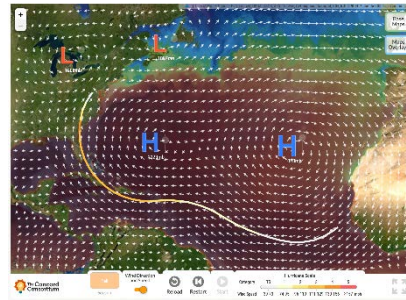


# NGSS Alignment of GeoHazard

## Science and Engineering Practices:

- Developing and Using Models
- Engaging in Argument from Evidence
- Analyzing and Interpreting Data



## Disciplinary Core Ideas:

### **ESS2.C: The Roles of Water in Earth's Surface Processes**

The complex patterns of the changes and the movement of water in the atmosphere, determined by winds, landforms, and ocean temperatures and currents, are major determinants of local weather patterns. (MS-ESS2-2)

The abundance of liquid water on Earth's surface and its unique combination of physical and chemical properties are central to the planet's dynamics. (HS-ESS2-1)

### **ESS2.D: Weather and Climate**

Weather and climate are influenced by interactions involving sunlight, the ocean, the atmosphere, ice, landforms, and living things. These interactions vary with latitude, altitude, and local and regional geography, all of which can affect oceanic and atmospheric flow patterns. Because these patterns are so complex, weather can be predicted only probabilistically. (MS-ESS2-1 GBE)

Global climate models incorporate scientists' best knowledge of physical and chemical processes and of the interactions of relevant systems. They are tested by their ability to fit past climate variations. Current models predict that, although future regional climate changes will be complex and varied, average global temperatures will continue to rise. (HS.ESS2.D GBE)

### **ESS3.B: Natural Hazards**

Some natural hazards, such as volcanic eruptions and severe weather, are preceded by phenomena that allow for reliable predictions. Others, such as earthquakes, occur suddenly and with no notice, and thus they are not yet predictable. However, mapping the history of natural hazards in a region, combined with the understanding of related geological forces can help forecast the locations and likelihoods of future events. (MS-ESS3-1 GBE)

Natural hazards can be local, regional, or global in origin, and their risks increase as populations grow. Human activities can contribute to the frequency and intensity of some natural hazards. (HS-ESS3-3 GBE)