



ECO-SCHOOLS PATHWAYS TO SUSTAINABILITY ALIGNMENT TO THE GLOBE PROGRAM

BIOSPHERE INVESTIGATION

We rely on the Earth's surface (a little bit above and below) to supply most of what we need to live. Therefore, mapping and monitoring the surface is critical to our wise use and protection of our planet. The *Biosphere Investigation* deals with the mapping and monitoring of both surface and phenological indicators. Students and scientists investigate soils through the collection of data using measurement protocols and using instruments that meet certain specifications in order to ensure that data are comparable.

ECO-SCHOOLS USA PATHWAY

GUIDING QUESTIONS TO SUPPORT INTEGRATION



BIODIVERSITY

Investigate biodiversity and research and implement solutions to increase wildlife biodiversity at school and within the community.

How does a **biodiverse** schoolyard impact Arctic bird migration through our community?



CLIMATE CHANGE

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

What is the relationship between **climate change** and a plant's blooming period?



CONSUMPTION AND WASTE

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

How have our **consumption and waste** habits impacted land cover in our community?

BIOSPHERE INVESTIGATION, PAGE 2 OF 4

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GUIDING QUESTIONS TO SUPPORT INTEGRATION



ENERGY

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

How do our sources of **energy production** impact bird migration?



HEALTHY LIVING

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

Is there a relationship between **physical activity or connections to nature** and our community's percentage of pervious versus impervious surfaces?



LEAF

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

What role does tree biometrics play in determine the **health of the trees** on our school's property?

BIOSPHERE INVESTIGATION, PAGE 3 OF 4

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SCHOOLYARD HABITATS

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

GUIDING QUESTIONS TO SUPPORT INTEGRATION

Using the **schoolyard habitat** as an outdoor learning laboratory can students track the Ruby-Throated hummingbirds in relationship to the budburst of its food sources?



TRANSPORATION

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

How might the integration of **bike lanes** for safer routes to and from school change land cover classifications in the community?



WATER

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

Is there a relationship between our municipality's **water conservation practices** and the length of our fire season?

BIOSPHERE INVESTIGATION, PAGE 4 OF 4

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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.

GUIDING QUESTIONS TO SUPPORT INTEGRATION

What is the relationship between the abundance of seaweed reproductive phases and ocean temperature? Are there implications for **ocean ecosystems**?