

SCIENCE – GRADE 4

Grade: 4

Academic Standard: 4.1

Academic Standard Indicator: 4.1.3

Core Standard: Yes

Standard Description (Academic or Indicator): Explain that clear communication is an essential part of doing science since it enables scientists to inform others about their work, to expose their ideas to evaluation by other scientists, and to allow scientists to stay informed about scientific discoveries around the world.

Suggestion for Integrating International Content: Have students examine the benefits of international forums, such as the The Climate Project, and discuss how scientists' work from many countries address similar topics and offer a range of solutions and action plans. **Extension:** Have students hold their own global climate summit and present a position from a specific country's perspective. **Suggested resource:** <http://www.theclimateproject.org>.

Grade: 4

Academic Standard: 4.1

Academic Standard Indicator: 4.1.3

Core Standard: Yes

Standard Description (Academic or Indicator): Explain that clear communication is an essential part of doing science since it enables scientists to inform others about their work, to expose their ideas to evaluation by other scientists, and to allow scientists to stay informed about scientific discoveries around the world.

Suggestion for Integrating International Content: Have students identify differences between the disciplines of science and engineering and give reasons why clear communication is essential between scientists and engineers who work together. Then have students discuss what communication skills and measuring tools are needed in order to communicate accurately in international projects.

Grade: 4

Academic Standard: 4.1

Academic Standard Indicator: 4.1.7

Core Standard: Yes

Standard Description (Academic or Indicator): Discuss and give examples of how technology, such as computers and medicines, has improved the lives of many people, although the benefits are not equally available to all.

Suggestion for Integrating International Content: Have students provide examples of how technology, such as computers and medicine, has improved the lives of many people in the world, although the benefits are not equally available to all citizens.

Grade: 4

Academic Standard: 4.3

Academic Standard Indicator: --

Core Standard: No

Standard Description (Academic or Indicator): Students continue to investigate changes of the Earth and sky and begin to understand the composition and size of the universe. They explore, describe, and classify materials, motion, and energy.

Suggestion for Integrating International Content: Have students research energy conservation, sustainable development, and recycling practices locally and in other countries. Then have students discuss how they might get involved in conservation efforts, locally and globally. **Suggested resource:** <http://getinvolved.conservation.org/site/PageServer>.

Grade: 4

Academic Standard: 4.3

Academic Standard Indicator: 4.3.5

Core Standard: Yes

Standard Description (Academic or Indicator): Describe how waves, wind, water, and glacial ice shape and reshape the Earth's land surface by erosion of rock and soil in some areas and depositing them in other areas.

Suggestion for Integrating International

Content: Have students analyze how glaciers impact places like the Himalaya Mountains, Iceland, Greenland, Antarctica, and Alaska.

Suggested resource:

<http://www.livescience.com>.

Grade: 4

Academic Standard: 4.3

Academic Standard Indicator: 4.3.5

Core Standard: Yes

Standard Description (Academic or

Indicator): Describe how waves, wind, water, and glacial ice shape and reshape the Earth's land surface by erosion of rock and soil in some areas and depositing them in other areas.

Suggestion for Integrating International

Content: Have student teams each choose a different region of the world. After researching the different ways in which wind, heat, and ice constantly reshape their region, have the teams make presentations to the whole class.

Grade: 4

Academic Standard: 4.3

Academic Standard Indicator: 4.3.12

Core Standard: yes

Standard Description (Academic or

Indicator): Investigate, observe, and explain that heat is produced when one object rubs against another, such as one's hands rubbing together.

Suggestion for Integrating International

Content: Have students examine how people from around the world start fires by using friction, specifically different Aboriginal fire starting techniques. **Suggested resource:**

<http://www.aboriginalculture.com.au>.

Grade: 4

Academic Standard: 4.4

Academic Standard Indicator: --

Core Standard: No

Standard Description (Academic or

Indicator): Have students learn about an increasing variety of organisms - familiar, exotic, fossil, and microscopic. They use appropriate

tools in identifying similarities and differences among them. They explore how organisms satisfy their needs in their environments.

Suggestion for Integrating International

Content: Have students consider how certain characteristics in plants and animals could be advantageous for survival and reproduction in one country as compared to another country.

Grade: 4

Academic Standard: 4.4

Academic Standard Indicator: 4.4.8

Core Standard: No

Standard Description (Academic or

Indicator): Know and explain that artifacts and preserved remains provide some evidence of the physical characteristics and possible behavior of human beings who lived a very long time ago.

Suggestion for Integrating International

Content: Have students explore how scientists learn about human characteristics and behavior through mummies. Compare findings related to the Iceman (a mummy found in the Alps) and the Ice Maiden (a mummy of an Inca girl).

Suggested resource:

<http://www.discovereducation.com>.

Differentiated Instruction- Special Needs

Accommodations: Set up a mock archaeological dig for students and have them match items that they find with possible uses.

Differentiated Instruction- Highly Able

Accommodations: Provide a variety of presentation genres for students to select from to demonstrate content knowledge, such as a diorama, PowerPoint, chart, etc. Then have students present to other classes in the school.

Grade: 4

Academic Standard: 4.4

Academic Standard Indicator: 4.4.11

Core Standard: No

Standard Description (Academic or

Indicator): Explain that there are some diseases that human beings can only catch once. Explain that there are many diseases that can be

prevented by vaccinations so that people do not catch them even once.

Suggestion for Integrating International

Content: Explain to students that there are many diseases that can be prevented by vaccines, but some countries do not have access to the vaccinations that industrialized countries possess. Have students analyze the consequences to people, especially children, in these countries.
