

## **Lesson Plan 6 – STREAMS Education – Mathematics**

Lesson Plan: **Mathematics and Climate Action**

Grade Level: 8-12 year old students

Objective:

- To explore the relationship between mathematics and climate action
- To understand the role of mathematics in measuring climate change and its impact on our planet
- To encourage students to take actions to reduce their carbon footprint

Materials:

- Whiteboard and markers
- Access to internet and YouTube
- Sample assessment activities and quiz samples

Introduction:

- Start by asking the students if they know what climate change is and how it affects our planet.
- Introduce the concept of carbon footprint and its impact on the environment.
- Explain that mathematics plays a crucial role in measuring and analyzing climate change.

Instruction:

1. Explain the concept of carbon footprint and how it contributes to climate change.
2. Show the students a few age-appropriate YouTube videos related to climate change and its impact on our planet. Here are some recommendations:
  - "The Science of Climate Change" by National Geographic Kids
  - "Climate Change 101 with Bill Nye" by National Geographic Kids
  - "The Hidden Cost of Fossil Fuels" by TED-Ed
3. Discuss with the students how mathematics is used to measure and analyze climate change. Some examples include:
  - Measuring temperature and atmospheric CO<sub>2</sub> levels
  - Analyzing climate data and creating models to predict future climate changes
  - Calculating carbon footprint and finding ways to reduce it
4. Have the students work in pairs or small groups to calculate their own carbon footprint. Provide them with a worksheet that includes questions such as:
  - How many miles do you travel by car each week?
  - How many hours do you spend watching TV or playing video games each week?
  - How often do you eat meat?
  - How often do you recycle?
5. After the students have completed the worksheet, have them share their results with the class and discuss ways they can reduce their carbon footprint.
6. Have the students take a quiz on the content covered in the lesson to assess their understanding. Sample quiz questions could include:

- What is a carbon footprint?
- How is mathematics used to measure and analyze climate change?
- What are some ways you can reduce your carbon footprint?

Conclusion:

- Review the key concepts covered in the lesson.
- Encourage the students to take actions to reduce their carbon footprint and make a positive impact on the environment.