



Introduction (10 minutes)

Read the introduction and answer the following questions:

1. What is a weather disturbance?

2. What are the different types of weather disturbances?

3. How do weather disturbances affect ecosystems?

Case Study (20 minutes)

Read the case study and answer the following questions:

Hurricane Katrina, which struck the Gulf Coast of the United States in 2005, caused widespread destruction and flooding in the city of New Orleans. The storm surge caused the levees to fail, resulting in the flooding of the city. The economic and social impacts of the storm were devastating, with thousands of people displaced and billions of dollars in damage.

1. What were the causes of Hurricane Katrina?

Page

2. How did the storm affect the ecosystem of the Gulf Coast?

3. What were the economic and social implications of the storm?

Data Analysis (25 minutes)

Analyze the following data and answer the questions:

| Weather Disturbance | Ecosystem Impact |
|---------------------|--|
| Hurricane | Loss of mangroves and coral reefs |
| Drought | Decrease in crop yields and livestock productivity |
| Flood | Increase in waterborne diseases and displacement of people |

1. What are the common ecosystem impacts of weather disturbances?

2. How do weather disturbances affect different types of ecosystems?

3. What are the implications of weather disturbances for ecosystem services?

Policy Brief (30 minutes)

Develop a policy brief on the economic and social implications of weather disturbances. Consider the following questions:

1. What are the economic costs of weather disturbances?

Page

2. How do weather disturbances affect human health and well-being?

3. What are the social implications of weather disturbances, including displacement and migration?



Conclusion (10 minutes)

Summarize the key points learned from this activity:

1. What is the impact of weather disturbances on ecosystems?

2. What are the economic and social implications of weather disturbances?

3. What can be done to mitigate the effects of weather disturbances?

Additional Resources

- National Oceanic and Atmospheric Administration (NOAA) Website
- United Nations Environment Programme (UNEP) Reports
- National Weather Service (NWS) Website

Glossary

- Weather disturbance: a significant change in the weather pattern, such as a hurricane or drought
- Ecosystem: a community of living and non-living components that interact with each other in a specific environment
- Biodiversity: the variety of different species of plants, animals, and microorganisms that live in an ecosystem
- Ecosystem services: the benefits that people obtain from ecosystems, including clean air and water, food, and shelter

