

GED Ready™: The Official Practice Test - Science Short Answer Prompts and Source Texts

The enclosed source materials are drawn directly from the Short Answer (SA) tasks on GED Ready™ - Science. In those SA tasks, students are asked to answer questions in their own words based on these source materials. We provide these source texts so that you may refer to them as your score your students' responses.

Use these source texts in conjunction with other Science SA scoring resources for educators, including the:

- Educator Scoring Tool for GED Ready™ - Science
- Short Answer Resource Guide for Educators - Science

Both tools are available at: <http://www.gedtestingservice.com/2014testresources>.

Things to keep in mind when using these materials:

1. The stimulus materials for both the A and B versions of GED Ready™ - Science are included. You can determine which version of the test your students took by reviewing their written responses.
2. Students' written responses are available in each student's Enhanced Score Report under the "Review My Written Answers" section. Ask each student to print out his or her score report and give you a copy, which you can then use to score the response.
3. Only use these source texts for the purpose of scoring student GED Ready™ responses. If you give students these source texts before taking GED Ready™, it may compromise the accuracy of their scores and the ability of the GED Ready™ to predict their scores on the operational GED® test.

IMPORTANT!

Before using these materials you must visit

<http://www.gedtestingservice.com/stimulus-opt-in> to review and accept the terms of use.

Stimulus Material: GED Ready™ - Science Version A
Wind Energy

Coal is a fossil fuel commonly used to generate electricity. In the United States, coal accounts for about 45% of the electricity generated. Worldwide, about 40% of electricity is generated from coal. Experts estimate that there is enough coal to provide energy for at least 100 years.

Power plants convert coal into electricity. In a coal-burning power plant, the coal is burned and the released heat converts water into steam. The steam drives a turbine, which turns an electric generator. The electricity flows through wires to the transmission grid where it can be delivered to customers or stored for later use.

Burning coal has negative environmental impacts. Coal consists primarily of carbon and can contain impurities, such as nitrogen and sulfur. When coal is burned, products such as carbon dioxide, sulfur dioxide, and nitrogen oxides are released into the atmosphere. Acid precipitation and increased levels of carbon dioxide in the atmosphere are sometimes linked to burning fossil fuels like coal.

Renewable energy alternatives account for about 10% of the electricity generated in the United States. Renewable energy use is expected to steadily increase over the next few decades.

Differences Between Various Energy Sources

Fuel Type	CO₂ Emissions per kWh	Power Availability	Ongoing Fuel Costs	Other Environmental Impact
Coal	About 200 pounds	24x7, 365 days per year	Yes	Strip mining & groundwater contamination Airborne mercury contamination Non-renewable fuel source
Natural Gas	About 130 pounds	24x7, 365 days per year	Yes	Non-renewable fuel source
Nuclear	Zero	24x7, 365 days per year	Yes	Extremely dangerous toxic waste Non-renewable fuel source
Wind	Zero	Varies directly with wind speed	No	Potential bird kill Highly visible Noise issues
Solar	Zero	Daytime only, affected by clouds	No	High energy used in manufacture Toxic silicon tetrachloride waste
Water (Reservoir Hydropower)	Zero	24x7, affected by seasonal precipitation	No	Flooding behind dam Impact on fish migration (if not mitigated)
Water (Streaming Hydropower)	Zero	24x7, affected by seasonal precipitation	No	Reduction in stream water flow

Prompt

Cite multiple pieces of data from the table that support why wind energy would be a preferred energy source over coal. Explain how a significant increase in the use of wind energy would affect the energy supply of coal.

Type your response in the box. This task may require approximately 10 minutes to complete.

**Stimulus Material: GED Ready™ - Science Version B
Solubility Experimental Design**

A researcher wants to test the solubility (property of being dissolved) of salt in water as the temperature of the water increases.

Materials: salt, water, beakers, heat source, thermometer, balance

Prompt

Design an experiment to test his hypothesis that as the water temperature increases the solubility of the salt in the water also increases. Include the following in your experimental design: experimental setup, procedure for data collection methods, and criteria for evaluating the hypothesis.

Type your response in the box. This task may require approximately 10 minutes to complete.