



**Subject:** Grade 7 Natural Sciences

**Topic:** Sources and types of energy

**Total:** 40 Marks

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1. C: nuclear energy 4 marks

**Explanation:**

Electricity, which is a secondary source of energy, is generated for Cape Town at the Koeberg Nuclear Power Station.

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2. lead | rainfall | earthquakes 6 marks

**Explanation:**

Should there be an explosion and the containers are destroyed, the waste should not be able to contaminate the water and environment.

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3. uranium 3 marks

**Explanation:**

During nuclear fission, in a nuclear power station, the nuclear atoms are SPLIT releasing enormous amounts of energy as heat.

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4. D: Boiled egg, 316 000 J 4 marks

**Explanation:**

The egg contains  $316\,000 \div 1\,000 = 316$  kJ.

The bread contains  $205 \times 2 = 410$  kJ.

One table spoon of cheese contains  $212\,300 \div 1\,000 = 212,3$  kJ. The total value for the cheese is therefore  $212,3 \times 2 = 424,6$  kJ.

The banana contains 475 kJ.

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5. true 2 marks

**Explanation:**

Much land has to be cleared and flooded. This means that many people have to move from their homes.

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6. B: fire 4 marks

**Explanation:**

The nomads used fire for cooking food and keeping warm.

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7. true 2 marks

**Explanation:**

Kinetic energy is defined as the energy that a body has when it is moving.

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8. C: food 4 marks

**Explanation:**

Food provides us with WARMTH and the ENERGY for our organs to work, even though we are asleep.

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9. Coal | coal 3 marks

**Explanation:**

Thomas Savery and Thomas Newcomen invented the ORIGINAL steam engine.

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10. batteries | coal | food | paraffin 8 marks

**Explanation:**

A chemical reaction inside a battery can produce electrical energy. Coal and paraffin are fuels that can undergo chemical reactions to release heat and light. Chemical reactions inside an animal's body change food to other forms of energy.

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