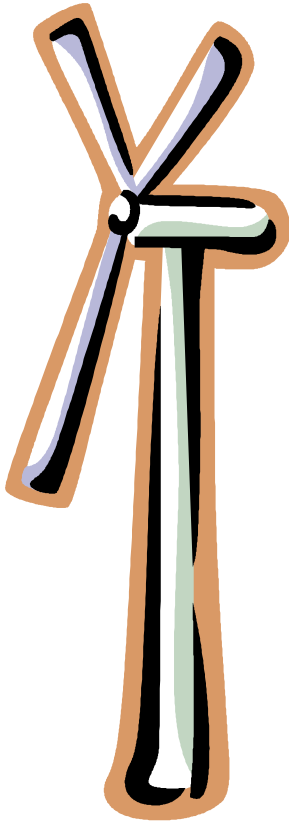


Generating Electricity



Learning Objective:

We are learning to compare and contrast the particular advantages and disadvantages of using different energy sources to generate electricity.

Learning Outcomes:

What I am looking for:

- You must be able to identify a method of generating electricity as coming from a renewable or non-renewable source.
- You should be able to explain the advantage of renewable energy sources over non-renewable energy sources to generate electricity.
- You might be able to evaluate which method of electricity generation is most suitable to a certain location or need.

Generating Electricity

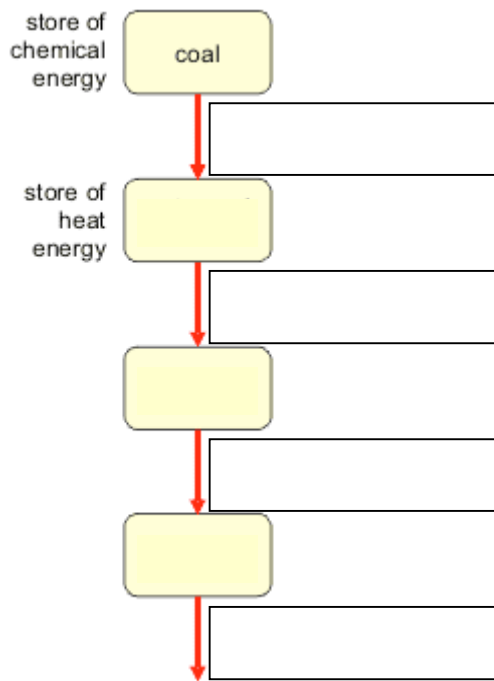
Electricity is a very convenient form of energy that can be generated using different energy resources. Some of these resources are renewable and some are non-renewable. Each resource has advantages and disadvantages. You will be researching 6 different types of fuels and comparing the advantages and disadvantages of each.

1. **Fossil fuels**
2. **Nuclear fuels**
3. **Wind energy**
4. **Water energy**
5. **Geothermal energy**
6. **Solar energy**

1. Fossil Fuels

How are fossil fuels made?

Complete the diagram below to show how energy is transferred when generating electricity from fossil fuels.



What are the advantages and disadvantages of fossil fuels?

2. Nuclear Fuels

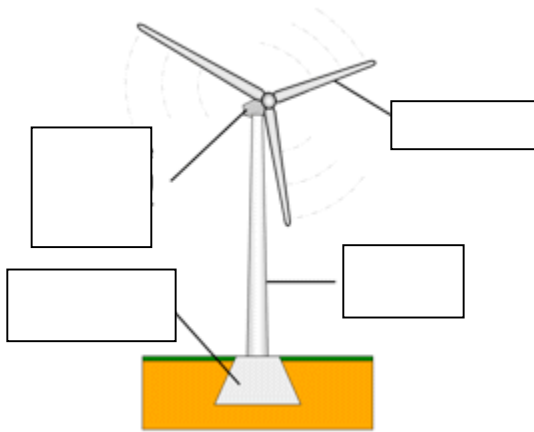
How is electricity generated using nuclear fuels?

What are the advantages and disadvantages of nuclear fuels?

3. Wind Power

How is electricity generated using wind power?

Complete the diagram below.



What are the advantages and disadvantages of wind power?

4. Water Energy

How is electricity generated using wave energy?

How is electricity generated using tidal barrage?

How is electricity generated using HEP (hydro-electric power)?

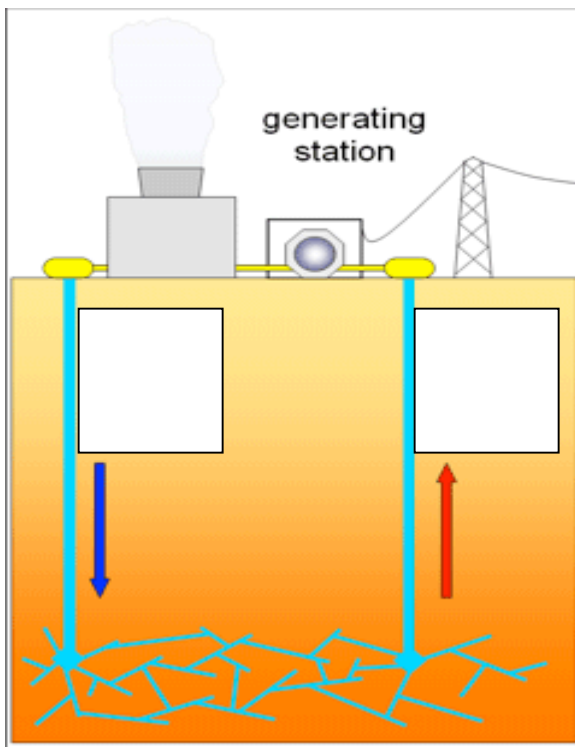
What are the advantages and disadvantages of water energy?

5. Geothermal Energy

How is electricity generated in volcanic areas?

How is this different to areas with hot rocks?

Complete the diagram below.



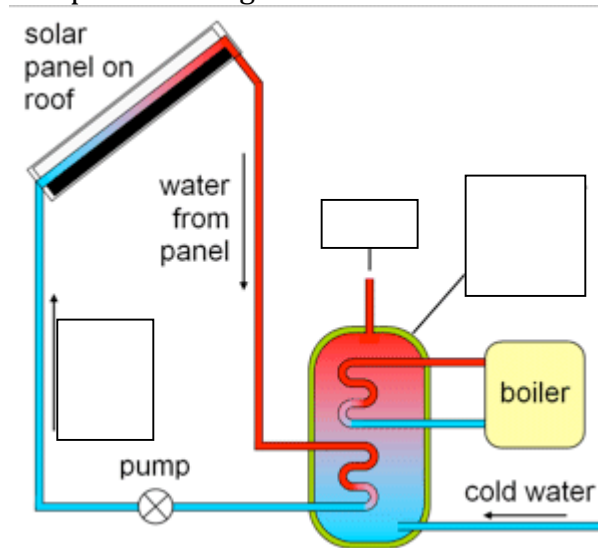
What are the advantages and disadvantages of geothermal energy?

6. Solar Energy

How is electricity generated using Solar panels?

How is this different to areas with solar cells?

Complete the diagram below.



What are the advantages and disadvantages of solar energy?

