

## Answers for worksheet 1

### Design & Technology

#### Grade 9

##### Question 1

Causes	Effects
<b>Water Pollution:</b> Liquid waste from factories contaminate canals, rivers and lakes.	Many aquatic plants and animals are affected.
<b>Wastage of materials:</b> There is a considerable amount of waste of raw materials due to poor planning and excess use of materials in the manufacturing sector.	There is a considerable increase of waste in the landfills.
<b>Energy consumption:</b> Electrical energy is mainly produced with non-renewable resources.	This leads to pollution problems together with high carbon emission.
<b>Consumption of natural resources:</b> Cutting down of trees(deforestation) to make wooden products and space for construction of buildings.	Excessive exploitation of natural resources causes the destruction of natural flora and fauna, landslides and destruction of natural habitat of animals.
<b>Air pollution:</b> Air pollution occurs when harmful or excessive quantities of harmful substances including gases and particles are introduced into the earth's atmosphere.	This causes health problems and climate changes.

##### Question 2

**Green design** involves designing products and systems considering the impacts that they may have on the environment throughout their lifecycles.

##### Question 3

**5 green design products: -**

- (i) Pandamus utilis leaves
- (ii) Eco-cement
- (iii) Bamboo stem and fibre
- (iv) Palm leaves
- (v) Biodegradable plastics

##### Question 4

The 3 R's strategy:

- Reduce
- Reuse
- Recycle

### **Question 5**

- **Recycling paper**

Paper recycling is the turning of waste paper into new paper products. It saves trees from being cut down.

- **Recycling glass**

Glass recycling involves turning used glass into new usable products. It helps in saving the raw materials that go into making glass. This also reduces a significant amount of waste sent to landfills.

- **Recycling metal**

Metals can be recycled over and over without alerting their properties. The most common recyclable metals include aluminium and steel.

- **Recycling plastics**

Plastic recycling means gathering disposed of plastic materials for example plastic bottle caps, cups and bags and processing them into tables, chairs and other useful items.

### **Question 6**

