

# Bioethical Decision-Making Model

## Abstract

Students work through a Bioethics Organizer worksheet from the perspective of a stakeholder to consider a bioethical dilemma. For use with any case study, scenario or bioethical dilemma.

## Logistics

### Time Required

- ▶ **Class Time:**  
50 - 80 minutes depending on how the activity is structured
- ▶ **Prep Time:**  
15 minutes

### Materials

Copies of student pages

### Prior Knowledge Needed

None

### Appropriate For:

Primary    Intermediate    Secondary    College

## Learning Objectives

- ▶ Advances in science and technology often create ethical, legal and social issues that must be addressed by society.
- ▶ There are numerous stakeholders involved in any bioethical dilemma, each with their own unique perspective.

## Special Features You'll Find Inside

- ▶ Instructions for various ways to use this model in the classroom.
- ▶ Suggested bioethics scenarios, case studies and dilemmas involved in genome science.

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## Classroom Implementation

**Choose one of the options below:**

### **One Case Study, Scenario or Bioethical Dilemma**

- Choose one case study, scenario or bioethical dilemma to work with.
- Have students work in pairs or small groups to read the case study, scenario or dilemma and identify the facts, stakeholders and ethical questions involved. They should record their thoughts in boxes 1-3 on the *Bioethics Organizer* (page S-1).
- As a class, decide who the major stakeholders are (i.e. patients, research scientists, biotech companies, other people with the disorder, etc.).
- Assign students to stakeholder groups.
- Have each stakeholder group discuss and fill out boxes 4-6 on the *Bioethics Organizer* (page S-1) from the perspective of their stakeholder and prepare a short summary of their discussion to share with the class.

### **Two or More Case Studies, Scenarios or Bioethical Dilemmas**

- Choose two or more case studies, scenarios or dilemmas to work with.
- Split the class into equal groups per each.
- Have each group complete the *Bioethics Organizer* (page S-1). They may either break into smaller stakeholder groups, or discuss the various stakeholder points-of-view as a whole group.
- Each group should prepare a brief summary of their discussion to share with the rest of the class.

## Adaptations

- If groups are struggling with the stakeholder roles, you may want to take some time to discuss the characteristics and attributes of each stakeholder group.
- If short on time have students fill out the *Bioethics Organizer* (page S-1) individually, using the case study, scenario or dilemma of choice.

## Quantities

### Per Student

- ▶ One copy of the *Bioethics Organizer* (page S-1).

## Bioethics Resources

**Visit the Genetic Science Learning Center website for links to bioethics case studies, scenarios or dilemmas covering a variety of topics!** Just log on to our website, visit the Teacher Resources and Lesson Plans page and view the bioethics activities listed under each module.

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## Standards

### U.S. National Science Education Standards

#### Grades 9-12:

#### Content Standard F: Science in Personal and Social Perspectives

- Science and Technology in Local, National and Global Challenges
  - » Science and technology are essential social enterprises, but alone they can only indicate what can happen, not what should happen. The latter involves human decisions about the use of knowledge.
  - » Understanding basic concepts and principles of science and technology should precede active debate about the economics, policies, politics, and ethics of various science- and technology-related challenges. However, understanding science alone will not resolve local, national, or global challenges.
  - » Individuals and society must decide on proposals involving new research and the introduction of new technologies into society. Decisions involve assessment of alternatives, risks, costs, and benefits and consideration of who benefits and who suffers, who pays and gains, and what the risks are and who bears them. Students should understand the appropriateness and value of basic questions—"What can happen?"—"What are the odds?"—and "How do scientists and engineers know what will happen?"

### Why Log-In On Our Website?

**Logging in as a teacher on the Genetic Science Learning Center website has its benefits. You'll get exclusive access to great resources just for you!**

- Get links to resources for this and other Print-and-Gos™.
- Access extra media materials for this module.
- Download classroom-ready presentations and graphics.
- Tips for using Print-and-Gos™ with online materials.

**and much more!**

### B. AAAS Benchmarks for Science Literacy:

#### Grades 6-8

#### The Nature of Technology

- Issues in Technology
  - » Rarely are technology issues simple and one-sided. Relevant facts alone, even when known and available, usually do not settle matters entirely in favor of one side or another. That is because the contending groups may have different values and priorities. They may stand to gain or lose in different degrees, or may make very different predictions about what the future consequences of the proposed action will be.

#### Grades 9-12

#### The Nature of Technology

- Issues in Technology
  - » Social and economic forces strongly influence which technologies will be developed and used. Which will prevail is affected by many factors, such as personal values, consumer acceptance, patent laws, the

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availability of risk capital, the federal budget, local and national regulations, media attention, economic competition, and tax incentives.

- » In deciding on proposals to introduce new technologies or to curtail existing ones, some key questions arise concerning alternatives, risks, costs, and benefits. What alternative ways are there to achieve the same ends, and how do the alternatives compare to the plan being put forward? Who benefits and who suffers? What are the financial and social costs, do they change over time, and who bears them? What are the risks associated with using (or not using) the new technology, how serious are they, and who is in jeopardy?

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