LESSON 1:
Introduction to Bioethics

INTRODUCTION

Students are introduced to the characteristics of an ethical question and learn to distinguish ethical questions from other types of questions, such as legal or scientific questions. Students then identify an ethical question and participate in an ethical dilemma involving the distribution of a scarce resource—a flu vaccine—during a flu outbreak. Students are asked to determine the best course of action in the face of conflicting choices, while examining the underlying themes that serve as a basis for their reasoning. Lastly, students experience how relevant facts influence decision-making.

KEY CONCEPTS

- Ethical questions are characterized by the following:
  - They often involve the words "ought" or "should," implying a difficult decision must be made.
  - There are several alternate solutions, none of which is without some challenging or problematic aspect.
  - They contain conflicting moral choices and dilemmas, and the underlying values of the people involved may clash.
  - They have no right or wrong answer that satisfies all parties, but better or worse answers based on well-reasoned justifications.
- It is important to gather as many facts as possible when making decisions about ethical questions.
- Ethical questions arise because of our ***social responsibilities*** to others in our community and because our behavior is capable of influencing the welfare of others.

Values signify what is important and worthwhile. They serve as a basis for moral codes and ethical reflection.

Morals are codes of conduct governing behavior. They are values "put into practice" as actions.

Ethics provide a systematic, rational way to work through dilemmas and to determine the best course of action in the face of conflicting choices.

LEARNING OBJECTIVES

Students will be able to:

- Identify the characteristics of an ethical question, and distinguish an ethical question from other types of questions.
- Recognize that reasoned judgment is valuable when making difficult decisions.
- Understand how facts contribute to decision-making.
- Reason through a difficult ethical scenario.

CLASS TIME

One class period of 55 minutes.

MATERIALS

Materials	Quantity
Student Handout 1.1—*Pandemic Flu!*	1 per student
Computer with projector *(optional)*	1

TEACHER PREPARATION

Make copies of Student Handout 1.1—*Pandemic Flu!,* one per student.

NOTE TO THE TEACHER

It is especially important to foster a safe classroom atmosphere when discussing ethical issues that may involve conflicting moral choices. Please review or create classroom discussion ground rules ("norms") before proceeding. Instructions for doing this can be found in the *Appendix.*

PROCEDURE

Part I: What is Bioethics?

Activity Time: 5 minutes

1. Tell students that the class is embarking on a week-long study of bioethics. Define both ***ethics*** and ***bioethics*** for students, as follows:

   Ethics is a field of study that looks at the moral basis of human behavior (***"Why do we act as we do?"***) and attempts to determine the best course of action in the face of conflicting choices (***"How do we decide what to do when people disagree about a complex issue?"***). It is a key component of living within a society in a civilized way.

   Bioethics is a subfield of ethics applied to the life sciences. The discipline of bioethics helps us, as a society, make decisions about how best to use new scientific knowledge, how to make policy decisions regarding medicines or treatments, and how we should behave with each other. It explores ethical questions such as:

   "How should we decide who receives organ transplants?" or, ***"Should a terminally ill patient be allowed to end his/her life with physician-prescribed medication?"***

2. Tell students that they will begin the unit by delving into an ethical discussion, after defining what constitutes an ethical question.

Part II: What is an Ethical Question?

Activity Time: 15 minutes

3. Tell students that, in the study of bioethics, the first step is often to recognize and define what the ***ethical question*** is. Students will need to refer back to this definition; teachers may either project the definition or ask students to take notes.

   Ethical questions have the following components:

   - Ethical questions often involve the words "ought" or "should," implying a difficult decision must be made.
   - There are several alternate solutions, none of that is without some challenging or problematic aspect.
   - They contain conflicting moral choices and dilemmas, and the underlying values of the people involved may clash.
   - They have no right or wrong answer which satisfies all parties, but better or worse answers based on well-reasoned justifications.

   Reminds student that not all questions with the word "should" are ethical questions. For example, ***"Should I bring my umbrella today?"*** does not meet the other criteria.

4. Tell students that there are different types of questions, each having different characteristics. In addition to ethical questions defined above, there are questions pertaining to law, to science, to personal preference, to one's culture or religion. **[Note:** These additional types of questions are further defined in ***Step #7***.]

5. Ask students to pick out the ethical questions from the following list of questions. It may be helpful to project the questions for all to see.

   a) Is it legal to sell human kidneys in the United States?

   b) How does a kidney function inside the body?

   c) What does my religion say about whether or not it is acceptable to donate a kidney?

   d) Should individuals who donate a kidney choose who their organ should go to?

   e) What type of diet allows for the best athletic performance?

   f) Is killing someone always illegal?

   g) Should people select the sex of their child in advance?

   h) Are same-sex marriages constitutional?

   i) What is the most appropriate way to worship?

   j) Do kidneys taste good?

Questions **d** and **g** are ethical questions, as they fulfill the criteria listed in ***Step #3.***

6. Further define other types of questions based on the definitions below.

7. Revisit the list of questions, a- j, and have students identify which type of question they represent.

   Legal questions ask what the law says about a particular issue. Questions **a**, **f**, and **h** are legal questions.

   Scientific questions can be explored through scientific inquiry and observation. They rely on empirical and measurable evidence. Questions **b** and **e** are scientific questions.

   Religious/Cultural questions ask what would be in line with a particular belief or practice, or the common practices of a particular culture. Questions **c** and **i** are religious/cultural questions.

   Personal preference questions relate directly to the speaker and are often modified by cultural bias. Question **j** is one of personal preference.

[**Note:** Questions may be of more than one type, and other types of questions also exist.]

A good complementary activity can be found in the National Institutes of Health Curriculum Supplement Series *Exploring Bioethics.* Activities in Module 1 support students in distinguishing types of questions. The curriculum can be found at: http://science.education.nih.gov/customers.nsf/HSBioethics.htm.

Part III: Ethical Group Discussion—Pandemic Flu

Activity Time: 20 minutes

8. Ask students what type of question the following is: ***"Who should be saved during a flu outbreak when there is not enough life-saving vaccine available for everybody?"***

9. Review the criteria for an ethical question to see that it is, indeed, an ethical question.

10. Pass out Student Handout 1.1—*Pandemic Flu!* Allow about 5 minutes for students to read the scenario and individually make their choices about the distribution of the vaccine. Ask students to pay close attention to ***how*** they are making their decisions.

11. On the board, draw the following table. Students will record their answers on the *Student Handout.*

Who should receive the vaccine?	How do you decide?

The purpose of this exercise is to allow students to practice "reasoning through" a difficult situation that cannot be solved easily, rather than exercising omnipotent powers.

"Who should receive the flu vaccine?" is a question that asks us to decide how best to share a scarce resource. This type of question can be applied to many topics, from organ donation allocation to natural resources.

12. Some students may be blocked to the point of inaction by the lack of facts given in the case. In this case, a decision ***must*** be made immediately. ("What if the vaccine was expiring right away?") ***Not*** making a decision will also have consequences.

13. In small groups, have students spend about 5 minutes discussing their answers, filling out their tables as they proceed. They do not need to come to consensus, but need to understand where there are differences in viewpoints and opinions.

14. Begin debriefing the exercise by reading through the list of characters one by one and having students raise their hands if they chose to give that character the vaccine. Ask questions such as: "Who chose to give the vaccine to the doctor?" Go through the list with minimal discussion.

15. Next, choose characters to discuss in more detail. Ask students ***how*** (on what basis) they made the decision to give the vaccine to a particular character. For example, "For those of you who chose to vaccinate the doctor, how did you decide?" You may also choose to ask, "Did anybody choose ***not*** to vaccinate the teacher? How did you decide?"

16. In the interest of time, make sure to discuss the doctor, the orphaned two-year old, and the mother refusing treatment. These three individuals highlight concepts behind bioethical principles that will be introduced to the students in *Lesson Two*. Continue with other characters from the exercise as time permits.

17. Point out some common approaches that may appear during the student discussion and write the italicized words on the board. By a show of hands, have students show whether they considered that approach when making their decisions.

    Approach 1: *Save the Youngest.* In choosing this, students are maximizing the life span for the greatest number of people.

    Approach 2: *Draw Straws* (or any randomization technique). This option values fairness.

    Approach 3: *Save the Weakest.* This option considers the special needs of vulnerable populations.

    Approach 4: *Save the Most Useful.* Saving someone who has special knowledge and/or may be able to save others benefits a larger number of people.

    Approach 5*: Respect Relationships.* Honoring the dignity of human beings includes acknowledging their relationships.

18. Tell students that these approaches reflect ***societal standards*** or ***codes of conduct*** that we often rely on when faced with difficult decisions or ethical questions. We will be exploring these in greater detail throughout the unit.

Part IV: The Need for Facts

Activity Time: 10 minutes

19. Underscore for students that in considering any ethical question, it is important to ***examine the facts*** available, and ***assess what additional information*** is needed. In the pandemic flu scenario, students had very little information from which to make difficult decisions. In most cases, more information may be gained through research or study.

20. Ask students, "What are the facts of this case?" and discuss what is known.

21. It is also helpful to define the "unknowns" in a case, as very few real-life situations will supply all the facts for all of the people involved. Eventually, a decision must be reached in the absence of a complete set of facts.

22. To illustrate how additional facts influence decision-making, present the following facts to add to the pandemic flu scenario.

    What if…?

    a) The senior citizen is primary caretaker for eight of her grandchildren.

    b) The mother refusing treatment is in her 60s. The son is in his 40s.

    c) The doctor is a podiatrist.

    d) The woman who thinks she is pregnant has been married to the orderly for about a year. They have no children.

23. Discuss with students how, or if, these additional facts changed their decisions.

24. Refer to the approaches written on the board. If students changed their minds about who should receive the vaccine, did the decision still fit one of the approaches? Are there other approaches that should be added to the list?

CLOSURE

25. Tell students that ethical questions arise whenever ***individuals***, with their own values and moral codes, interact within a larger ***community*** and a decision must be made about conflicting choices.

26. Share with students that science is a human enterprise that is conducted in a social context—science clearly has ethical implications. Offer the following examples of ethical questions (not for discussion, merely as illustration):

    - Should we allow embryos left over from in vitro fertilization clinics to be destroyed for stem cell research, if they would otherwise be discarded?
    - Should human clinical trials be conducted in populations that may not be able to afford the final medication, even if that population benefits from the trial?

27. Tell students that these are real-world, complex, engaging ethical questions. By learning how to ***recognize*** an ethical question, ***assess*** the facts, ***listen*** to different viewpoints, and make a ***reasoned judgment*** about a course of action, students gain experience in critical thinking, and grow in their understanding and respect for other points of view. In their lifetimes, students will be confronted with many ethical issues related to science—an understanding of bioethics and decision-making will help them make well-reasoned and informed choices.

HOMEWORK

- Ask students to find a news article that highlights the larger societal and ethical implications of science. Students should ***identify and write down an ethical question*** pertaining to that news topic or issue, and be prepared to share it with the class.
- Alternately, students may write down an ethical question they have faced in their own lives. Students should not be expected to share these with the class.

ADDITIONAL RESOURCES FROM *AN ETHICS PRIMER*

From the *Lesson Strategies* section:

- **General Discussion Background:** Suggestions for Conducting Classroom Discussions
- **Awareness:** Ethical Questions

STUDENT HANDOUT 1.1

Pandemic Flu!

Name_____ Date_____ Period_____

Read the scenario and come to a decision on your own. When you and your group are finished, discuss your answers in a group. **Be prepared to explain *how* you reached your decision**. The purpose of this exercise is to practice using reasoning skills in a difficult, hypothetical situation in which there is no clear answer.

Scenario

A severe worldwide outbreak of a flu caused by a respiratory virus has occurred. It threatens everybody in your community—healthy young people as well as the very old and very young. You cannot count on receiving federal assistance during this pandemic. This deadly flu has already killed people in your community and exposure to the flu is expected. Anybody who has not been vaccinated will succumb to the flu and most likely die. Effective vaccines exist in limited supply. There are enough vaccines to treat more than half of the community members during the first wave of the pandemic.

There are ten people who require the vaccine at this time and you can only treat six.
The four individuals who do not receive the vaccine will most likely die.

Which six should receive the flu vaccine?

Woman who thinks she is six weeks pregnant

Recently orphaned two-year old

Nurses' aide who works at a nursing home

Senior citizen who has 15 grandchildren

Thirteen-year-old twins

Doctor

Elementary school teacher

Mother and son; the mother is refusing treatment so her son will be treated

Who Should Receive the Vaccine?	How Did You Decide?

HANDOUT

HANDOUT