3 Eutrophication 4 Cultural eutrophication 5 Dead Zone 4 Oligotrophication 3 Water conservation 5 Dissolved oxygen/DO 2 Low flow 2 Solubility 1 Toilet Soil, Agriculture, and Food \rightarrow 15 Points 5 LD50 5 Crop rotations 2 Agriculture 5 Crop yield 5 CSA/Community Supported Ag 4 Aquaculture 3 Malnourished 4 Food Miles 2 Overnourished 4 Localvore 2 Green revolution 3 FDA 1 Erosion 3 USDA 1 Irrigation 4 NRCS 2 Drip irrigation 1 Cattle 3 Center pivot irrigation 1 Inorganic fertilizer 4 Flood irrigation 2 Organic fertilizer 5 Salinization 3 (GMOs) - Genetically Modified Organisms 5 Overfishing 3 Croplands 3 Rangelands 3 Overgrazing 2 Plowing 1 Pesticides 4 Desertification 5 Pesticide treadmill 5 CAFOs - concentrated animal feeding operations 5 IPM/Integrated Pest Management 1 Herbicides 4 Contour plowing 5 No-till agriculture 5 Monsanto 4 Cover Crops 5 Persistance 1 Insecticides 2 Soil profile 5 DDT 2 O Horizon 3 A Horizon/Top Soil 2 Monocropping 3 Polyculture 5 E Horizon/Zone of Leeching 4 Intercropping 3 B Horizon/Sub Soil 4 Terrace farming 3 C Horizon/Parent material 1 Erosion 4 Infiltration 1 Weathering 4 Leaching 2 Clay 1 Soil 1 Humus 3 Silt

1 Sand

2 Soil horizons

1 Gravel 4 pH

3 Soil texture 4 Soil porosity
3 Loams 4 Soil permeability
2 Nitrogen 1 Soil erosion

2 Phosphorous

Geology/Mining, Nonrenewable / Renewable Energy → 15 Points

2 Geology 3 Rock cycle
1 Lithosphere 4 Fault line
5 Plate tectonics 5 Earthquake
5 Divergent plate boundary 5 Epicenter
5 Convergent plate boundary 5 Magnitude
5 Transverse plate boundary 5 S waves
5 Subduction zone 5 P waves

3 Uplift 3 Mineral resources

1 Erosion 3 Ore

1 Physical weathering 5 Surface mining 2 Chemical weathering 5 Open-pit mining 1 Mineral 5 Area strip mining

2 Igneous rock 5 Smelting

1 Sedimentary rock 5 Depletion time

3 Metamorphic rock

3 Law of conservation of matter 5 Chernobyl

3 Law of conservation of energy 5 Three-mile Island

3 1st law of thermodynamics 5 Uranium 3 2nd law of thermodynamics 4 Half-life

4 High quality energy 5 Yucca Mountain 3 Low quality energy 5 Nuclear waste 4 Generator

1 Petroleum 3 Passive solar heating 2 Crude oil 2 Active solar heating 5 Exxon Valdez 2 Photovoltaic cells (PV)

5 OPEC 4 Wind power 5 Shale oil 3 Biofuels

5 Tar sands 5 Geothermal energy 2 Natural gas 5 Hydroelectric energy

1 Coal 4 NIMBY

3 Peat 2 Kilowatt hour 5 Lignite 1 Electricity 5 Bituminous coal 1 Power

5 Anthracite 2 Net metering 2 Fossil fuels 4 Incentives

4 Greenhouse gasses 3 Green technologies

5 Fission 2 Energy star 5 Fusion 3 Phantom Load

<u>Air – Air Pollution, Climate Change</u> → 15 Points

1 Organic compounds 5 Electrostatic precipitator 1 Hydrocarbons 4 Greenhouse gasses

1 Atmosphere 3 Global warming (Climate change)

1 Troposphere 1 Aerosols 3 Stratosphere 5 Kyoto protocol

5 Stratospheric ozone 5 Montreal protocol

4 Tropospheric ozone (photochemical smog) 3 Chlorofluorocarbons (CFCs)

3 Greenhouse effect2 Skin cancer1 Emmisions2 UV light (A, B, C)3 Carbon cycle2 Carbon monoxide

3 Carbon cycle 2 Carbon monoxide 5 Carbon sequestration 2 Carbon dioxide

5 Nitrogen cycle 4 SO2
5 Sulfur cycle 4 NOx
2 Primary pollutant 4 Methane
3 Secondary pollutant 2 Point source
5 Temperature inversion 3 Nonpoint source

5 Acid deposition 4 Lead
5 Radon gas 4 Mercury
5 Asbestos 5 Mesothelioma
3 Asthma 5 Feedback loop

5 Environmental Protection Agency(EPA)
5 Clean air act 1990
5 Negative feedback loop

5 Wet scrubber

Waste Management → 15 Points

4 Lead 5 Comprehensive Environmental and

5 Mercury Response, Compensation, and Liability Act

2 Biodegradable 5 Superfund program

2 Nonbiodegradable 5 Love canal 2 Waste management 3 Brownfields

3 Low waste approach 3 Anaerobic respiration

4 Fee-per-bag 3 Methane
5 Bioremediation 4 Incineration
5 Phytoremediation 2 Landfill

5 Chemoremediation 5 Waste to energy

2 Municipal waste 3 Reduce
2 Industrial waste 2 Reuse
1 Paper 2 Recycle

1 Postconsumer waste 3 Refuse 2 Sanitary landfill 1 Plastic

3 Leachate 4 Bisphenol A – (BPA)

5 Resource Conservation and Recovery Act

(RCRA)

3 Contamination
3 Hazardous waste

3 E waste