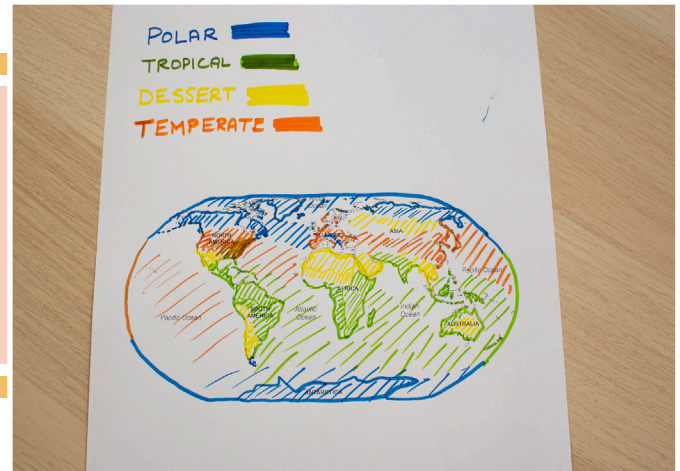


MAPPING CLIMATE CHANGE



Climate change refers to long-term shifts in temperatures and weather patterns. These shifts may be natural, such as through variations in the solar cycle, but since the 1800s, human activities have been the main driver of climate change, primarily due to burning fossil fuels like coal, oil and gas. Mapping the areas of the earth where the climate has become identifiably hotter through color is a way of presenting data in an easily digestible form. Mapping, graphing, charting, and plotting points are great ways to present information to get people behind a cause.

CLIMATE ZONES:

POLAR—has the coldest with temperatures almost always below freezing.

TEMPERATE—most of the Earth’s land masses fall into this climate zone with more moderate temperatures and rainfall year-round.

DESERT—has dry hot temperature with very little rain and plant growth.

TROPICAL—has the warmest average temperatures and gets the most rain.

LEARNING STANDARDS:

Visual Arts Cn10.1.6: Generate a collection of ideas reflecting current interests and concerns that could be investigated in artmaking.

Social Studies 1.6-8.1: Analyze positions and evidence supporting an issue or an event.

Social Studies 1.6-8.2: Evaluate the logic of reasons for a position on an issue or event.

Social Studies 2.6-8.1: Create and use research questions to guide inquiry on an issue or event.

MAPPING CLIMATE CHANGE (CONT.)

KEY:

BLUE: Polar

GREEN: Temperate

YELLOW: Desert

RED: Tropical

INSTRUCTIONS:

1. Create a color key with four different colors to illustrate the various climate zones found throughout the world.
2. Use your first map of the world to create a climate zone map using the four different climate zones defined in this lesson.
3. Color in the current map to illustrate what is currently the temperature in different parts of the world.
4. Research what the world would be like if it were just an average of 4°C warmer.

SUGGESTED WEBSITES

<https://www.noaa.gov/climate>

<https://www.epa.gov/environmental-topics/greener-living>

<https://www.climate.nasa.gov/news/2865/a-degree-of-concern-why-global-temperatures-matter/>

<https://www.carbonbrief.org/what-is-a-4c-world>

5. Use this information, and the same color key, to color the second world map to show how the climate could change in each region changes with this slight shift.
6. Research the role that car emissions play in creating climate change and write a paragraph about this impact, including answers to these questions:
 - a. How do vehicle emissions change the climate?
 - b. What role does fossil fuel play in the car industry?
 - c. What options have become available for alternate fuel sources for vehicles?
 - d. Where does fossil fuel come from? How much is available?

MATERIALS:

Pencil and paper

Crayons, markers, or colored pencils

Two printed maps of the world or hand drawn maps [like this](#)