

Curriculum Aligned Competency Based Test Items

Science

Class 8 – Chapter 5

Coal and Petroleum

The table shows two groups of natural resources.

| Group 1 | Group 2 |
|----------------------|------------------------------|
| Air, Sunlight, Water | Coal, Petroleum, Natural gas |

SAS21S080501

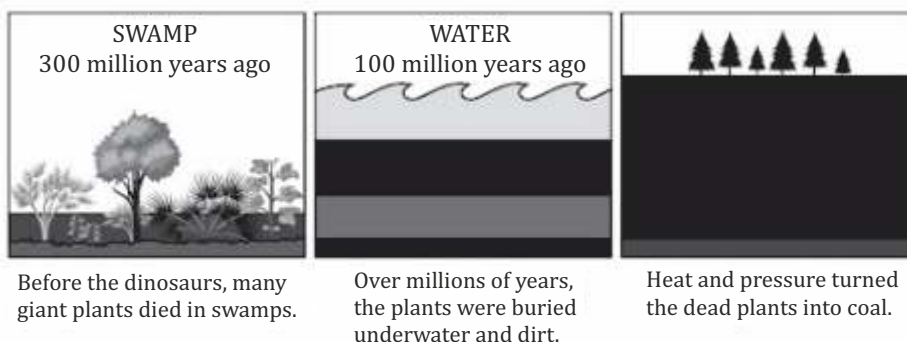
1 How is group 1 different from group 2?

| | Group 1 | Group 2 |
|----|--|-----------------------------------|
| A. | Cannot be used as energy sources | Can be used as energy sources |
| B. | Will not exhaust even if used continuously | Will exhaust if used continuously |
| C. | Take thousands of years to form | Take millions of years to form |
| D. | Contain high percentages of carbon | Contain low percentages of carbon |

SAS21S080502

2 Which resource in group 2 will cause the least amount of air pollution on burning?

The table shows two groups of natural resources.



SAS21S080503

- 3 Which of these statements is true about coal?
Circle 'Yes' or 'No' for the correct response.

| Is this true about coal? | Yes or No |
|---|-----------|
| Dirt makes up a large part of coal. | Yes/No |
| Coal is produced from plant fossils. | Yes/No |
| Formation of coal requires heat and pressure. | Yes/No |

SAS21S080504

- 4 Where is a coal reserve most likely to be found?

- A. Inside volcanoes
- B. Beneath glaciers
- C. On ocean floors
- D. Under land surfaces

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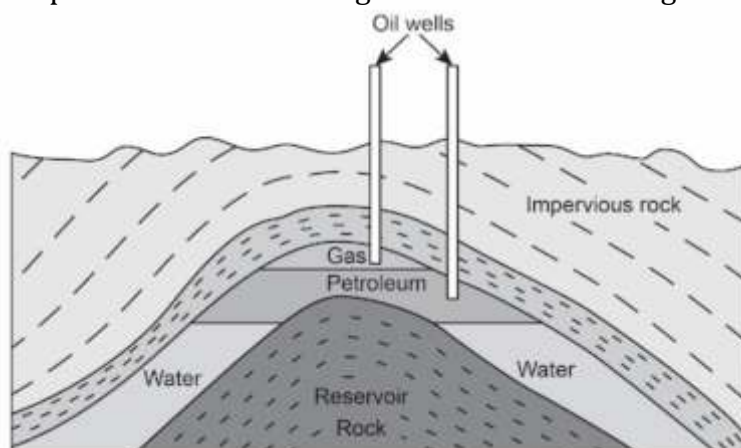
- 5 Which gas is **mainly** emitted during the combustion of coal?

SAS21S080506

- 6 Coke is a product obtained by the processing of coal.
Which of these is a by-product of making coke?

- A. Coal tar
- B. Bitumen
- C. Coal gas
- D. Kerosene

The picture shows how petroleum and natural gas are extracted through oil wells



SAS21S080507

- 7** Which of the following statements are supported by the picture?
Circle 'Yes' or 'No' for the correct response.

| Is this statement supported by the picture? | Yes or No |
|---|-----------|
| Petroleum is insoluble in water. | Yes/No |
| Natural gas is denser than petroleum. | Yes/No |
| Petroleum and natural gas deposits are found under rock layers. | Yes/No |

SAS21S080508

- 8** Which of these conditions is required for the formation of natural gas?

- A. Low pressure
- B. Presence of air
- C. High temperature
- D. Presence of water

SAS21S080509

- 9** Which of these petroleum products is used for heavy motor vehicles?

- A. LPG
- B. Diesel
- C. Petrol
- D. Kerosene

SAS21S080510

- 10** What is the advantage of using CNG instead of petrol in light motor vehicles?

- A. It can be stored easily
- B. It can be extracted easily
- C. It causes less air pollution
- D. It releases more energy on combustion

Answers

Science
Class 8 – Chapter 5

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|---------------------------------|---|
| Item Number | |
| Question Code | SAS21S080501 |
| Grade & Unit Name | Grade 8 Coal and Petroleum |
| Concept Sub-concept | Earth Sciences Types of Natural Resources |
| Competency | Explaining Phenomena Scientifically |
| Item Type | Multiple Choice Question |
| Full Credit (Full Score) | B. Will not exhaust even if used continuously/will exhaust if used continuously |
| No Credit (No Score) | Any other response or missing response |

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|---------------------------------|--|
| Item Number | Question 2 |
| Question Code | SAS21S080502 |
| Grade & Unit Name | Grade 8 Coal and Petroleum |
| Concept Sub-concept | Earth Sciences Exhaustible Natural Resources |
| Competency | Explaining Phenomena Scientifically |
| Item Type | Constructed Response |
| Full Credit (Full Score) | Mentions natural gas as the response |
| No Credit (No Score) | Any other response or missing response |

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|---------------------------------|---|
| Item Number | Question 3 |
| Question Code | SAS21S080503 |
| Grade & Unit Name | Grade 8 Coal and Petroleum |
| Concept Sub-concept | Earth Sciences Coal Formation |
| Competency | Interpreting Data and Evidence Scientifically |
| Item Type | Complex Multiple Choice Question |
| Full Credit (Full Score) | No Yes Yes |
| No Credit (No Score) | Any other response or missing response |

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|---------------------------------|--|
| Item Number | Question 4 |
| Question Code | SAS21S080504 |
| Grade & Unit Name | Grade 8 Coal and Petroleum |
| Concept Sub-concept | Earth Sciences Coal Formation |
| Competency | Explaining Phenomena Scientifically |
| Item Type | Multiple Choice Question |
| Full Credit (Full Score) | D. Under land surfaces |
| No Credit (No Score) | Any other response or missing response |

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|---------------------------------|--|
| Item Number | Question 5 |
| Question Code | SAS21S080505 |
| Grade & Unit Name | Grade 8 Coal and Petroleum |
| Concept Sub-concept | Earth Sciences Combustion of Coal |
| Competency | Explaining Phenomena Scientifically |
| Item Type | Constructed Response |
| Full Credit (Full Score) | Mentions carbon dioxide as the response. |
| No Credit (No Score) | Any other response or missing response |

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| Item Number | Question 6 |
| Question Code | SAS21S080506 |
| Grade & Unit Name | Grade 8 Coal and Petroleum |
| Concept Sub-concept | Earth Sciences Coal |
| Competency | Explaining Phenomena Scientifically |
| Item Type | Multiple Choice Question |
| Full Credit (Full Score) | C. Coal gas |
| No Credit (No Score) | Any other response or missing response |

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|---------------------------------|---|
| Item Number | Question 7 |
| Question Code | SAS21S080507 |
| Grade & Unit Name | Grade 8 Coal and Petroleum |
| Concept Sub-concept | Earth Sciences Petroleum and Natural Gas Deposits |
| Competency | Interpreting Data and Evidence Scientifically |
| Item Type | Complex Multiple Choice Question |
| Full Credit (Full Score) | Yes No Yes |
| No Credit (No Score) | Any other response or missing response |

| | |
|---------------------------------|---|
| Item Number | Question 8 |
| Question Code | SAS21S080508 |
| Grade & Unit Name | Grade 8 Coal and Petroleum |
| Concept Sub-concept | Earth Sciences Petroleum and Natural Gas Deposits |
| Competency | Explaining Phenomena Scientifically |
| Item Type | Multiple Choice Question |
| Full Credit (Full Score) | C. High temperature |
| No Credit (No Score) | Any other response or missing response |

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|---------------------------------|--|
| Item Number | Question 9 |
| Question Code | SAS21S080509 |
| Grade & Unit Name | Grade 8 Coal and Petroleum |
| Concept Sub-concept | Earth Sciences Various Constituents of Petroleum |
| Competency | Explaining Phenomena Scientifically |
| Item Type | Multiple Choice Question |
| Full Credit (Full Score) | B. Diesel |
| No Credit (No Score) | Any other response or missing response |

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|---------------------------------|--|
| Item Number | Question 10 |
| Question Code | SAS21S080510 |
| Grade & Unit Name | Grade 8 Coal and Petroleum |
| Concept Sub-concept | Earth Sciences Natural Gas |
| Competency | Explaining Phenomena Scientifically |
| Item Type | Multiple Choice Question |
| Full Credit (Full Score) | C. It causes less air pollution. |
| No Credit (No Score) | Any other response or missing response |