Climate Change Challenge

Duration: Four weeks (19 instructional hours)

Driving Question: How can we communicate evidence of climate change to convince our community to act?

**Lesson 1:**

**Carbon Concerns**
Why is Earth’s climate changing?

- **Activity 1:** Heating Up (50 mins)
- **Activity 2:** Our Greenhouse (75 mins)
- **Activity 3:** Carbon All Around (50 mins)
- **Activity 4:** Global Trends (50 mins)
- **Activity 5:** Local Emissions (75 mins)

**Lesson 2:**

**Extreme Weather**
How is our atmosphere changing?

- **Activity 1:** Weather Interconnections (75 mins)
- **Activity 2:** Meteorological Models (75 mins)
- **Activity 3:** Weather, Meet Climate (50 mins)
- **Activity 4:** Now and Then (50 mins)
- **Activity 5:** Plot It! (50 mins)

**Lesson 3:**

**Shifting Seas**
How are our waters changing?

- **Activity 1:** Oceanic Impacts (50 mins)
- **Activity 2:** Circulation of the Seas (50 mins)
- **Activity 3:** Ocean Acidification: The Evidence (50 mins)
- **Activity 4:** Sea Temperature: The Evidence (50 mins)
- **Activity 5:** Sea Level: The Evidence (75 mins)

**Lesson 4:**

**Our Change to Make!**
How can we challenge our community to shrink their carbon footprint?

- **Activity 1:** Adaptation and Mitigation (50 mins)
- **Activity 2:** Our Footprints (50 mins)
- **Activity 3:** Climate Questioning (100 mins)
- **Activity 4:** Planet Pledge (50 mins)
- **Activity 5:** Community Consciousness (50 mins)

**Project-Based Learning Unit Product**

After analyzing and creating graphical representations of both local and global climate change data, students create a Climate Change Challenge Pledge with three relevant strategies to mitigate personal contributions to climate change. They present their work to the school community, using explanations of the data representations and justifications of the pledge to convince others to shrink their carbon footprints.