



The Journey of Content-Specific Global Learning

Guidance for Embedding Global Learning into all Content Areas

The Purpose of the Journey Every educator should consider how much the world beyond the classroom, neighborhood, state and country will impact each student. Each of their future endeavors will involve a touch with a perspective different than his or her own and educators can help prepare students to be successful with those experiences. Fostering lifelong learning and globally-conscious students can happen when the educators infuse global ideas into their classroom. From decorating with travel mementos to inviting in guest speakers with diverse backgrounds to utilizing internationalized content, every teacher can have an impact.

Five Reasons Why Global Learning is Important in all Content Areas:

1. In a globally-focused curriculum, students learn that the world needs them to act, and that they can make a difference.
2. A new generation of students requires different skills from the generation that came before. The ability to thrive in this new and rapidly changing environment is grounded in a globally-focused curriculum.
3. A changing world and global workforce; a company in one country may employ, export or import with a company in another country.
4. The culture that once lived halfway around the world now lives just down the street. Changing demographics in classrooms and neighborhoods
5. A globally-focused curriculum engages students in their own learning and motivates them to strive for knowledge and understanding. It creates lifelong learners. Global Learning challenges students to investigate the world, consider a variety of perspectives, communicate ideas, and take meaningful action.

In order to develop high-quality global learning opportunities, educators need to know what global competence entails. Every young person should be able to:

- Investigate their world, including their immediate environment and beyond.
- Recognize their own and others' perspectives.
- Communicate and collaborate with diverse audiences.
- Translate their ideas and findings into appropriate actions to improve conditions.

Behind the Wheel and Helping to Plan the Journey: Every teacher of every content can help any and all students become more globally competent. Enabling students to become more globally minded is not reinventing the curriculum or adding additional standards to instruction. Infusing global learning into student learning is simply reframing how one teaches by using a different lens. Below are content-specific resources to help teachers start.

*This document is specific to **6-12 Science**. Visit the [IDOE Global Learning](#) webpage for more resources and for the complete Content-Specific Global Learning Guide click [here](#).*

Packing Your Bags for the Journey: Use these two Symbaloo webmixes to get started with a bundle of resources curated with a lot of resources. The first is designed to give you a series of resources specific to global learning. The second is focused on teacher and student exchange where you'll find links to scholarships, fellowships and opportunities for students and teachers to travel. You can sign up for a free account to have the links with you wherever there is internet, you can find them on our website or by clicking below.



[Global Learning Webmix](#)

[Teacher & Student Exchange Webmix](#)

Moving along the Journey: 6-12 Science

"They (students) observe natural phenomena that cause them to wonder, ask their own questions and test their ideas. When they interpret their data, new questions arise, leading them into focused, purposeful research of the literature and further inquiry. The result is students who can understand, analyze, apply, and evaluate existing scientific knowledge in the context of global cultural perspectives, politics, economics and history." Asiasociety.org

Internationalized Standards: A resource for the Indiana Academic Standards for Science 2016 that includes a series of suggestions for infusing global content/perspectives into science. (Update to align with the Indiana Academic Standards for Science 2016 coming spring 2017) [Global Learning Resources](#)

Beginner Steps:

- Identify topics that you already implement that provide a natural opportunity to introduce a global prospective
- Provide an opportunity for students to work on researching a global issue/problem
- Pull in news and research from around the globe and various cultures
- Participate in global challenges or challenges focused on global issues
- Collaborate/Communicate/Perform research with schools in other parts of the world

Biology:

1. Interdependence: Describing how the human impact in various global societies impacts various ecosystems. Have students each choose a country and look at their ecosystem. Students can share in a small group format before choosing a potential solution to problem-solve one of the human behaviors to reduce that impact.
2. Inheritance and Variation in Traits: Consider having students evaluate and predict the characteristics of individuals from a variety of cultures. Provide students with two sets of DNA without the cultural background noted and having students determine the physical features of the offspring to determine cultural ancestry. [Ancestry Video](#)

Earth & Space Science:

1. Earth Cycles and Systems: Have students research how the nitrogen cycle varies globally. What causes this variation? What effects are seen? Do the same for phosphorus. [In the Netherlands](#), for example, extreme reactive nitrogen levels have changed the Dutch countryside's characteristic heathlands to grasslands.

Resources/Topics:

[Science is Global](#): Article about how students learn to think more like scientists when global elements are infused.

[IOP](#) (Institute of Physics) – Energy, sound, sports

[iEARN](#) (International Education and Resource Network) – Collaboration

[GLOBE](#) (Global Learning and Observations to Benefit the Environment) – Data, Collaboration

[ICCA](#) (International Council of Chemical Associations) – Sustainability, Climate Change, Impact, Policy

[AAAS](#) (American Association for the Advancement of Science) global outreach, science diplomacy

[SEDAC](#) (Socioeconomic Data and Applications Center) Biomes, Population, Landscape, Climate Change

[WHO](#) (World Health Organization) – Outbreaks (Zika), Immunizations, Policy

[Olympics](#) – Sports and locations around the globe, statistics, rates

Chemistry:

1. Properties and States of Matter: Have students examine samples of pure substances and mixtures and then ask them to research where and how those substances and mixtures are found or made. See [this video](#) about origins of four recent elements.
2. Atomic Structure and the Periodic Table: Have students research a variety of global policies on the utilization of nuclear energy and compare how nuclear energy is perceived around the world.

Physics:

1. Constant Acceleration: Using sports around the world as examples to have students discuss and create graphical problems using objects such as those used in international sports like: jai alai, soccer, rugby, badminton, and cricket.
2. Simple Circuit Analysis: While discussing voltage, have students look at international voltage converters and create a document to show consumers how to select a device before an international trip that won't damage their devices due to foreign voltage. Consider asking students why each country developed that type of voltage and outlet. [Video](#)

Environmental Science:

1. Population: Have students compare and contrast the factors that contribute to birth and death rates from the United States and another country. Students should share their findings in the form of an opinion speech to move toward the country with the best growth rate.



Overcoming Roadblocks and Speedbumps

Questions and Answers about Embedding Global Learning into Instruction



Q: Won't teaching global content take away from my standards-based content?

A: Although it may seem like you'd be doing more with the same amount of time, the idea of global learning is to teach the standard that you were going to teach anyway, but simply use resources and contexts that are globally-focused rather than the materials/resources/ideas that are focused on a primarily non-diverse or single-sided ideas.

Q: I am not well traveled. How am I supposed to teach globally when I have never been out of the country?

A: Although this may seem intimidating, this is where IDOE can help. The resources above, especially the Internationalized Indiana Academic Standards in the links at the top of the content area pages for Math, English Languages Arts and Social Studies, are here to share with you the ideas on how to do this without ever having left the country. Your content area specialists have also selected some standards from their courses to give you even more ideas across the curriculum. Also, consider giving your students some of the reigns and help them use their experiences and home cultures to infuse a "global" element into your classroom. If your school hosts exchange students, invite those students in too. The way that they learned the information that your students are learning may be quite different and could connect to some of your students better!

Q: Why should I spend time on global content when it is not in my standards nor is it assessed?

A: When you sit back and consider both why you entered the field of education and where students will be headed when they leave your classroom and school, this seems to be an easy answer. This is one of the most critical elements of helping your students be able to spread their wings once they leave the K-12 environment. Many of Indiana's universities are highly diverse both with international student populations that will be teaching some of their classes but also there are many more cultural backgrounds represented than to what some of our Hoosier students may be accustomed. Should your students be moving along to the workforce or the armed forces, interactions with individuals from backgrounds and with languages different than theirs are almost inevitable, thus it is our job as educators to prepare them for their next steps. If you are an elementary or middle level educator, you have the unique ability to establish such a strong and intriguing foundation for students to continue pursuing global topics and cultural studies beyond your classroom.

Q: Embedding global learning into my instruction sounds great in a perfect world, but I barely have time to plan lessons on my own content. How will I find time to find content and plan activities?

A: You are not alone. Teachers like yourself are being pulled in many directions every day. Our suggestion is to start small. Start with that unit that you already want to re-do or spice up. Let the Internationalized Indiana Academic Standards be a guide to get you started when you pick that standard or unit you want to do differently. There are ideas and resources listed to help get you started. You can also join the "Global Learning" Community on the Learning Connection where teachers can share lesson plan ideas with colleagues as they are integrating global content into their own classes.

Q: I teach a course that is not represented in this document. How can I get assistance in globalizing my course?

A: Some of the content areas that have examples above represent more than 30 different courses and we could not represent them all here. The pages of this document are meant to spark your ideas and get you started. If you teach a course that is not represented, please consider reaching out to the [Global Learning & World Languages Specialist at IDOE](#), visiting the [IDOE Global Learning website](#), visiting the [Asia Society website](#), or even visiting the [Partnership for 21st Century Learning website](#) to get some ideas about integrating global learning!