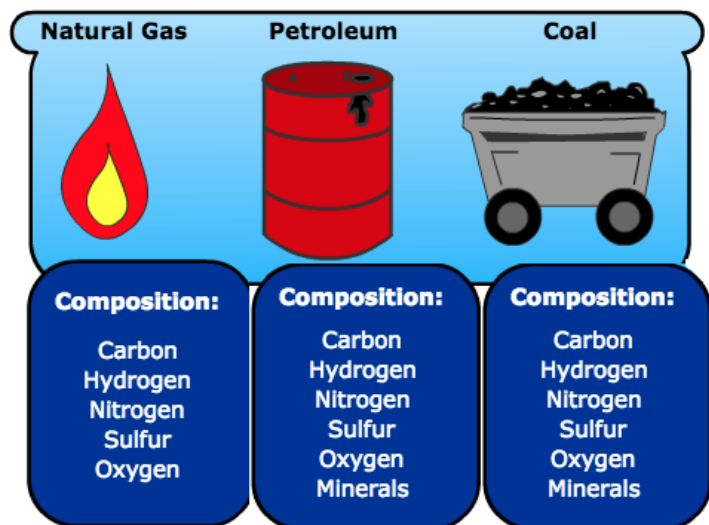


C7. Environment & Society

Balancing Environmental Sustainability and Societal Needs



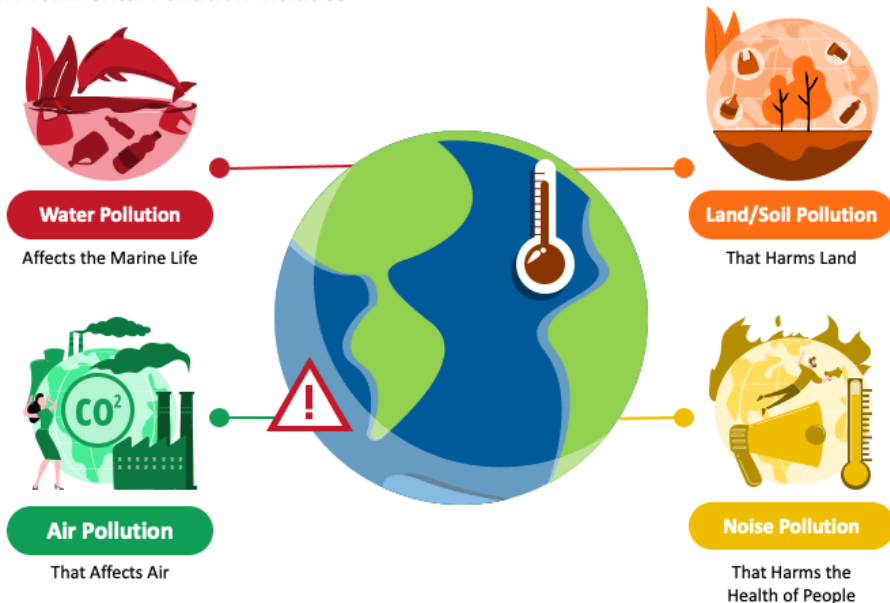
As our society continues to grow and evolve, our dependence on various sources of energy becomes increasingly evident. The choices we make regarding energy production and consumption have far-reaching consequences for the environment, the economy, and our overall well-being. In this passage, we will explore the interplay between society and fossil fuels, the importance of renewable resources and the different types available, the significance of preventing pollutants, the delicate balance between conservation and the economy, and the role of new technology in shaping our environmental future.

Society and Fossil Fuels

Fossil fuels, such as coal, oil, and natural gas, have been the backbone of our society's energy supply for centuries. They have powered our homes, fueled our vehicles, and driven industrial growth. However, this heavy reliance on fossil fuels has led to several environmental challenges, including air pollution, greenhouse gas emissions, and climate change.

ENVIRONMENTAL POLLUTION

Environmental Pollution Includes

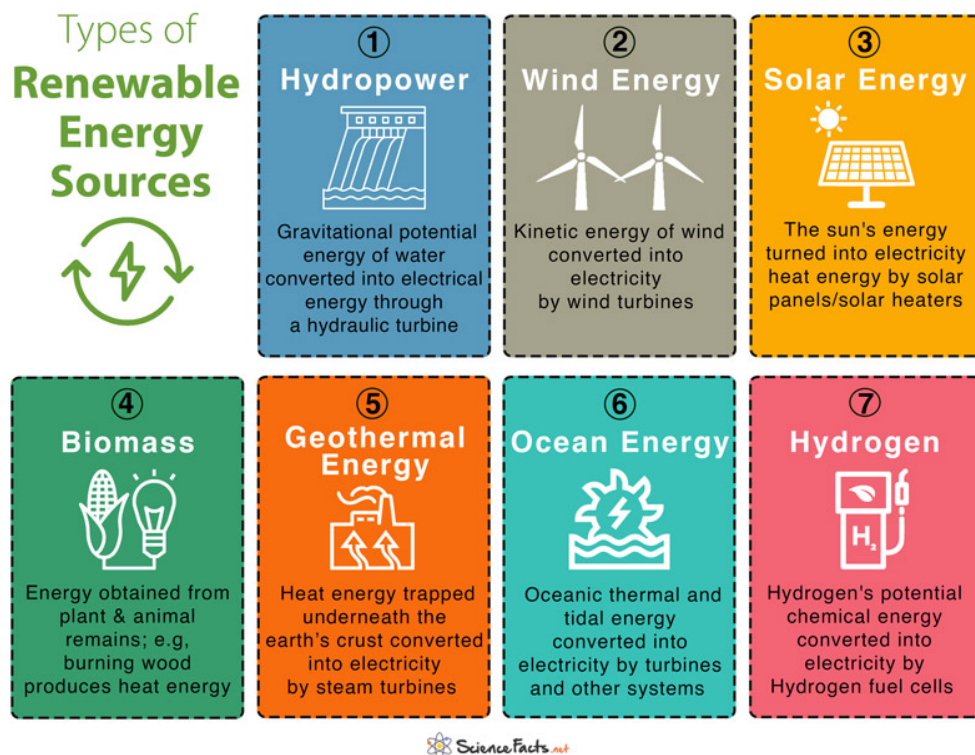


Environmental Impact of Fossil Fuels

The burning of fossil fuels releases pollutants and greenhouse gases into the atmosphere, contributing to air pollution and the warming of the planet. These emissions are a major driver of climate change, leading to more frequent and severe weather events, rising sea levels, and disruptions to ecosystems.

Renewable Resources and Types

In response to the environmental consequences of fossil fuels, there is a growing recognition of the need to transition to renewable resources. Renewable resources are energy sources that are naturally replenished and have a lower environmental impact compared to fossil



fuels.

Types of Renewable Resources

There are several types of renewable resources, including:

1. Solar Energy

Solar panels harness energy from the sun's rays and convert it into electricity. Solar power is clean, abundant, and sustainable.

2. Wind Energy

Wind turbines capture the kinetic energy of the wind and convert it into electrical power. Wind energy is both clean and renewable.

3. Hydropower

Hydropower systems generate electricity by harnessing the energy of flowing water, such as rivers and dams. It is a reliable and environmentally friendly energy source.

4. Geothermal Energy

Geothermal power plants utilize the Earth's internal heat to produce electricity. Geothermal energy is sustainable and emits very low greenhouse gases.

Preventing Pollutants is Important

Preventing pollutants from entering the environment is crucial for mitigating the impacts of pollution. Pollution can harm air and water quality, damage ecosystems, and pose health risks to humans and wildlife alike.

Conservation & Economy Balance

Conservation efforts are essential for protecting natural habitats, preserving biodiversity, and maintaining the health of our ecosystems. However, finding the right balance between environmental conservation and economic growth can be challenging.

Balancing Conservation and Economy

Sustainable practices and policies aim to strike a balance between conserving natural resources and supporting economic development. These practices include responsible land use, sustainable agriculture, and the promotion of eco-friendly technologies.

New Technology

Advancements in technology are shaping our ability to address environmental challenges and transition to more sustainable energy sources.

Role of New Technology

New technologies are instrumental in reducing pollution, improving energy efficiency, and promoting sustainable living. Innovations in electric vehicles, energy storage, and smart grids are transforming the way we produce and consume energy, reducing our reliance on fossil fuels.

1. What has been the primary source of energy for society for centuries?
 - a) Renewable resources
 - b) Natural gas
 - c) Fossil fuels
 - d) Nuclear energy
2. What environmental challenges are associated with the heavy reliance on fossil fuels?
 - a) Increased biodiversity
 - b) Greenhouse gas emissions and climate change
 - c) Cleaner air quality
 - d) Reduced energy consumption
3. What is the key characteristic of renewable resources?
 - a) They deplete over time
 - b) They are not naturally replenished
 - c) They have a high environmental impact
 - d) They are naturally replenished and have a lower environmental impact
4. Which type of renewable resource harnesses energy from the sun's rays?
 - a) Geothermal energy
 - b) Wind energy
 - c) Solar energy
 - d) Hydropower
5. How do wind turbines generate electricity?
 - a) By using water currents
 - b) By capturing the kinetic energy of the wind
 - c) By converting geothermal heat
 - d) By burning fossil fuels
6. What is the primary goal of preventing pollutants from entering the environment?
 - a) To increase pollution levels
 - b) To harm ecosystems
 - c) To mitigate the impacts of pollution
 - d) To promote industrial growth
7. What is the objective of sustainable practices and policies?
 - a) To prioritize economic growth over environmental conservation
 - b) To deplete natural resources
 - c) To strike a balance between environmental conservation and economic growth
 - d) To harm ecosystems

8. What role do new technologies play in addressing environmental challenges?
- a) They worsen pollution
 - b) They have no impact on energy efficiency
 - c) They reduce pollution, improve energy efficiency, and promote sustainable living
 - d) They increase reliance on fossil fuels
9. Which type of energy harnesses the Earth's internal heat to produce electricity?
- a) Solar energy
 - b) Wind energy
 - c) Geothermal energy
 - d) Hydropower
10. What is a significant environmental consequence of burning fossil fuels?
- a) Reduced air pollution
 - b) Greenhouse gas emissions leading to climate change
 - c) Improved air quality
 - d) Increased use of renewable resources

ANSWERS & EXPLANATIONS

1. c) Fossil fuels
 - Fossil fuels have been the primary source of energy for society for centuries.
2. b) Greenhouse gas emissions and climate change
 - The heavy reliance on fossil fuels is associated with environmental challenges, including greenhouse gas emissions and climate change.
3. d) They are naturally replenished and have a lower environmental impact
 - Renewable resources are characterized by being naturally replenished and having a lower environmental impact.
4. c) Solar energy
 - Solar panels harness energy from the sun's rays.
5. b) By capturing the kinetic energy of the wind
 - Wind turbines generate electricity by capturing the kinetic energy of the wind.
6. c) To mitigate the impacts of pollution
 - The primary goal of preventing pollutants from entering the environment is to mitigate the impacts of pollution.
7. c) To strike a balance between environmental conservation and economic growth
 - Sustainable practices and policies aim to strike a balance between environmental conservation and economic growth.
8. c) They reduce pollution, improve energy efficiency, and promote sustainable living
 - New technologies play a role in reducing pollution, improving energy efficiency, and promoting sustainable living.
9. c) Geothermal energy
 - Geothermal power plants harness the Earth's internal heat to produce electricity.
- 10.b) Greenhouse gas emissions leading to climate change
 - Burning fossil fuels leads to greenhouse gas emissions, which contribute to climate change.