Modify Standards in Relation to Global Education­\_ANO

Type out the standard and identify the source of the standard.

2. Identify how you could integrate global education into each standard.

3. Cite specific TGC course materials that you used to modify the standards.

4. Suggest a formative or summative assessment for the standard revisions.

**2) MPS Curriculum Guide for Secondary School – Science 7**

The MPS Curriculum guide is derived from the Minnesota Academic Standards (MCA) for Science. The standard statements are stated as Learning Targets)

Unit 1: Natural Systems

* I can identify the parts of an ecosystem. (7.4.2.1.1, 7.4.2.1.2)
* I can trace the flow of matter in an ecosystem. (7.1.1.2.3, 7.1.3.4.1, 7.4.2.1.1., 7.4.2.1.2, 7.4.2.2.1, 7.4.2.2.2, 7.4.2.2.3)
* I can describe where energy is changed and stored in a food web. (7.1.1.2.2, 7.1.1.2.3, 7.1.3.4.2, 7.4.2.2.1, 7.4.2.2.2)
* I can analyze the effect of biotic and abiotic factors on the number of organisms in a Minnesota ecosystem. (7.1.1.2.2, 7.1.1.2.3, 7.1.3.4.1. 7.1.3.4.2, 7.4.2.1.3)
* I can analyze the impact of human activities on an ecosystem. (7.1.1.7.1.3.4.1,

7.4.4.1.2)

Modifications:

* Students study the systems both man-made and natural systems. They extend the Minnesota ecosystem to a global system/ecosystem.
* They examine their individual and collective responsibility to the ecosystem sustainability.
* They adopt a lake and join a global water project monitoring organization.

Diversity

* I can explain why some organisms are more likely to survive and have offspring. (7.1.1.2.3, 7.1.3.4.1, 7.1.3.4.2, 7.4.3.2.3)
* I can explain the relationships between the characteristics of an organism, its genes, and the environment. (7.4.3.1.1, 7.4.3.1.2, 7.4.3.1.3, 7.4.3.2.4, 7.4.4.1.1)
* I can use the features of several organisms to hypothesize how closely the organisms are related. (7.4.3.2.1, 7.4.3.2.2)

TGC Materials to Use:

An analysis of these using *The Global Education Checklist* indicate that the MPS Curriculum guide and by extension the state standards does not sufficiently address global concepts, connections, ideas and issues.

From EdSteps’ *Global Competency Matrix:* there is also not enough evidence to indicate that the following global competence standards were addressed.

Investigate the World: Students investigate the world beyond their immediate environment

Recognize Perspectives: Students recognize their own and others’ perspectives

Communicate Ideas: Students communicate their ideas effectively with diverse audiences.

Take Action: Students translate their ideas and findings into appropriate actions to improve conditions

Modification:

* Students study organism survival in relation to the human species.
* They study issues of world hunger and impact on future human offspring.
* They research language diversity as an extension of biodiversity and propose ways for preserving.

Physical Properties of Matter

* I can apply safety procedures, tools and measurement instruments in scientific and engineering contexts. (8.1.3.4.2)
* I can classify substances based on their physical properties. (8.2.1.1.1, 8.2.1.1.2)
* I can explain physical changes in matter using the particle model. (6.2.1.1.1, 6.2.1.2.3, 6.2.1.2.1)

TGC Materials to Use

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From EdSteps’ *Global Competency Matrix:* there is also not enough evidence to indicate that the following global competence standards were addressed.

Investigate the World: Students investigate the world beyond their immediate environment

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Communicate Ideas: Students communicate their ideas effectively with diverse audiences.

Take Action: Students translate their ideas and findings into appropriate actions to improve conditions.

Modification:

* Students identify tools of science around the world including ancient tools and evaluate them for safety using their present day knowledge.
* Students examine measurement practices including counting systems around the world and evaluate their degrees of precision and accuracy.
* Research the development of the particle model through out history taking note of the sociopolitical climate of the time (Interdisciplinary connection).
* Students examine the reason for classification and research various classification systems of the globe.
* Students design, build and calibrate food-measuring instruments for a group of local traders in West Africa.

**3) The Benchmark for Science Literacy Standards (7- Human Society: G-Global Perspective**:

**By the end of the 8th grade, students should know that**

* Trade between nations occurs when natural resources or the skill to make something are unevenly distributed or when the costs of production are very different in different countries. A nation has a trade opportunity whenever it can create more of a product or service, or a better quality product or service, or a less expensive product or service than can another nation. 7G/M1\*
* The economic well being of a country may be enhanced by improving the skill and motivation of its workforce, by developing equipment or practices that are more efficient and produce higher quality products and services, and by engaging in trade with other nations. 7G/M2\*
* Treaties are negotiated between two or more nations to establish or maintain peaceful relationships, to define parameters for trade, or to create political or military alliances. 7G/M3\*
* The global environment is affected by national and international policies and practices relating to energy use, waste disposal, ecological management, manufacturing, and population. 7G/M5\*
* Communication and transportation technologies influence how much people in different countries may interact, whether it be for political, economic, or social purposes. 7G/M6\*\*
* International organizations such as the United Nations, the World Bank, and the European Union provide a structure for nations to communicate, reach consensus, and negotiate treaties, but these organizations often have only limited authority over their members. 7G/M7\*\* (SFAA)
* Treaties do not affect all of the people in a country equally. 7G/M8\*\* (SFAA)

The standard recognizes that as a species, we are social beings who live out our lives in the company of other humans. We organize ourselves into various kinds of social groupings. Which also recognizing that students should know the standards stipulated above, the standards suggested placing them within the discipline of social science. According to the Benchmark, scientific literacy does require, however, a broad-based knowledge across all of these disciplines. Therefore, instead of focusing on the special features of the individual social-science disciplines, the benchmarks delineate what students at various levels of development ought to know about how social science illuminates human behavior.

There was no sufficient evidence to show that the Benchmark addressed comprehensively the

Modification: Include EdSteps *Global Competency Matrix* *‘Take Action’* matrix