APES FRQ TOPIC SUMMARY

1998
1: math, energy BTU dishwasher
2: nuclear power article; unlabeled diagram to interpret
3: pH tolerance of fish; diagram interpretation; lake acidification
4: map; preservation of a wooded area for birds; relevant laws

1999
1: pond; water quality; design exp, indicator species
2: developed vs. developing per capita; sustainability; policy
3: air pollutants graph
4: pesticide article analysis

2000
1: math; power plant BTU
2: recycling article
3: extinct/endangered species; biodiversity; relevant laws
4: age pyramids

2001
1: math; energy heating BTU
2: mini-article, food web, design exp
3: air pollutants and effects; sick building syndrome
4: water quality with map sketch; effects; clean water act

2002
1: math; electric cars; policies and benefits
2: water diversion projects
3: water toxicity; graph; LD/ED 50
4: article; El Nino /ENSO and diseases

2003
1: worm invasion article; exotic species
2: math; CBR/CDR graph to fill in
3: estuaries and wetlands; characteristics; human effects
4: endangered species article

2004
1: seafood article; biological magnification; mercury in water
2: math; energy; power plant, coal and wind
3: radioactive waste; storage; properties, effects
4: chemical and physical soil tests; conservation; humus; fertilizers

2005
1: disease article; infectious disease mortality graphs to interpret
2: math; per capita calcs; meat production and consumption; veg diet
3: coal mining; effects, impacts, restoration steps
4: minor math; ANWR (Alaskan National Wildlife Refuge); tundra; petroleum resources

2006
1: solar power systems
2: atmospheric CO_2 graphs and math
3: brownfield
4: graph: fish harvest; commercial fishing

2007
1: sewage treatment article
2: math – home water and energy use
3: destruction of stratospheric ozone
4: outdoor air pollution and temperature

2008
1: math - biodiesel
2: math – landfill & leachate
3: forests – fires, clear-cutting, etc.
4: Total Fertility Rate graph/chart

2009
1: nitrogen issues: nitrogen cycle, fertilizers, smog
2: math - methane digesters and electricity
3: water diversion - Colorado river, climate change effects
4: genetically modified crops – graph interpretation

2010
1: toxic chemicals; NO_x/SO_x
2: math; termites in rainforest
3: invasive species
4: math; estuaries, sea level and temp.

2011
1: boom and bust
2: coral reef with graph
3: electricity/power with graph
4: agriculture with graph

2012
1: natural gas/fossil fuels; vs. nuclear
2: math; alternative energy; forest data
3: pesticides/IPM
4: wetlands; food web

2013
1: article; nutrients in water body
2: math; electric vehicles vs. standard; CO_2
3: ozone; Montreal Protocol
4: biodiversity

2014
1: article; nuclear power plant
2: math; sewage and storm water runoff
3: plate tectonics; succession
4: biogeochemical cycles

2015
1: Everglades restoration: climate change, water quality, phosphorus cycle
2: math; electronic waste (e-waste)
3: oil spills with graph
4: urban sprawl with graph

2016
1: article; diseases; effects on populations and ecosystems
2: math; mining
3: MSW/landfills with graph
4: soil formation; impact of human activities on soil and water

2017
1.article – microplastic aquatic pollution
2. population – conservation; graph; math
3. deforestation; developed vs. developing countries
4. dams

2018
1. article – carbon footprint, green living
2. math – wind farm
3. food web diagram; Arctic issues
4. biomass; air pollution

2019
1. threatened species; map; coastal issues
2. math; oil sands, forests
3. math; graph, CO_2 concentrations, pH
4. math; graph; national parks; air pollution

NEW FORMAT after 2020

2020
questions incorporated into AP Classroom

2021 set 1
1. experiment: PV cells
2. hydroelectric power
3. pesticides

2021 set 2
1: experiment; soil; graph
2: biodiversity
3: math; coal power; PM

2022 set 1
1: map; turtles and aquatic mercury pollution
2: graph; fracking and methane in drinking water
3: math; urban heat islands; solar power

2022 set 2
1: map; aquatic dead zone; water quality
2: graph; island biogeography
3: island biogeography; invasive species; ecosystem services

2023 set 1
1: GMO
2: map; manatee, power plant wastewater; seagrass; photochemical smog; hydrogen fuel cells
3: crude oil; extraction

2023 set 2
1: mining; graph
2: introduced species; map
3: landfills

2024 set 1
1: water DO and BOD
2: global warming and animal protein consumption
3: math; nuclear power plant and fossil fuels

2024 set 2
1: ecological succession and soil changes; tree removal and water quality
2: graph; land use changes
3: math; desert water issues