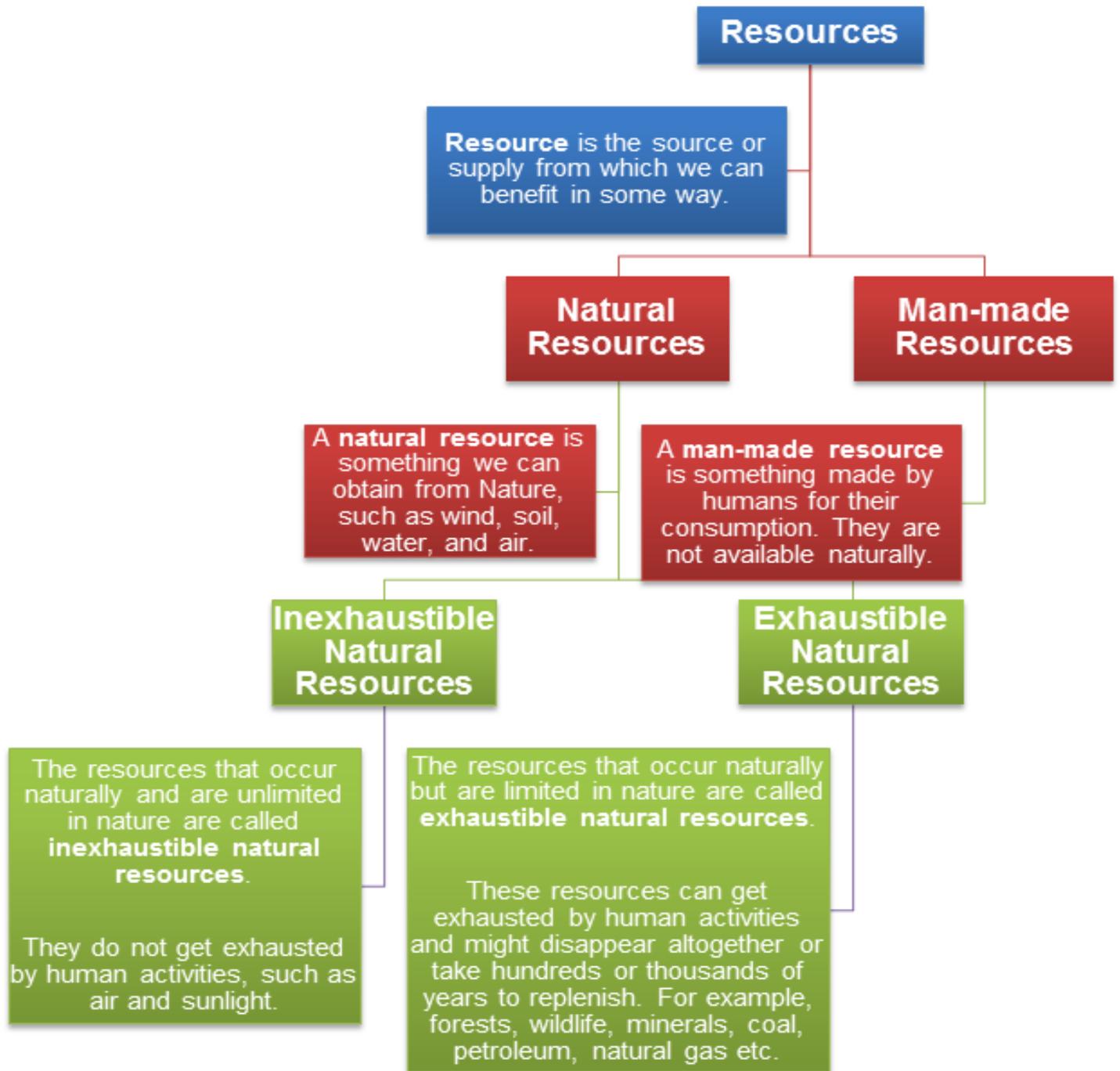


Revision Notes on Coal and Petroleum



Coal, Petroleum and Natural Gas are exhaustible natural resources. They are fossil fuels.

Fossil fuels are fuels that are formed by fossils (or dead remains) of living organisms.

What are fuels?

A fuel is any substance that releases large amounts of energy in the form of heat and light when it is burned. For example, coal and petroleum are fuels.

Fuels can be classified as:

Classification of Fuels	Definition	Examples
Solid Fuels	These fuels exist in a solid state at room temperature	For example, coal, firewood, animal dung cakes, charcoal, coke
Liquid Fuels	These are volatile liquids that produce vapour which burns and produces energy	For example, petrol, diesel, kerosene
Gaseous Fuels	These are the fuels that exist in the form of a gas or as a mixture of different gaseous fuels.	For example, natural gas, biogas, CNG, coal gas

Why do we need fossil fuels?

Fuels are required for different purposes such as:

1. **Transportation:** fuels are used to run different vehicles such as cars, trucks, motorcycles, trains, airplanes etc.
2. **Cooking:** fuels are needed for cooking. For instance, LPG is used in urban areas while firewood, coal and cattle dung is used in rural areas.
3. **Heating:** fuel is also used to generate heat
4. **Electricity production:** different fuels such as coal, petrol, natural gas and diesel are used to generate electricity in power plants
5. **Industrial usage:** many industries use fuels for different purposes such as producing electricity, running their machinery and heating
6. **Rockets and other space vehicles:** fuels called propellants are used in rockets that help in launching the space vehicles

What are the characteristics of a good fuel?

The characteristics of good fuel are:

1. It should be economical.
2. It should be available easily

3. It should not emit poisonous gases on burning
4. It should produce large amounts of heat with respect to its mass (it should have a high calorific value)
5. It should be easy to transport and handle
6. It should not produce a bad odour
7. It should be clean and should not produce many ashes
8. It should not ignite easily at room temperature

Next Topic: Coal