Humanity's Footprint

"It is horrifying that we have to fight our own government to save the environment."
– Ansel Adams

Warm up

- What human activities do you think have the biggest impact on the environment?
- How do you think the world would change if humans disappeared overnight?
- How do you think plants and animals would adapt if they no longer had to deal with humans?
- What inventions do you think have had the greatest environmental impact, positive or negative?
- What positive changes have humans made to protect the environment?
- What do you think the world will look like in 100 years if we continue our current lifestyle?

1. Match the vocabulary to the images then discuss the following questions.

deforestation
urbanisation

renewable energy
animal sanctuaries

crops
overfishing

urbanisation

deforestation

renewable energy

crops

overfishing

animal sanctuary

- How do deforestation and urbanization impact the environment differently? Can cities grow without harming forests?
- What are the pros and cons of renewable energy compared to traditional energy?
- How can protecting animal sanctuaries help biodiversity? Is it enough to offset deforestation?
- How can we balance fishing for food with protecting marine life?
- How can we improve farming practices to reduce environmental harm?
- Which environmental issue in the images concerns you most? Why?
- What other human activities have a big impact on the environment, good or bad?

2. Read the text below and answer the following questions.

Hi, I'm Dr. Oliver Bright, a futurologist, and I would like to talk about humanity's future on Mars. In 2200, humans are likely to live on Mars in incredible domed cities, but this new frontier is bound to bring up significant ethical questions. For instance, if only the wealthiest people could afford to move to Mars, it would create substantial inequalities between those on Earth and those on Mars.

We must consider how to ensure fair distribution of resources so that everyone can benefit from the opportunities on the red planet. Another dilemma is sure to arise with the potential impact on Martian ecosystems. If we were to introduce Earth organisms to Mars, we would risk disrupting any existing Martian life forms or future habitats.

Additionally, as we develop new technologies, ethical concerns are bound to emerge about privacy and surveillance. If advanced tech were used to monitor Martian residents excessively, this could raise serious issues about personal freedom and autonomy.

Mars is sure to be a land of incredible possibilities, but addressing these ethical challenges will be crucial. We must ensure that our Martian future is just and equitable for everyone involved.

1. What is the concern about only rich people moving to Mars? *The concern is that if only the wealthiest people can afford to move to Mars, it would create significant inequalities between those on Earth and those on Mars. This could*

lead to a situation where the benefits and opportunities of living on Mars are limited to a privileged few, exacerbating social and economic disparities.

2. What problems could arise from using technology to monitor people on Mars? *Using technology to monitor people on Mars could lead to serious issues regarding privacy and personal freedom. Excessive surveillance might raise concerns about individual autonomy, as residents may feel their personal space and activities are being intrusively observed, which could undermine their sense of freedom and privacy.*
3. Why is it important to think about ethical issues when planning for life on Mars?
5. Should everyone be allowed to move to Mars, or should there be restrictions? Why?
6. Do you think life on Mars will be better or worse than life on Earth? Why?

Speculation and Prediction

Modal verbs and expressions express different levels of certainty, possibility, and prediction about the present or future.

Strong Predictions:

- Will: Used for confident predictions about the future.
  Example: "The world will experience more climate change effects in the coming decades."

High Probability:

- Be likely to: Indicates a high chance or expectation.
  Example: "Renewable energy sources are likely to become more common."
- Is sure to: Expresses certainty about a future outcome.
  Example: "Technological innovations are sure to change the way we live."

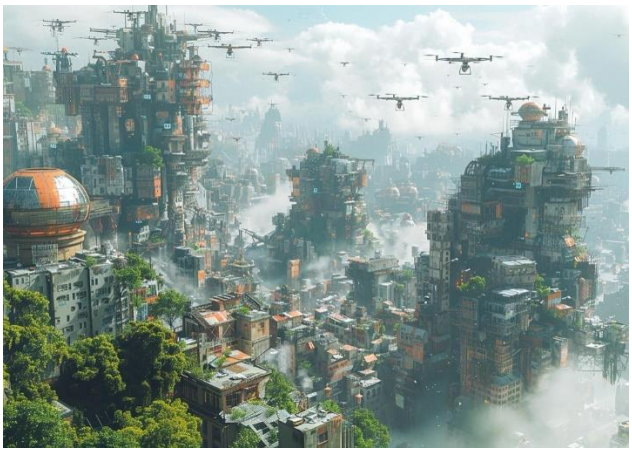
Inevitable Outcomes:

- Be bound to: Suggests something is certain to happen given the current circumstances.
  Example: "With increased urbanisation, environmental challenges are bound to intensify."

Hypothetical Predictions:

- Would: Used for predictions based on hypothetical conditions or imagined scenarios.
  Example: "If we continue using fossil fuels, it would lead to severe environmental damage."

3. Work in pairs or small groups. Look at the images below and make a list of future predictions using the speculation and prediction phrases on the previous page.



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4. Before watching the video *What would happen if humans suddenly disappeared?* familiarize yourself with the following vocabulary. Match each word to its definition below.

1. malfunction	*e*	a. The variety of plant and animal life in a particular habitat.
2. abandoned	*c*	b. To grow or develop in a healthy or vigorous way.
3. decay	*d*	c. Left behind or deserted.
4. biodiversity	*a*	d. The process of rotting or decomposing.
5. native	*f*	e. To fail to work correctly or normally.
6. flourish	*b*	f. Originating naturally in a particular place.
7. legacy	*g*	g. Something handed down from a predecessor or from the past.

5. Watch the video What would happen if humans suddenly disappeared?[1] and answer the following questions.

1. What are some immediate consequences mentioned in the video once humans disappear? *Oil refineries malfunction, causing fires. Flooded tunnels from failed drainage systems lead to darkness as emergency generators shut down.*

2. How does the video describe the decay of urban infrastructure over time? *Sidewalks crack and erode due to weeds and tree roots. Buildings collapse as concrete deteriorates and floods wash them away.*

3. What changes occur in plant and animal life after humans are gone? *Imported plants run wild, and new plant life thrives. Some animals adapt to new conditions, while others die out or thrive in changed habitats.*

4. According to the video, how long will it take for CO2 levels to return to pre-human levels? *It will take up to 65,000 years for CO2 levels to return to pre-human levels.*

5. How does the video describe the longevity of human-made structures and artefacts after our disappearance? *Human-made structures and artifacts, like Mt. Rushmore and bronze sculptures, can last for millions of years as technofossils.*

6. Do you think humans leaving a permanent mark on Earth's geological record is a positive or negative aspect of our legacy?

7. Which changes described in the video do you find most surprising about nature reclaiming urban areas?

[1] https://www.youtube.com/watch?v=v6Agqm4K7Ok&ab_channel=TED-Ed

6. Discuss in pairs or small groups.