

Developing the Next Generation of Geo-Literate Citizens Integrating Decision-Making Skills into the Classroom



Stakeholder Consequences Decision Making

To be successful in the ever-shifting 21st century learning landscape, today's students need to be critical of information they are consuming by asking questions, parsing out the issues, and identifying problems. Students need to be able to recognize and analyze information from different perspectives and understand how social, political, economic, and cultural values can influence decisions. They need to have a general understanding of the state of the world, including political and geographic boundaries and natural resources. They need to identify problems and form arguments from evidence. Ultimately, they need to be able to communicate their thinking to others. Today's students are the next generation of decision makers and caretakers of our earth. To prepare them for this responsibility, we need to emphasize geo-literacy within the curriculum to help students develop a depth of understanding and reasoning about the implications of human actions and the consequences for our world.

Stakeholder Consequence Decision Making and Common Core State Standards

The SCDM framework aligns to the Common Core State Standards by providing learning experiences that increase the **reading** of rigorous and relevant non-fiction primary and secondary source text, developing students as critical consumers of information, and providing a structure to help students analyze an argument by identifying sufficient evidence and valid reasoning. The SCDM framework also supports the development of **writing** by providing a step-by-step process for students to follow as they are developing their own argument. Adding the decision making process into the curriculum also provides a rich context for additional research projects. The SCDM framework is designed for a collaborative learning environment where the discussion of ideas drives the learning process. The SCDM framework explicitly outlines each step in the process of sharing individual thinking and the presentation of ideas. This aspect of the framework supports students in developing their **speaking and listening skills** by asking students to organize and present their own ideas, listen to the ideas of others, and collaborate with classmates to generate a final decision statement.

Opportunities to Explore

AND PROMOTE GEO-LITERACY IN THE CLASSROOM

A way to promote geo-literacy within the classroom is to contextualize learning by incorporating more decision-making opportunities for students to explore. The Stakeholder Consequences Decision Making (SCDM) framework was developed to provide educators and students with an explicit process for guiding the teaching of decision-making. For more information on specific steps of SCDM, refer to the article “Learning to Make Systematic Decisions”.

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Four stages of the SCDM process:

1. Establishing constraints and considerations
2. Identifying consequences
3. Assessing impacts on stakeholders
4. Weighing impacts on stakeholders

This process helps students learn to establish decision-making criteria and identify the consequences of a decision. Students also explore the various consequences of a decision when they apply individual, social beliefs, and cultural values to a situation.

Two Approaches

TEACHING DECISION MAKING

The SCDM framework can be incorporated into the curriculum in two ways. The framework’s structure can be used to support students in making a decision. In addition, SCDM can be integrated into lessons as a guide for analyzing a decision that has already been made.

Students as Decision Makers

CASE 1: LAND DEVELOPMENT AND PROTECTING NATURAL HABITATS

A growing population in a coastal town in Florida is in desperate need for a larger high school and has acquired some land for this purpose. The land they have purchased is also home to a large population of gopher tortoises, which happens to be a keystone species within the ecosystem. Is there a way for the town to have its school and also protect the gopher tortoises?



In this example, the decision has not been determined. Students are asked to take on the role of a decision maker and ultimately provide a recommendation for a final decision. Students will explore all aspects of the scenario to develop a list of constraints and considerations they have to work within. This analysis of the scenario helps students articulate three options. For each of the possible options, the students explore the possible consequences by creating a cascading consequences chart and develop a stakeholder's impact chart. In the final stage, students weigh the various impacts of the three options on the stakeholders based on the decision makers' values. From this process a decision statement is generated. For more on this instructional approach see [Learning to Make Systematic Decisions](#)¹.

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Deconstructing a Decision

CASE 2: MAKING INFORMED ENVIRONMENTAL DECISIONS

In northern Kenya, a decision was made to construct multiple dams on the tributaries that feed into the Lake Turkana, the largest desert lake in the world. These dams provide electricity to three neighboring countries. The construction of these dams has impacted migratory bird and animal patterns, affected indigenous species, altered the chemistry of the lake, and flooded the fertile land around the new dam sites.

In this example, students take on the role of one of the stakeholders within this decision. They would explore the information provided through the lens of a particular stakeholder—identifying that stakeholder's needs and wants, articulating their culture, personal and social beliefs and values, and assessing the impact of the decision on their stakeholder. Students then explore the decision through multiple stakeholders' perspectives and focus on deconstructing the decision-making process. By analyzing an already determined decision, students develop a deep understanding of the problem and the consequences of that particular decision, and they begin to appreciate the complex nature of making decisions. The lesson ["Making Informed Environmental Decisions"](#)² was designed using this approach.



¹http://education.nationalgeographic.com/education/media/learning-make-systematic-decisions/?ar_a=1

²http://education.nationalgeographic.com/education/lesson/making-informed-environmental-decisions/?ar_a=1

Successful implementation of the SCDM process fosters a classroom culture that:

- Supports questioning, exploring situations from multiple perspectives, assessing implications and impacts of actions, and debating ideas.
- Promotes collaborative learning, group problem solving, and idea sharing
- Uses instructional materials that contain rich, open-ended scenarios that support multiple perspectives with opportunities for students to dissect ideas and discuss their reasoning.

In either use—as an analysis tool or a decision-making tool—the SCDM supports students in their development of geo-literacy by asking students to wrestle with complex situations and learn the skills necessary to make well-reasoned, systematic decisions.

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