LIFE ORIENTATION

Western Cape Government Education

Grade 11

WEEK 6

LESSON: 1	TOPIC: SOCIAL AND ENVIRONMENTAL RESPONSIBILITY

What you will be dealing with:

- Social and Environmental responsibility
- The harmful effects of these issues on personal and community health.
- Social issues that impact negatively on local and global communities
- Climate change: causes, impact on development, mitigation and adaptation.

Resources:

- Approved textbooks
- Causes and effects of climate change on the population: https://youtu.be/G4H1N_yXBiA
- Website to assist kids: Website: Climate change (for kids)
- Newspaper article about Climate Change warrior, Greta Thunberg from Sweden :
- Article: Greta Thunberg (Climate change warrior)

At the end of lessons 1 and 2 you must be able to:

1. **Define concepts relating to Climate change**
2. **Have a clear understanding of the causes of climate change and the impact on society and environment.**
3. **Explain the relationship between climate change and COVID-19 and possible solutions**

1. **Concept and skills:** Study the following definitions. (Note that at least 2 marks are awarded if you can define a term correctly in the examination)

Concept and definition	Know the meaning of instructional verbs in test and examination questions e.g.
• **Soil Erosion**- wearing away of topsoil. Topsoil is the top layer of soil and is the most fertile because it contains the most organic, nutrient-rich materials. One of the main causes of soil erosion is water erosion, which is the loss of topsoil due to water. • **Battery farming** – Inhumane farming method, which is unhealthy. Animals (chickens) are injected with artificial food they don't see sunlight are stressed and cooped up. • **Degradation** - This is the act of destroying or damaging something. Treating it without respect or poorly • **Deforestation** - clearance, clearcutting or clearing is the removal of a forest or stand of trees from land which is then converted to a non-forest use often to build homes or shopping centers. • **Climate change** - It is It is a change which is attributed directly or indirectly by human activity which alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparative time periods • **Carbon footprint** - total amount of greenhouse gases produced to directly and indirectly support human activities, usually expressed in equivalent tons of carbon dioxide (CO2) • **Greenhouse effect** - When the Earth's atmosphere becomes thick with gases and substances which trap the sun's radiation, making the Earth warmer. *An example of the greenhouse effect is global warming.* • **Over fishing** - Disappearance of species, certain fish caught and dumped, large catches, trawling damages ecosystem, jobs, no food – malnutrition • **Adaptation** - Adaptation means anticipating the adverse effects of climate change and taking appropriate action to prevent or	<table><tr><th>Instructional verb</th><th>Meaning</th></tr><tr><td>Name/List/State</td><td>Single out, point out, name, apply knowledge to pick out.</td></tr><tr><td>Describe</td><td>State in sentences the main points of a process</td></tr><tr><td>Explain</td><td>To make clear, interpret and spell out the content.</td></tr><tr><td>Compare</td><td>Give similarities and differences between concepts</td></tr><tr><td>Discuss</td><td>Write/talk as if you were sharing your knowledge with someone else. Use details and examples to explain the topic</td></tr><tr><td>Suggest/ Recommend</td><td>Idea or plan put forward for consideration most suitable in the context. Provide solution to the problem/topic/issue</td></tr><tr><td>Define</td><td>Describe/explain the meaning of something or character or a word.</td></tr><tr><td></td><td></td></tr></table>

minimize the damage they can cause or taking advantage of opportunities that may arise.
- **Mitigation** - using new technologies and renewable energies, making older equipment more energy efficient, or changing management practices or consumer behavior.

2. **Causes of climate change:** Human causes vs Natural causes

Human Causes (only three are mentioned)	Natural Causes (only four are mentioned)	Resources and Informal tasks

Greenhouse effect
1) Burning of fossil fuels, coal, oil and gas – this increases CO2 emissions (Greenhouse effect). We drive cars and factories produce CO2 to provide us with "stuff" we don't need but rather want e.g new takkies and clothes we don't wear in 2months. The transport of goods to stores (so humans can shop) the trucks produce large amounts of CO2 when communicating.
2) Cutting down of trees (Deforestation) – Trees absorb CO2, humans cut down trees for building of homes, businesses and factories. The space is needed for the ever-growing population. (Are we over populated?)
3) Increase in livestock farming – Cows and sheep produce large amounts of methane when they digest food. Think of all the take-aways your family and friends go to? How many sheep or cows would be produced to feed all the people?
	1) Volcanic eruptions
	2) Ocean currents
	3) Earth orbital changes
	4) Solar variations
		Click on the following or scan the QR code:
		Natural climate change causes
		    OR
		
		Questions/Exercises to develop understanding:
		Question 1:
		  1.1 Name FOUR human activities that contribute to climate change (4x1)
		  1.2 Discuss the difference between Adaption and mitigation. (2x2)
		  1.3 Suggest TWO reasons why developing countries may be more affected than developed countries (2x2)

3. Impact of climate change on development

Changes	Resources and informal tasks
- Global warming could lead to an increase in pest insect populations, harming yields of staple crops like wheat, soybeans, and corn. Thus less "food" for an overpopulated world. Thus a select few can afford food daily. We see it during lock down (Covid 19) not everyone can afford food (no income and cannot work from home to receive salary). - Overpopulation results in farmers having to speed up production – spraying of harmful pesticides to speed up growth for production, livestock often injected with artificial growth hormones to speed up production (all harmful to humans) - Certain areas not receiving adequate rain (droughts have become more common SA farmers struggled 2017 – 2019) thus less "food" to feed people.	**Question 2:** 2.1 *Define* the term 'overfishing' and name TWO reasons why overfishing has occurred in South Africa's oceans. (1+2) 2.2 *Explain* FOUR ways how overfishing could be detrimental to South Africa's ocean (4x2) 2.3 *Recommend* THREE ways that the South African government could decrease overfishing. (3x3) In your answers, indicate how EACH recommendation could decrease the likelihood of overfishing

4. Ways to **mitigate** and **adapt** to the disasters caused by climate change:

Mitigation:	
- Use of borehole water - Government improving bus transport system (less cars on the road) - Focus on renewable energy – solar panels and energy saver light bulbs - Hazard mapping – not building homes near high risk areas for flooding. - Stricter penalties on companies who don't abide to the policies or laws *(e.g. VW Dieselgate scandal in 2018, had to pay $2.8billion fine for rigging diesel-powered vehicles, they cheated on the government emission tests)*	
Adaption:	
What can humans do to adapt to the change in climate: - Walk/Cycle or carpool - Plant indigenous plants - Stop wasting water - Farmers plant different crops	Be an ambassador during the COVID-19 lockdown in your household: Reuse, Reduce, Recycle OR
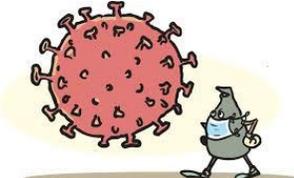
• Governments can build defenses to protect against rising sea levels (limit some floods) • Reduce, Re-use and Recycle • Stop buying unnecessary stuff (junk)	

5. **Climate change and Covid-19**

How Covid-19 has improved climate change outlook:	How Covid 19 has negatively impacted climate change:

• Clear air and clean water because of Covid-19:
 	
  https://youtu.be/HVwjs_D_kRI
 	
    OR
 	
	1) **Increase in household garbage and plastic waste** – Working from home has resulted in an increase in electricity use and home heating and a surge in the amount of garbage produced by each household. Shops and businesses that once preached the use of reusable bags and containers are now advising customers to switch to single-use packaging and bags even though single-use plastics can still harbour bacteria.
	2) **Medical waste on the rise** - The demand for personal protective equipment (PPE) has in turn surged. As a result, COVID-19 is generating tons and tons of medical waste.
	3) **Recycling programs on hold** - With more plastic and medical waste being generated, countries have also decided to halt recycling programmes. In some European countries, waste disposal options have been paused indefinitely.

6. **Assessments/Activities:**

Question 1
Read the following adapted headline and answer the questions that follow:

Harness Youth to Change World's Future

Tuesday, March 31, 2020

NEW YORK, Mar 31 (IPS) - Vanessa Nakate of Uganda may have been cropped out of a photograph taken at the World Economic Forum, but she along with Swedish activist Greta Thunberg have made the climate crisis center stage. Climate change is real.

1.1 Define the term, climate change and briefly explain why it is important that we are aware what is it all about.   (1+2)
1.2 Discuss THREE negative consequences of climate change on the environment.   (3x2)
1.3 Suggest THREE practical strategies that learners at your school can adopt at school to join the fight against climate change.   (3x2)

7. **Consolidation and Values:**

Consolidation	Values
• Think and write down any issues that are not clear to question your teacher at later stage • Do all the activities to ensure you understand and develop/acquire skills to lessen the impact of climate change • It is important that we promote environmental sustainability and become social activist and join volunteers/volunteering programmes in your communities whom work tirelessly to address environmental issues. (find out about these organisations to possibly join after the lock down period) • Think about the following: According to scientist the COVID-19 crises have influenced climate positively. The challenge however, will the positive effect be sustainable?	• Concern for future generations • Ubuntu • Sense of duty • Resect for people and environment • Self-control • Conservation • Cooperation and commitment Watch the following video if you want to know more about the Corona Virus. https://youtu.be/1APwq1df6Mw