

Energy

Exercise 63:

Solution 1:

The toys start moving either due to the batteries fitted in them or due to the winding of the key.

Solution 2:

The toy stops working because the batteries in the toy might be completely drained or removed, or due to complete unwinding of the key.

Exercise 64:

Solution 1(a):

No.	Name of the object or thing	Energy used for	From where it gets energy
1.	Human being	Walking, running and performing different biological processes	Food
2.	Scooter	Transportation	Petrol
3.	Car	Transportation	Petrol, CNG, Diesel
4.	Tree	Provide food to animals and human beings	Sun
5.	Chulha	To cook food	Firewood
6.	Electric lamp	To get light	Electrical energy
7.	Flag	To flutter in wind	Wind
8.	Tower clock	To show time	Winding or cell mechanism

Exercise 65:

Solution 1(a):

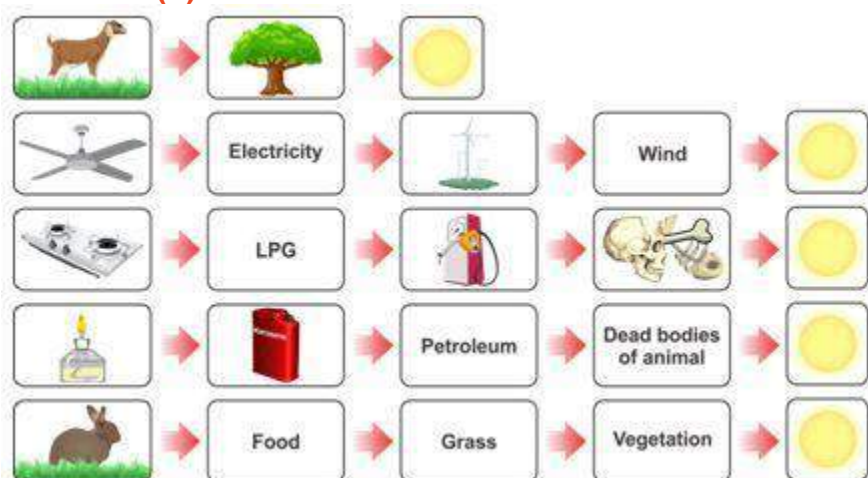
1. Living things get energy from the food they eat.
2. The lantern gets energy from the kerosene used.
3. Windmills run on the wind.
4. The water wheels or turbines rotate using the energy of the flowing water.

Solution 1(b):

We obtain energy from wind, flowing water, solar cell, natural gases, kerosene, petrol, diesel, dung cakes, biogas, wood, coal, etc.

Exercise 66:**Solution 1(a):**

If we don't get energy, we cannot perform our basic activities like walking, running, talking, writing, etc. as well as our domestic duties. All the physiological processes of our body will stop without energy and also the brain will discontinue working. Thus, we cannot live without energy.

Solution 1(b):**Exercise 67:****Solution 1(a):**

The following are the uses of solar energy:

1. It is used in solar cookers to cook food.
2. Solar heaters are used to heat water.
3. It is used for obtaining salt from pools of sea water.
4. Solar energy is used to dry grains.
5. It is used to run street lights by using solar batteries.
6. Solar energy is used to run cars.
7. It is used to run automatic equipments used in artificial satellites.
8. It is also used in solar cells to operate calculators, wristwatches.
9. Solar energy is used to run appliances like light lamps which can be used at night by storing energy in the day time.
10. Solar energy is converted in solar panels to electrical energy and can be used for domestic purposes.

Exercise 68:

Solution 1:

Energy is the capacity to do work. To do work energy is required. The Sun is the main source of energy.

Solution 2:

The following is the list of energy sources:

1. Sun
2. Wind
3. Flowing water or the water stored in the dams
4. Petroleum products like diesel, petrol, kerosene, CNG, LPG
5. Wood
6. Dung cakes
7. Mineral coal
8. Ocean waves

Solution 3:

Source of energy	Name of the object / appliance	Use
Electricity	Fan	To get relief from the hot weather.
Biogas	Stove	It is used to cook food.
Petrol	Scooter or bikes	It is used for transportation.
CNG	Rickshaw	It is used for public transportation.
Kerosene	Lantern	It is used for light
Diesel	Bus	It is used for transportation.

Solution 4:

Petrol: Cars, scooters, bikes and other vehicles run on petrol. So, if there is a decrease in petrol these vehicles could not be used for easy transportation as their use will become expensive. Similarly, transportation of goods will also become expensive

leading to increase in prices.

Diesel: Cars, trucks and diesel trains run on diesel. Transportation of goods will become difficult if there is scarcity of diesel.

Kerosene: People in rural areas where there are poor facilities of electricity will face difficulties for lighting and for cooking food.

Gas: Vehicles which run on gas will become expensive to use. People in cities and some in villages use gas to cook food. Hence with decreased gas, cooking food in houses, restaurants, hotels, dharmashalas, etc. will become expensive.

Solution 5.a:

Sun is the source of energy for plants. All plants use solar energy to prepare their food and grow. Plants give us wood. Hence, the energy associated with wood is obtained from the Sun and can be said to be a form of solar energy.

Solution 5.b:

The Sun is the main source of energy. The energy associated with the plants and animals is the energy given by the Sun. Petroleum is formed by the dead bodies of plants and animals buried millions years ago which undergo a chemical reaction due to the heat and pressure of the Earth. Petrol is one of the constituents of petroleum. Thus, it can be said that the energy obtained from petrol is a form of solar energy.