**WORK FROM HOME**

**INTRODUCTION TO ENVIRONMENT**

* Environment are things around us.
* Another word to mean environment is surroundings.

**Components of the environment**

* Animals - Buildings - Vehicles
* Plants - Land/soil - Birds
* Water bodies - Roads - Insects

**Types of environment**

* Biological environment
* Physical environment

**Biological environment**

* This is the type of environment which consists of living things.

**Components**

* Plants - Insects
* Birds - Animals

**Physical environment**

* This is the type of the environment which consists of non-living things.

**Components**

* Mountains - Land/soil
* Cars/vehicles - Hills
* Valleys - Buildings

**Environmental practices**

* These are activities which people do on the environment.
* They are divided into negative environmental practices and positive environmental practices.

**Positive environmental practices**

* These are activities people do in the environment to protect it against destruction.

**Examples of environmental conservation practices**

* Afforestation
* Proper disposal of wastes
* Recycling of wastes/plastics
* Reforestation
* Bush fallowing
* Practicing good modern farming practices
* Agro-forestry
* Treating of wastes before dumping them in water bodies
* Allowing the operations of national environment bodies

**Recycling**

* Recycling is the process of turning waste material into useful products.

**The 5Rs in proper waste management**

* Reuse
* Recycle
* Reduce
* Reject/Refuse
* Return

**Reuse**

* This means using wastes for other purposes.

**Examples**

* Using a polythene bag more than once.
* Using containers to hold flowers
* Using containers as dust bins

**Negative environmental practices**

* These are practices that lead to the destruction of the natural beauty of the environment.
* They are also called environmental degradation practices.

**Examples of environmental degradation practices**

* Deforestation - Brick laying
* Mining - Industrialization
* Overfishing - Overgrazing
* Over cultivation - Road construction
* Swamp drainage - Poaching
* Uncontrolled bush burning - Settlement
* Use of poor farming methods

**Qn. State any two causes of environmental degradation**

* Over population
* Lightning
* Volcanic eruption
* Unemployment
* Political instability
* Floods wide spread of poverty

**Land degradation**

* Land degradation is the lowering of the quality and productivity of land.

**Ways people misuse/degrade land**

❖Through deforestation

❖By carrying out overgrazing

❖Through over cultivation

❖Through swamp drainage.

❖By dumping non-biodegradable materials on land

❖Through uncontrolled mining

❖Through bush burning

**Land fragmentation**

* Land fragmentation is the division of land into small plots.

**Causes of land fragmentation**

* High population
* Land inheritance
* Land shortage
* Government policy
* Land tenure system

**Dangers of land fragmentation**

* It leads to food shortage
* It hinders agricultural mechanization
* It leads to land conflicts
* It hinders development of infrastructure

**Dangers of environmental degradation**

* It leads to soil erosion
* It leads to soil infertility
* It leads to floods
* It leads to prolonged drought
* It leads to global warming
* It leads to diseases.
* It leads to displacement of wild animals.
* It leads to landslides

**Wastes**

* Wastes are unwanted materials in our environment.

**Classification of wastes**

* Solid wastes
* Liquid wastes
* Gas wastes

**Classification of solid wastes**

* Inorganic wastes/non-bio gradable wastes
* Organic wastes/Bio degradable

**Inorganic wastes**

* These are wastes that can easily rot.

**Examples**

* Peelings
* Husks
* Dung
* Leftover foods

**Organic wastes**

* These are waste materials that can’t easily rot.

**Examples**

* Metals
* Polythene bags
* Broken tins and bottles

**Examples of wastes in our environment**

* Sewage - Animal dung
* Broken tins and bottles - Leftover foods
* Peeling from raw food - Liquid chemicals

**NB:**

* Sewage are the waste materials produced from human bodies that are carried from houses and factories through pipes.

**Causes of increased waste production**

* Population increase
* Increased technology
* Increased trade activities
* Urbanization
* Industrialization
* Lack of basic education about waste management

**Waste management**

* This refers to collection, handling and safe storage of waste materials in the environment.

**Forms of good waste management practices**

* Recycling of wastes/plastics
* Dumping of wastes in rubbish pits
* Generating of biogas from animal wastes
* Treating industrial wastes before dumping them in water bodies
* Encouraging the reuse of some waste materials to control over production from industries
* Use of garbage from plants as manure
* Educating people about proper waste management practices

**Environment management bodies in East Africa**

* National Environment Management Authority (NEMA) in Uganda
* National Environment Management Authority (NEMA) in Kenya
* Rwanda Environment Management Authority (REMA) in Rwanda
* National Environment Management Council (NEMC) in Tanzania
* Department of Land and Environment Management in Burundi

**NEMA**

* It stands for National Environment Management Authority.
* It was set up in 1995 as a national body for conserving the environment in Uganda.
* It is under the Ministry of Water and Environment.

**Bodies under NEMA**

* National Forestry Authority
* Uganda Wildlife Authority
* National Water and Sewerage Corporation

**Duties of NEMA in Uganda**

* To educate people about the usage of the environment
* To protect wetlands
* To evict encroaches on wetlands
* To promote cleanliness of the environment
* To monitor human activities to protect the environment
* To make guidelines about environment management
* To conserve forests.

**Qn. State any one advantage of having an environmental management club in a school.**

* It helps in keeping the environment clean.
* It conserves the environment
* It promotes environmental protection
* It sentizes children about the importance of trees.
* It promotes sanitation in a school.
* It encourages the planting of trees in a school.

**Exercise**

1. Which national body in Uganda is responsible for conserving forests?

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1. Identify any two human activities that conserve vegetation of an area.

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1. State any two challenges facing NEMA while carrying out its activities.

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1. State any two ways NEMA conserves the environment in Uganda.

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1. Write NEMA in full

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1. Which national body is responsible for conserving wetlands in Uganda?

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1. State any two benefits of conserving the natural environment.

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**Duties of NFA**

* To educate people on the values of trees
* To provide free tree seedlings to people
* To protect forest reserves
* To evict people encroaching on forested areas
* To enforce laws against deforestation
* To encourage people to plant trees

**Importance of conserving vegetation**

❖ It reduces soil erosion.

❖ It conserves the natural beauty of the environment.

❖ It promotes constant supply of wood fuel.

❖ It conserves the natural habitat for animals.

❖ It promotes tourism.

❖ It promotes constant supply of craft raw materials.

❖ It controls drought.

**Results of irresponsible living in the environment**

* Leads to floods
* Leads to landslides
* Leads to diseases
* Leads to pollution
* Leads to destruction of natural habitats for wild animals
* Leads to overexploitation of natural resources
* Leads to drought
* Leads to soil erosion

**Floods**

* A flood is a large amount of water covering a low-lying area.

**Causes of floods**

* Heavy rainfall
* Poor drainage system
* Silting of water bodies
* Swamp drainage

**Danger/effects of floods**

* Leads to death of people
* Leads to destruction of houses
* Leads to spread of water borne diseases
* Leads to destruction of crops
* Leads to death of animals
* Leads to destruction of transport routes
* Leads to displacement of people
* Leads to destruction of bridges

|  |
| --- |
| * Ministry of Relief, Disaster and Preparedness is the ministry responsible for helping flood victims in Uganda. |

**Ways URCS help flood victims**

* Providing food to them
* Providing them with shelter
* Providing them with safe water
* Providing them with medical care
* Providing them clothing

**Ways of controlling floods**

* Conserving swamps
* Constructing drainage channels
* Planting trees along river channels
* Clearing drainage channels

**Drought**

* Drought is a long is a time when there is little or no rain.

**Causes of drought**

* High rate of deforestation
* Bush burning
* Swamp drainage
* Industrialization

**Dangers/effects of drought**

* Leads to famine
* Leads to shortage of water
* Leads to shortage of pasture
* Leads to destruction of crops

**Solutions to drought**

* Conserving swamps
* Practicing agro-forestry
* Evicting people settling in wetlands
* Teaching people about dangers of swamp drainage
* Enforcing strict laws against swamp drainage
* Practicing irrigation farming
* Constructing valley dams and bore holes
* Practicing afforestation

**Landslides**

* Landslides are masses of soil or rocks that fall down the slopes of a highland.
* Landslides mainly occur in mountainous areas.

**Causes of landslides**

* Heavy rainfall
* Over cultivation on mountain slopes
* Deforestation on mountain slopes

**Effects of landslides**

* Leads to displacement of people
* Leads to famine
* Leads to destruction of crops
* Leads to destruction of houses
* Leads to death of people
* Leads to death of animals
* Leads to destruction of roads

**Exercise**

1. State a reason why central region is not affected by landslides.

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1. Which natural disaster is commonly experienced in Bududa District?

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1. State a reason why people are advised to plant trees on mountain slopes.

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1. In which one way can government help people affected by landslides?

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**Pollution**

* This is the introduction of harmful substances in the environment

**Types of pollution/forms of pollution**

▪ Air pollution

▪ Water pollution

▪ Land pollution

▪ Sound/ noise pollution

**Air pollution**

* This is the introduction of harmful substances into the atmosphere.

**Things which pollute air (how air is polluted)**

❖ Fumes from factories and cars.

❖Tobacco smoke from smokers

❖ Smoke from volcanic mountains

❖ Smoke from burning bushes and charcoal

❖Radioactive substances from bombs

**Solutions to air pollution**

❖ Avoid bush burning.

❖By maintaining vegetation cover

❖By fixing exhaust gas purifiers

**Water pollution**

* This is the contamination of water sources with harmful substances.

**How water is polluted.**

❖By dumping wastes into water bodies.

❖By urinating and defecating into water bodies

❖By discharging untreated sewage into water bodies

❖By planting trees along river banks

❖By treating industrial wastes and sewage before releasing them into water bodies

❖By cleaning wells regularly.

❖Avoid pouring wastes into water bodies.

**Land pollution**

* This is the process of lowering the quality of land by adding wastes.
* It is the introduction of harmful substances on land.

**How land is polluted.**

❖By dumping garbage on land

❖By dumping rocks from mines on land

❖By dumping used tins, polythene bags and plastics on land

❖Excessive use of artificial fertilizers

* Dumping of old vehicles and factory machines on land.

**Solutions to pollution of land**

❖By recycling plastics and metals

❖By using compost manure instead of artificial fertilizers

**Sound pollution**

* This is the condition when there is too much noise in the environment.

**Causes of noise pollution**

❖ Noise from war weapons

❖ Noise from birds e.g. weaver birds.

❖ Noise from many people gathered in a sports stadium.

❖ Noise from engines of vehicles

**Effects of noise pollution**

❖ It causes stress

❖ It leads to diseases

❖ It can lead to mental disorders

❖ It causes permanent damage to the hearing system

**Exercise**

1. What is pollution?

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1. State any one people pollute water sources.

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1. Mention any one effect of water pollution.

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1. What is silting?

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1. Mention any one cause of silting in an area.

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**Climate change**

* Climate change refers to the changes in the weather patterns of an area over long time.

**Global warming**

* Global warming is the increase in temperature of the world.

**Indicators of climate change**

* Low rainfall totals
* Increase in temperatures
* Increased melting levels of snow from mountain tops
* Increased levels of floods

**Causes of climate change**

* Deforestation - Mining
* Road construction - Industrialization
* Settlement

**Ways of reducing global warming**

* By planting trees
* Banning importation of old vehicles
* Discouraging swamp drainage
* Use of alternative sources of fuel besides wood fuel
* Enforcing laws against deforestation
* Sensitizing people about the value of forest conservation