



ECO-SCHOOLS PATHWAYS TO SUSTAINABILITY ALIGNMENT TO THE GLOBE PROGRAM

ATMOSPHERE INVESTIGATION

GLOBE student data within the *Atmosphere Investigation* aids scientific understanding of spatial gaps in air temperature and precipitation coverage by weather monitoring stations, important data on aerosols and surface ozone. In addition, atmospheric data play a critical role in the calibration of satellite instruments collecting data on, for example, clouds and aerosols.

ECO-SCHOOLS USA PATHWAY

GUIDING QUESTIONS TO SUPPORT INTEGRATION



BIODIVERSITY

Investigate and increase biodiversity at school and within the community.

How is **biodiversity** in our schoolyard and neighboring communities impacted by changes in temperatures in our soil, air and water?



CLIMATE CHANGE

Find meaningful lasting ways to reduce the school's carbon footprint.

What does data collected the following protocols, aerosols, surface ozone, temperature, and precipitation coverage, convey about how the **climate is changing** in our community?



CONSUMPTION AND WASTE

Analyze and address the full life cycle of a school's products including what teachers, staff and students consume.

What is the connection between our **consumption and waste habits** and changes in atmospheric conditions?

ATMOSPHERE INVESTIGATION, PAGE 2 OF 3

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GUIDING QUESTIONS TO SUPPORT INTEGRATION



ENERGY

Investigate energy habits, the school and states fuel mix and ways to conserve energy.

What are the relationships between **energy** use and atmospheric changes over short and long periods of time?



HEALTHY LIVING

Promote sustained, unstructured time outdoors, increase physical activity and other healthy lifestyle choices that benefit the mind, body and soul.

How do atmospheric conditions impact time **spent outdoors**? How can students monitor atmospheric conditions to better serve the **health** of the entire school community?



LEAF

Identify forest systems and the roles they play in the environment, a community and the economy.

How can understanding current and long term atmospheric data inform our **forestry** decisions?



SCHOOLYARD HABITATS

Design, develop and maintain sustainable gardens as laboratories for learning, community building and as safe places for reflection and mindfulness.

When developing an action plan, how can understanding your local atmospheric weather and climate impact the design and development of the **outdoor learning laboratories**?

ATMOSPHERE INVESTIGATION, PAGE 3 OF 3

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GUIDING QUESTIONS TO SUPPORT INTEGRATION



TRANSPORTATION

Sustainable solutions to reduce travel footprints by investigating consequences and evaluating solutions.

Does **traffic** in and around my school impact air and surface temperature?



WATER

Investigate the school community's water habits, research water resources and implement and practice conservation strategies.

Using GLOBE protocols, how can students validate city **water** quality readings?



WOW, WATERSHEDS, OCEANS AND WETLANDS

Water connects us all and usable water is finite. Investigate the health of bodies of water small and large, identify the habitat requirements of plant and animal species and instill a stewardship and conservation ethic.

How do seasonal precipitation patterns impact our local **watershed** health? Have the patterns changed overtime?