

## **DISCUSSION ITEMS**

### **Item1**

During a grand graduation ceremony in Wakiso district, a popular catering company impressed guests with the mouth-watering aroma and taste of its food. The manager, while handing out business cards, mentioned that the food is always prepared by chefs with a background in chemistry. Some curious guests wanted to know what the manager really meant by that statement.



### **Task:**

As a student of chemistry, help the guests understand the role of chemistry in food preparation by addressing the following:

- (a) The variety of the ingredients used.
- (b) The suitability of the ingredients.
- (c) The health-related concerns that may arise from these ingredients.
- (d) The advice on choosing the right kind of ingredients used.

### **Item2**

A youth's cooperative in Mbarara town is planning to expand its fruit juice business. As part of their business growth, they need to purchase packaging bottles that are of high quality and environmentally friendly. The manager, aware of your chemistry knowledge, has requested your guidance in making an informed choice of material.

### **Task:**

As a chemistry student, help the manager on the;

- a) (i) Category of the materials to use.  
(ii) Suitability of this material for packaging fruit juice.
- b) Give another purpose for which the materials can be used
- c) Advise the manager on the side effects of using the materials and how to avoid them

### Item 3

The National Agricultural Research Organization (NARO) has reported a shortage of nitrogen based fertilizers in the country. To boost agricultural productivity and soil fertility, the government has contracted an investor to establish a fertilizer manufacturing plant in Kagadi town.

However, the investor is uncertain about the scientific process involved in producing the fertilizer and the possible effects the plant may have on the environment.

#### Task:

As a chemistry student, prepare a write-up to the investor to clear his doubts.

### Item 4

There has been growing concern across the country about the rising cost of fuel—petrol, diesel, and paraffin included. In response, the government has partnered with foreign investors to establish a new oil refinery plant in Kyakayege village, Sembabule District, to make use of the local oil deposits.

However, some residents are protesting the move, fearing land grabbing and questioning the importance of the refinery to their community. They also lack knowledge about how the oil refining process is carried out.

To address these concerns, the District Development Officer (DDO) and the Local Council Representative have organized a radio talk show on a local station to help sensitize the public.

#### Task:

As a learner of Chemistry, prepare a write-up you would make upon invitation.

**Item 5:** Kisoro, a scenic village nestled among the rocky hills of southwestern Uganda, has relied heavily on stone quarrying as a major source of income. The region's rich stone deposits have provided many residents with work through the extraction and sale of stone.

However, continued quarrying has resulted in serious environmental concerns, including seasonal weather changes, water shortages, poor air quality, health risks, and water contamination.

In response, the government has launched community awareness programs to help address these challenges and educate residents about the impact of quarrying.



**Task:**

As a chemistry learner, prepare a simple write-up that the government should base on when addressing the residents.

**Item 6**

**Nyakibale village** in Rukungiri District is rapidly growing. Areas that were once covered with wetlands and natural vegetation have now been replaced with houses and business structures. Sand mining and brick-making have become the major economic activities in the area.

Recently, most of the water wells have dried up, and the remaining water sources are polluted. Residents who practice small-scale farming also report irregular weather patterns, leading to poor harvests and increased food scarcity.

These changes have raised serious concerns among the local community.

In response, the **National Environment Management Authority (NEMA)** plans to conduct a sensitization workshop to raise awareness about the environmental issues affecting the area.

**Task:**

As a chemistry learner, prepare a brief presentation you will deliver upon invitation.

**END**