

North Sea Link Energy Education Centre

GCSE Questions



Q1.

State two advantages of generating electricity using nuclear power stations. [2 marks]

Advantages (any two from) Produces no polluting gases. Does not contribute to global warming. Very low fuel costs. Low fuel quantity reduces mining and transportation effects on environment. Power stations have a long lifetime.



Q2.

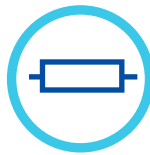
State two environmental issues caused by generating electricity using nuclear power stations. [2 marks]

Disadvantages (any two from) Waste is radioactive and safe/correct disposal is costly. Local thermal pollution from wastewater can impact marine life. Large-scale accidents can be catastrophic. Public perception is very negative. Costs of safely building and decommissioning are very high. Cannot react quickly to changes in electricity demand.



Q3.

What is the correct circuit symbol for a fuse?

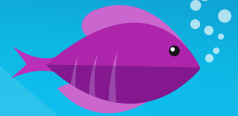


Q4.

Coal is a non-renewable energy resource. Name two other non-renewable energy resources. [2 marks]

(any two from): Nuclear, oil, gas





Q5.

Electrical power is transferred from power stations to the National Grid. What is the National Grid? Circle one.



A system of cables and pylons.



A system of cables and transformers.



A system of cables, transformers and power stations.



Q6.

An island has a large number of wind turbines and a coal-fired power station. The island needs to use the electricity generated by the coal-fired power station at certain times. Choose one reason why.



Wind is a renewable energy resource.



Wind turbine power output is constant.



The power output of wind turbines is unpredictable.



The fuel cost for wind turbines is very high.



Q7.

It is important that scientists develop new energy resources. Choose one reason why. Circle one.



All energy resources are running out.

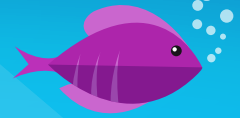


All energy resources are used to generate electricity.



Most energy resources have negative environmental effects.





Q8.

Match the descriptions with the correct energy source.

biofuel

coal

geothermal

nuclear

waves

geothermal

nuclear

biofuel

Energy from the Earth's core is used to heat water.

Fission of uranium nuclei is used to heat water.

Gases from rotting plant material are burned to heat water.



Q9.

Use the correct answer from the box to fill in the blank spaces below. [3 marks]

Chemical | Electrical | Kinetic | Nuclear | Sound | Wind | Turbine

1

A battery stores Chemical energy which is transferred into electrical energy.

2

An electric motor transfers electrical energy usefully into Kinetic energy.

3

A motor wastes energy as Sound energy and as energy that heats the surroundings.



Q10.

Which of these is a non-renewable source of energy?



Geothermal.



Natural gas.

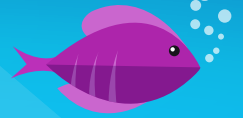


Tidal.

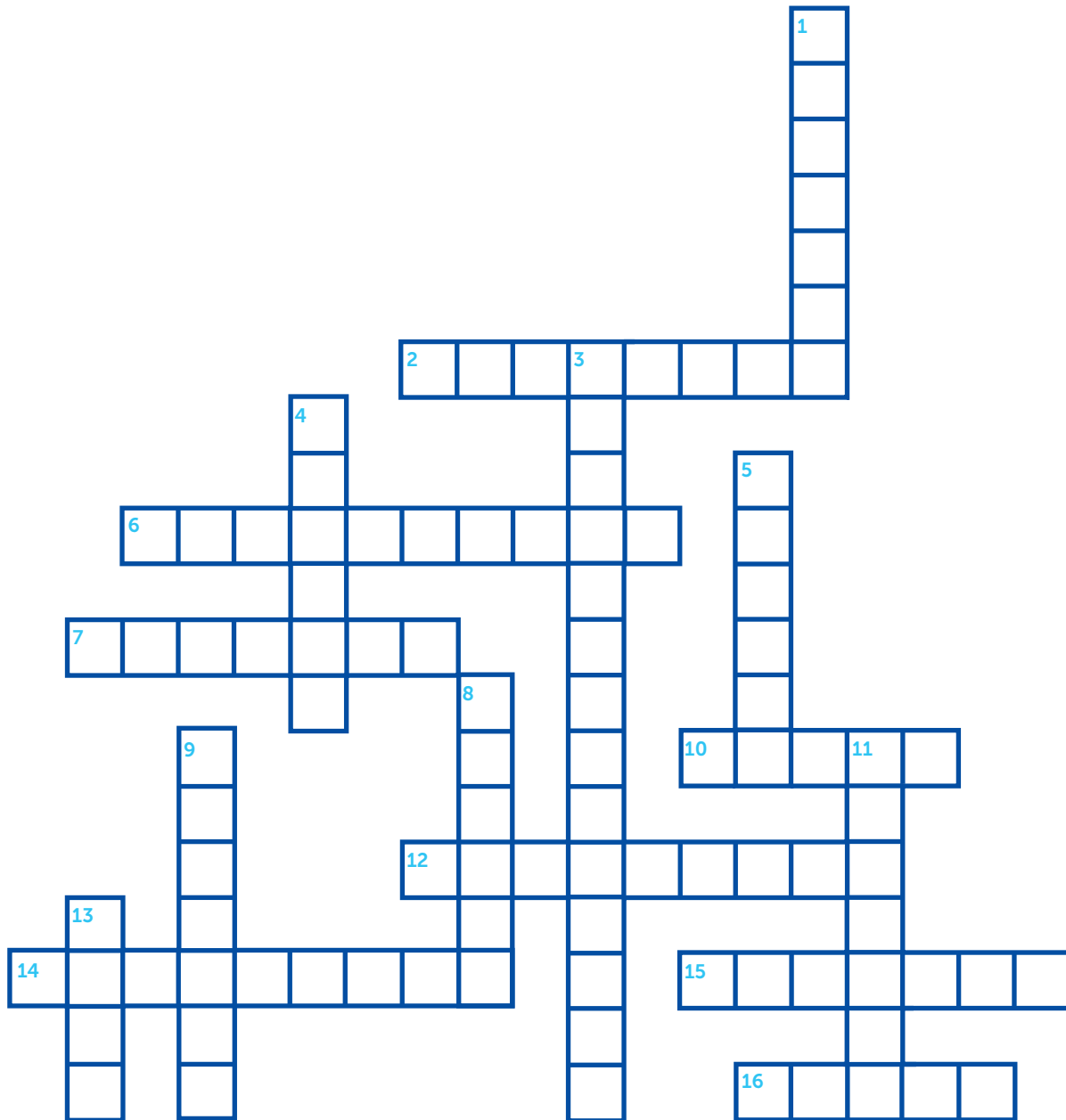


Solar.



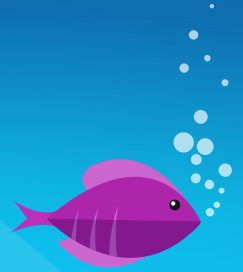


Energy crossword



Energy Education Centre

GCSE Questions



Energy crossword

Across

2. A person who designs safe and efficient energy systems
6. A type of energy formed by the movement of water
7. Rotting garbage produces this type of gas
10. The UK North Sea Link site is located in
12. Energy that can be replenished is
14. Used to measure electricity
15. The average weather measurements over a long period of time
16. Power from the sun

Down

1. Energy released during fission or fusion, used mostly to generate electricity
3. Links the electricity grids of two countries, allowing both to share energy
4. North Sea Link connects the UK to
5. Fuels include coal and oil
8. Solar can be used to heat up water
9. The use of organic matter combusting to create energy
11. Heat energy is also known as energy
13. A metal pollutant that is generated from coal use

NorthSeaLink

