**26. The Effects of Human Activities**

1

**on Water Resources**

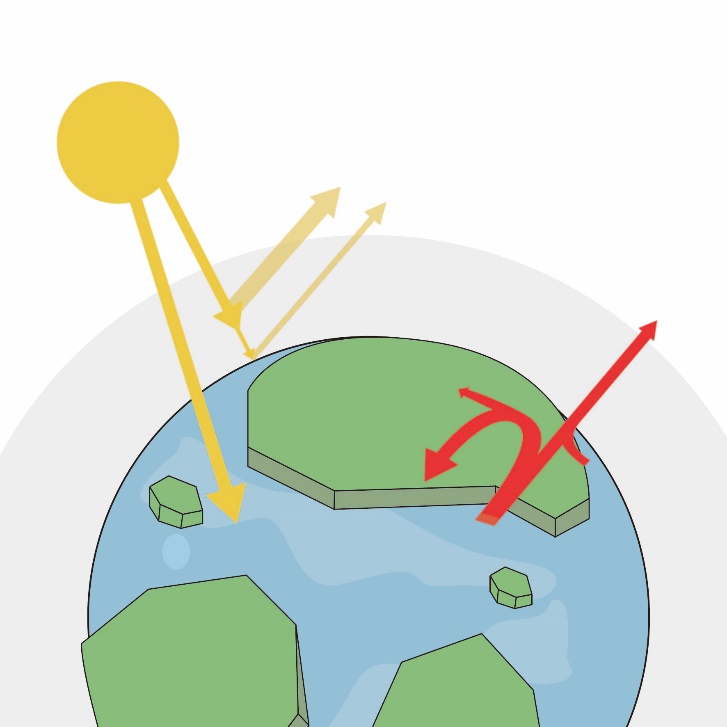
Learning objectives

* Understand the problem of global warming
* Understand the effects of global warming on water resources



Global warming

Global warming leads to the occurrence of extreme weather events. Do you know why is there global warming?



Infra-red radiation emitted from the Earth surface is absorbed by the greenhouse gases in the atmosphere. Then, part of it will pass into the space but part of it will go back to the Earth.

Part of the solar radiation is absorbed by the Earth surface and part of it is reflected back to the space.

Atmosphere

Sun

　　 The heat content at the surface of the Earth is mainly derived from the Sun. When solar radiation reaches the Earth, part of it is reflected back to space by bright surfaces, and part of it heats up the Earth. The Earth's surface emits infra-red radiation to space and the Earth cools. The Earth has a layer of atmosphere. Greenhouse gases in the air such as carbon dioxide, ozone and methane (absorb / reflect) part of the infra-red radiation emitted from the Earth and then re-emit energy in all directions. Part of the infra-red radiation will escape to space but part of it will go back to the Earth, heating up the surface. This is known as greenhouse effect. However, as a large amount of greenhouse gases is emitted from human activites, (more / less) infra-red radiation is reflected back to the Earth surface which (intensifies / reduces ) the greenhouse effect leading to global warming.

Effects of global warming on water resources  
Listed below are some of the effects of global warming on water resources. Write the correct answer on the lines.

1. Frequency of　　　　　　　in some areas increases intensifying the problem of water shortage.
2. Melting of glaciers leads to the rise of　　　　　　　which contaminates the inland surface runoff and groundwater of coastal plains.
3. As alpine glaciers melt, volume of meltwater increases drastically in the earlier which then  
    drmatically and threatens water supply.

P6 - Environment and Living: Survival of the Fittest

**26. The Effects of Human Activities**

2

**on Water Resources**

Learning objectives

* Understand the pollutions to fresh water resources incurred by human activities



Which of the following human activities would intensify global warming which induces problems related to water resources? Study the following pictures and fill in either ✓ or  in the (　　).

|  |  |  |  |
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| Electricity generation by burning of fossil fuels（ ） | Wind power（ ） | Vehicle emissions（ ） | Industrial emissions（ ） |



Sources of fresh water pollution include oil, livestock waste, industrial waste, food waste and plastic etc. They are produced from different human activites. Please connect the pictures of pollutants on top to their main sources.

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|  |  |  |
| --- | --- | --- |
| \\Taiyar\wsd\Primary\02 Lesson Plan + Worksheet\NEW\graphic\ws_21_2_3.jpgOil and industrial wastes | Illegal dumping of plastic waste and food waste | \\Taiyar\wsd\Primary\02 Lesson Plan + Worksheet\NEW\graphic\ws_26_3_1.jpg  Livestock wastes |
| • | • | • |
| • | • | • |
| Agricultural waste | Domestic waste | Industrial waste |

**26. The Effects of Human Activities**

3

**on Water Resources**

Learning objectives

* Understand ways to prevent water pollution



Different parties could contribute to solve the problem of water pollution. Please identify the roles of the Government (A), the business sector (B) and individuals (C) as listed below in solving the problem.

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|  |  |
| --- | --- |
| 1. Use environmental friendly dishwashing detergents for washing dishes. | 1. |
| 1. Regulate illegal dumping of wastewater through legislation. | 2. |
| 1. Do not discharge any untreated wastewater into the stormwater drainage. | 3. |
| 1. Collect domestic sewage and direct it to treatment facilities before disposal | 4. |
| 1. Treat industrial sewage before disposal | 5. |
| 1. Take away all garbage made when going for an outing to prevent them from entering the river. | 6. |
| 1. Recycle wastewater generated from production processes | 7. |

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The problem of water pollution in (developing countries/ developed countries) is especially severe. Water pollution ruins water sources such as groundwater, rivers and lakes. It also induces diseases or may enter the ocean as it flows along the river which threatens marine life.