AP FR practice

Folks, please review these Free Response questions from 2024 and 2023.

Look for the following:

- notice how the depth of each question increases with each section
- notice what subjects are combined into one question
- note how they are graded-see me for grading standards
- look over correct responses:
  - how detailed are they?
  - how much time should I spend on each one?
  - how important is it that I re-read the question before moving on?

Free response sample question folder

Link to folder

APES FR notes

Know the Exam Structure

• **FRQs = 40%** of your score.

• 3 questions:

1. **Design an Investigation**
2. **Analyze an Environmental Problem and Propose a Solution**
3. **Synthesize Information from Multiple Topics**

Master Key Content Areas

Review the most tested topics:

• Biogeochemical cycles (carbon, nitrogen, phosphorus)
• Energy flow and trophic levels
• Climate change and greenhouse gases

• Pollution types and sources
• Population dynamics
• Sustainability and land use

Use **AP Classroom**, **Barron's**, **Princeton Review**, or **Fiveable** for focused study.

Practice Free Response Questions

• Use **past FRQs from College Board** (linked below).
• Time yourself (22 minutes per question).
• Use the **APES scoring guidelines** to self-grade and understand how points are awarded.
• Practice writing clearly and concisely—no fluff, just facts.

Past FRQs and Scoring Guidelines – APES

Use the CER Framework

When writing responses, structure them as:

• **Claim**: Make a direct, factual statement.

• **Evidence**: Use data or facts from the prompt.

• **Reasoning**: Explain how the evidence supports the claim.

Example:

Claim*: A decrease in biodiversity negatively impacts ecosystem stability.*

Evidence*: Loss of pollinators like bees leads to reduced crop yields.*

Reasoning*: With fewer pollinators, plants fail to reproduce, leading to food shortages in the ecosystem.*

Show All Math Clearly

• For any math-based questions:

• Show all **units**

• Write out the **formula**

• Plug in numbers before solving

• **Box the final answer (easier for the grader)**

Use Specific Vocabulary

• Say *“nitrate runoff causes eutrophication”* instead of *“pollution is bad”*.

• Environmental science is full of key terms—**use them confidently and accurately**.

Memorize Key Examples

Have 1–2 examples ready for common themes:

• **Case studies**: BP oil spill, Three Gorges Dam, Aral Sea, Chesapeake Bay

• **Laws**: Clean Air Act, Endangered Species Act, Clean water act

• **Solutions**: Renewable energy types, conservation techniques, population control

Analyze Graphs and Data

• Practice interpreting graphs, reading axes (x and y, not the kind you throw), and describing trends.

• Use terms like *“increase,” “fluctuate,” “plateau,”* and always **relate data back to environmental concepts**.

FOR MATH/CALCULATIONS

- - Show your setup (formula)
- - Include units in all steps
- - Circle or box your final answer

Example:

Formula: Rate = Quantity / Time

Work: (1000 kg - 500 kg) / 5 years = 100 kg/year

Answer: 100 kg/year

COMMON TOPICS & VOCABULARY TO USE

- Biodiversity: Genetic diversity, ecosystem services, habitat fragmentation
- Pollution: Point vs. nonpoint, bioaccumulation, thermal, noise
- Climate: Greenhouse gases, carbon sinks, feedback loops
- Energy: Renewable, nonrenewable, efficiency, EROI
- Water: Aquifers, eutrophication, water tableWaste: Landfill, leachate, incineration, recycling
- Agriculture: Monoculture, IPM, soil salinization, GMOs

KEY LAWS & CASE STUDIES

- Clean Air Act Regulates air pollutants
- Clean Water Act Maintains water quality
- Endangered Species Act Protects threatened species
- CERCLA (Superfund) Cleans hazardous sites

Case Studies:

- BP Oil Spill Marine pollution
- Three Gorges Dam Hydroelectric power & habitat loss
- Aral Sea Water diversion, ecosystem collapse

FOR GRAPH/DATA QUESTIONS

- Describe trend (increase, decrease, plateau)
- Use data values or years
- Explain why the trend happens (link to concept)

PHRASES THAT SCORE POINTS

- "This causes a decrease in biodiversity because..."
- "This is a sustainable practice because it reduces..."
- "This leads to eutrophication due to increased nutrient runoff..."

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