

COURSE OVERVIEW

UNIT PLAN

LESSON	PRIMER VIDEO	KNOWLEDGE		ACTIVE	REFLECTIVE
		LOs	UNEP Q2	Discuss, reformat, compare...	Global Competency
Lesson 1	Episode 1	S2, L1	2	Compare 2021/2055/2084/2100	1
	Character focus - Knox as leader	S2, L3	16	Empathise with a character	2
	Plot - change over time, impact of ozone depletion	S3	17	Characteristics of change makers	
Lesson 2	Episode 2	H2, S1	1	Recreate ozone depletion through game	2
	History of ozone depletion/ripple effect	L3, L4	4, 6, 7	Design info pamphlet/poster to drive change	3
	Plot - attempt to change the future	S1	5	Active play ozone game	1
Lesson 3	Episode 3	H5	10	Create timeline of action	1
	History of ozone depletion/ripple effect	H2, H3, L2	15	Inspire an environmental leader	4
	Plot - individual action can make a difference	H2, L4, L5	20	Predict future changes with ozone regulation	3

GLOBAL COMPETENCY DIMENSIONS

- 1 - Examine local, global and intercultural issues
- 2 - Understand and appreciate the perspectives and world views of others
- 3 - Engage in open, appropriate and effective interactions
- 4 - Take action for collective well-being and sustainable development

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LEARNING OBJECTIVES

	KEY SCIENCE	AUDIENCE	EVIDENCE / OBJECTIVE	IDENTIFIER	UNEP QS
SCIENCE	Invisible gaseous layer	Tweens (Age 7-12)	Explain ozone formation / characteristics	S1	1
			Recognise the important role of ozone of protecting species from UV radiation.	S2	2
	Relationship with nature	Teenagers (Age 13-18)	Identify how ozone and climate are connected, but not causal	S3	17,18
			Acknowledge ozone recovery and seasonal changes	S4	9
			Understand natural impacts on ozone such as volcanoes and the sun	S5	13
HUMAN IMPACT	Compromised by	Tweens (Age 7-12)	Identify the pollution that affects the ozone - ODS (ozone-depleting substances such as CFCs and Halons)	H1	7,8
			Recognise that pollution from the previous generation persists and will impact future generations	H2	15,20
	Restored by	Teenagers (Age 13-18)	Appreciate that this challenge requires international regulations and cooperation	H3	15
			Appreciate that individual personal behaviours and consumer choices have an impact on ozone	H4	6
	Distribution		Recognise the impact of ozone on a local / regional / global scale	H5	12
LONG-TERM PROGRESS	Requires continuous care	Tweens (Age 7-12)	Identify the consequences of unsustainable ozone depletion	L1	2
			Acknowledge the role of global regulations and the ozone treaties	L2	15,19
	Requires awareness and understanding	Teenagers (Age 13-18)	Acknowledge that continued progress on ozone requires a broad base of awareness and support	L3	6
			Understand continued progress relies on Assessment Panels	L4	15
			Acknowledge ozone recovery is a source of hope for other global environmental challenges	L5	6,20

COURSE OVERVIEW

OZONE POSITIVE BEHAVIOURS

- GC1** - Examine local, global and intercultural issues
- GC2** - Understand and appreciate the perspectives and world views of others
- GC3** - Engage in open, appropriate and effective interactions
- GC4** - Take action for collective well-being and sustainable development
- > Leads/participates in school programmes to use more sustainable materials.
 - > Improves waste-management programmes in schools (like Eco Club).
 - > Check fridge or air conditioning unit at home or school to see if it is CFC free.
 - > Minimise AC use and keep units well maintained.
 - > Join ozone events or youth initiatives.
 - > Chooses public transportation/biking/walking over driving.
 - > Chooses eco-friendly products, reduces consumption of plastic products.
 - > Chooses sustainable brands.
 - > Asks for sustainable products, advocates for sustainable changes in personal life and in school.
 - > Connects with others on environmental issues.
 - > Creates ride-share or bicycle share programme at school/parents work.
 - > Organises or participates in sustainability events, teaches family how to reduce carbon footprint.
 - > Talks with family about sustainable habits at home.

UNEP QUESTIONS

- 1 - What is ozone?
- 2 - Why do we care?
- 3 - How is ozone distributed?
- 4 - How is ozone measured?
- 5 - How are Halogen source gases involved?
- 6 - How are human activities involved?
- 7 - What are reactive Halogen gases?
- 8 - What are the Chlorine Bromine reactions?
- 9 - Why is the ozone hole only over Antarctica?
- 10 - How severe is depletion over Antarctica?
- 11 - Is there depletion of the Arctic ozone layer?
- 12 - How large is the depletion of the global layer?
- 13 - Do the sun and volcanoes affect the ozone?
- 14 - Controls on the production of ozone-depleting substances?
- 15 - Has the Montreal Protocol been successful?
- 16 - Does ozone depletion affect ground-level UV radiation?
- 17 - Does ozone depletion affect climate change?
- 18 - How is the Montreal Protocol also helping earth's climate?
- 19 - How has the Montreal Protocol expanded?
- 20 - How are ozone levels expected to change in the decades ahead?

Click here for additional information:

<https://ozone.unep.org/20-questions-and-answers>

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OZONE POSITIVE BEHAVIOURS +L3L5:L21+L5:L22

ENGAGEMENT IN ACTIVITIES /20

Standard of Excellence 17-20	Proficient 12-16	Acceptable 6-11	Not Acceptable 0-5
Students readily engaged in activities and consistently showed leadership in each of the assigned activities.	Students willingly engaged in activities and frequently showed leadership in each of the assigned activities.	Students engaged in activities and occasionally showed leadership in each of the activities.	Students reluctantly engaged in activities and rarely showed leadership in the activities.

KNOWLEDGE - NOTES AND RESPONSES /20

Standard of Excellence 17-20	Proficient 12-16	Acceptable 6-11	Not Acceptable 0-5
Notes and responses demonstrate a thorough understanding of the complexity of the issues. Students develop a sound judgment based on solid evidence.	Notes and responses demonstrate an understanding of the complexity of the issues and the ability to support their opinion.	Notes and responses demonstrate an ability to summarise and restate the key issues.	Notes and responses indicate a lack of conceptual understanding. Issues are dealt with at a superficial level and/or in isolation.

GLOBAL COMPETENCY DIMENSIONS /20

Standard of Excellence 17-20	Proficient 12-16	Acceptable 6-11	Not Acceptable 0-5
Students demonstrate a thorough understanding of key concepts.	Students demonstrate an understanding of key concepts.	Students demonstrate a general understanding of key concepts.	Students indicate a lack of conceptual understanding. Issues are dealt with at a superficial level and/or in isolation.

PROJECTS - PRODUCTS /20

Standard of Excellence 17-20	Proficient 12-16	Acceptable 6-11	Not Acceptable 0-5
Projects demonstrate a thorough understanding of concepts. Effective and competent communication of key concepts.	Projects demonstrate an understanding of concepts. Effective communication of key concepts.	Projects demonstrate a general understanding of concepts. Communication of key concepts is evident.	Projects indicate a lack of conceptual understanding. Issues are dealt with at a superficial level and/or in isolation.

PEER PRESENTATIONS /20

Standard of Excellence 17-20	Proficient 12-16	Acceptable 6-11	Not Acceptable 0-5
Contribution demonstrates a thorough understanding of stewardship. Effective and competent communication of key concepts.	Contribution demonstrates an understanding of stewardship. Effective communication of key concepts.	Contribution demonstrates a general understanding of stewardship. Communication of key concepts is evident.	Contribution indicates a lack of conceptual understanding. Issues are dealt with at a superficial level and/or in isolation.