

NCERT CBSE Solutions for Class 10 Science Chapter 16

Management of Natural Resources

Back of Chapter Questions

1. What changes would you suggest in your home in order to be environment-friendly?

Solution:

We can make our homes environment-friendly by utilizing the resources reasonably and generating less waste. We can follow the five **R**'s to achieve the same-

- (i) **Reduce-** We can reduce the consumption of the following in our house-
- We should reduce the usage of electricity by switching off lights and fans when not in use.
 - We should reduce the usage of water by taking in shorter showers.
 - We should reduce the wastage of water by fixing any leaking taps.
 - We should reduce the use of plastics.
 - We should reduce food waste.
- (ii) **Reuse-** We should reuse plastic or glass packaging containers. We can reuse the water used for washing vegetables for watering the plants. We should also try to reuse old clothes, utensils, etc.
- (iii) **Refuse-** We should say NO to single-use plastic bags or packaging materials as they produce non-biodegradable waste.
- (iv) **Recycle-** We should segregate recyclable wastes from the non-recyclable ones so that new materials can be made using the old ones.
- (v) **Repurpose-** We can create useful products from some wastes such as decorative materials from waste paper, pots from broken utensils, etc.

2. Can you suggest some changes in your school which would make it environment-friendly?

Solution:

Our school can be made environment-friendly by making the following changes

- (i) lights and fans in classes should be **switched off** when not in use.

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- (ii) Dry waste such as paper or plastic waste should be **separated from the wet waste** using different dust bins for these wastes.
 - (iii) More trees can be planted in the field.
 - (iv) Leakage from taps should be fixed.
3. We saw in this chapter that there are four main stakeholders when it comes to forests and wildlife. Which among these should have the authority to decide the management of forest produce? Why do you think so?

Solution:

The wildlife and nature enthusiasts should be given the authority to manage the forest produce as they care about conserving the forest. They also have the required knowledge about the local forests and they do not depend on the forests. They can work closely with the forest department of the government to implement the conservation steps. Other stakeholders such as people living around forests and the industrialists consume forest products. If they are given the authority, it could lead to the exploitation of the forest.

4. How can you as an individual contribute or make a difference to the management of
- (a) forests and wildlife
 - (b) water resources and
 - (c) coal and petroleum?

Solution:

We can contribute individually to manage the resources in the following ways-

(a) Forests and wildlife-

- (i) We should protest against deforestation and poaching of wild animals.
- (ii) We should work towards developing more efficient agricultural practices which can prevent clearing of forests for agricultural use.
- (iii) We should use the forest produce such as paper wisely and avoid their wastage.

(b) Water resources-

- (i) We must fix the leaking taps or pipes and use water cautiously.
- (ii) We should try to conserve and use rainwater.

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(iii) We should reuse water and ensure proper disposal of sewage.

(c) Coal and petroleum-

(i) We should limit the use of petrol or diesel by avoiding unnecessary travel and by using public transport or car-pool.

(ii) We should switch to alternative energy sources such as CNG for vehicles instead of petrol or diesel and LPG for cooking instead of coal.

(iii) We should use solar energy as much as possible, such as for outdoor lighting, heating of water, etc.

5. What can you as an individual do to reduce your consumption of the various natural resources?

Solution:

We can take the following measures to reduce the consumption of natural resources:

(i) We must avoid the wastage of natural resources.

(ii) We should reuse forest products such as paper by recycling them to reduce the cutting down of trees.

(iii) We should practice rainwater harvesting so that we can reduce the usage of groundwater.

(iv) We should practice car-pooling and encourage the use of public transport to limit the use of petrol and diesel.

(v) We should use alternative sources of energy such as wind energy, hydro-energy, and solar energy.

6. List five things you have done over the last week to —

(a) Conserve our natural resources.

(b) Increase the pressure on our natural resources.

Solution:

(a) In the last week, I did the following things to conserve our natural resources-

(i) Turned off lights, fans, and other electronic equipment when not in use.

(ii) Used less water and avoided its wastage while brushing, bathing and performing other activities which consume water.

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- (iii) Created useful products such as a pen stand using waste paper.
 - (iv) Segregated biodegradable and non-biodegradable wastes into separate bins.
 - (v) Planted new trees in my garden.
 - (iv) Avoided food wastage.
- (b) In the last week, I did the following activities which increased pressure on the natural resources:
- (i) Took printouts of some content which I could have read on my computer.
 - (ii) Used plastic bags for carrying goods.
 - (iii) Used vacuum to clean my house.
 - (iv) Commuted to school in my car.

7. On the basis of the issues raised in this chapter, what changes would you incorporate in your lifestyle in a move towards sustainable use of our resources?

Solution:

I will incorporate the following changes in my lifestyle-

- (i) Use of a bicycle to commute to school.
- (ii) Limit the use of electronic equipment which consumes more electricity such as air conditioners, vacuum, heaters, etc.
- (iii) Use of solar-powered geysers for heating water during winters.
- (iv) Walking to nearby places and using public transport more often.
- (v) Spread awareness about the need for saving our natural resources.



In between Chapter questions

1. What changes can you make in your habits to become more environment-friendly?

Solution:

We can incorporate the 5R's of environmental protection in our daily habits to become more environment-friendly, such as:

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- (a) By reducing the consumption of our resources:
 - (i) Using less water and avoiding its wastage while brushing, bathing and performing other activities which consume water.
 - (ii) Reducing the usage of fossil fuels by walking or cycling to nearby places and using public transport more often.
 - (iii) Limiting the use of electronic equipment which consumes more electricity such as air conditioners, vacuum, heaters, etc.
- (b) By reusing water and waste materials such as plastic or glass containers to reduce waste generation.
- (c) By segregating wastes into different bins so that they can be sent for recycling.
- (d) By saying NO to single-use plastic bags or packaging materials as they produce non-biodegradable waste.
- (e) By creating useful products from some wastes such as decorative materials from waste paper, pots from broken utensils, etc.

2. What would be the advantages of exploiting resources with short-term aims?

Solution:

Exploiting resources with short-term aims would benefit the present generation in the following ways-

- (i) It would help fulfill the basic needs such as food, water, and shelter, of everyone.
- (ii) It would encourage rapid economic growth through development and industrialization.

However, such exploitation of these resources will eventually lead to its exhaustion. This will deprive future generations of the benefits of these resources.

3. How would these advantages differ from the advantages of using a long-term perspective in managing our resources?

Solution:

Exploiting resources with short-term aims benefits only the present generation as they utilize the resources for their growth and development. However, sustainable use of resources with long term aims allows the present as well as future generations to utilize the resources for fulfilling their needs. This also ensures a continued supply of resources.

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Thus, in the interest of our future generations, we must use the resources with long-term goals.

4. Why do you think there should be equitable distribution of resources? What forces would be working against an equitable distribution of our resources?

Solution:

Equitable distribution of resources would ensure that everyone would be able to access and utilize the resources for their benefit.

The following forces would work against an equitable distribution of resources:

- (i) Geographical and climatic factors such as rainfall distribution and soil type.
- (ii) Economic factors such as the influence of rich and powerful people.

5. Why should we conserve forests and wildlife?

Solution:

Forests are biodiversity hotspots. Thus, it is necessary to conserve forests and wildlife in order to conserve biodiversity. Conservation of forest resources ensures their continued supply to the current as well as future generations.

6. Suggest some approaches towards the conservation of forests.

Solution:

Following are the useful measures to conserve forests:

- (i) Formation of national parks and wildlife sanctuaries which reduces human intervention.
- (ii) Involving local people in conserving forests.
- (iii) Limiting the destruction of forests for developmental purposes making roads, dams, and hotels, or mining.
- (iv) Driving tree plantations.

7. Find out about the traditional systems of water harvesting/management in your region.

Solution:

The following traditional water harvesting methods are being used in our region:

- Tanks

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- Wells
- Tube wells

8. Compare the above system with the probable systems in hilly/mountainous areas or plains or plateau regions.

Solution:

Being from plains, our traditional water harvesting methods are tanks and wells. In hilly areas, dams and canal irrigation are commonly used.

- Dams are water harvesting structures which are crescent-shaped earthen embankments. They are made up of concrete and can hold huge volumes of river water flowing down the mountains.
- Canal irrigation is also commonly used in hilly regions. A system of canal irrigation called Kulhs is used for water harvesting in Himachal Pradesh. This involves the collection of rainwater in a stream, which is then diverted into man-made channels down the hillsides.

9. Find out the source of water in your region/locality. Is water from this source available to all people living in that area?

Solution:

Groundwater is the main source of water in our region. It is available to all the people living in the area. The municipal corporation also supplies water in our area.

