

Assignment Discovery Online Curriculum

Lesson title:

Multiple Intelligences

Grade level:

9 - 12

Subject area:

Contemporary Issues

Psychology

Duration:

Two class periods

Objectives:

Students will:

1. understand Howard Gardner's theory of multiple intelligences;
2. compare the theory of multiple intelligences with traditional theories of intelligence; and
3. explore the implications of the theory of multiple intelligences for schools and society.

Materials:

- Computer with Internet access (optional but very helpful)
- Copies of Classroom Activity Sheet: Howard Gardner's Theory of Multiple Intelligences
- Copies of Classroom Activity: Short Biographies of Eminent People
- Copies of Take-Home Activity Sheet: A Personal Look at Multiple Intelligences

Procedures:

1. Begin the lesson by giving about 5 minutes to write about the traditional definitions of intelligence. You may prompt them with the following questions:
 - What does it mean to be intelligent in our society?
 - What abilities do schools value and promote?
 - How do we measure a person's intelligence?
2. Hold a class discussion about students' ideas. These ideas may come up:
 - Intelligence is a single, general capacity that everyone possesses to some extent. It's what you are born with and there's little you can do to change it.
 - Schools value having a good vocabulary, the abilities of analyzing reading material and solving complex math problems, strong memories that retain much information, and the ability to find solutions to problems quickly.
 - Tests can measure intelligence, such as the IQ Test and the Scholastic Aptitude Test (SAT).
3. Introduce Howard Gardner's theory using the Classroom Activity Sheet: Howard Gardner's Theory of Multiple Intelligences. With the students, read the descriptions of different intelligences. Discuss

which of these intelligences students think are most valued by schools and society. Is it possible for an individual to have more than one intelligence? Students will probably suggest that schools value linguistic and logical-mathematical intelligences the most, as evidenced by the emphasis placed on the core subjects of English, social studies, math, and science. Further evidence is the type of assessments, both teacher-generated and standardized, usually given to students. Students will likely agree that most people possess all of the intelligences to various degrees and that it is possible for an individual to excel in more than one area.

4. Pass out copies of the Classroom Activity Sheet: Short Biographies of Eminent People. Have students read through the biographies and determine the types of intelligences manifested by each person. If students have trouble, ask them to consider what value the intelligences of these people have in society. They might also consider how these intelligences match traditional ideas about intelligence.
5. Take a few minutes to discuss students' responses. Do these people fit the traditional definition of intelligence? Point out that Gardner's multiple intelligences do not necessarily fit those traditional definitions. Ask students if they can think of any other people that they consider intelligent who do not fit the traditional definition. Finally, ask students if they have changed their ideas about intelligence. If so, how?
6. Invite students to consider the implications of multiple intelligence theory in a school setting. Divide the class into small groups of four or five and give them about 15 minutes to discuss the following questions, which you may wish to write on the board or display on an overhead projector:

If schools recognized multiple intelligences, how might the following activities be revised?

- a. activities in the classroom
- b. classroom assignments
- c. graduation requirements

For additional information about Gardner's theory, refer students to the following Web sites:

<http://edweb.gsn.org/edref.mi.th.html>

http://www.newhorizons.org/trm_gardner.html

<http://pzweb.harvard.edu/SUMIT/MISUMIT.HTM>

7. Ask each group to share one or two main ideas from their discussions. Students might conclude some of the following:
 - Classroom activities would be more varied, allowing students to learn using all areas of intelligence that are appropriate to a subject.
 - Students would be given more options for showing what they know, understand, and can do. For example, building a model might be a reasonable alternative to taking a written test.
 - Graduation requirements might give more emphasis to coursework that addresses areas of intelligence other than linguistic and logical-mathematical.
8. For homework, have students consider the personal implications of Gardner's theory by completing the Take-Home Activity Sheet: A Personal Look at Multiple Intelligences. If time permits, discuss students' ideas during the next class period.

Adaptations for younger students:

Begin the activity by asking students to think about the ways they are smart. On the board, list students' responses, which may include the traditional (reading, spelling, solving math problems) and other types of intelligence (working a jigsaw puzzle, fixing a broken toy, determining the easiest way to get from one location to another). Introduce Gardner's theory of multiple intelligences. Work as a class to come up with examples of how each intelligence may be manifested in an individual. Conclude by working on the Take-Home Activity Sheet as a whole-class activity.

Discussion Questions:

1. Traditionally, people have defined someone who is intelligent as an individual who can solve problems, use logic to answer questions, and think critically. But psychologist Howard Gardner has a much broader definition of intelligence. Compare the traditional idea about intelligence with Gardner's. How have his ideas changed the way we assess the strengths and weaknesses of people?
2. Why are linguistic intelligence, emphasizing sensitivity to the meaning and order of words, and logical-mathematical intelligence, stressing ability in mathematics and other complex logical systems, more valued than other intelligences? Are they really more important forms of intelligence?
3. One criticism of Gardner's theory is that he classifies talents as a type of intelligence. Critics might say that a talented dancer or chess player is not necessarily smart. How would you reply to this criticism?
4. Does it matter if we call special abilities "talents" or "intelligences"?
5. Gardner suggests that schools must develop assessments that better represent what people will have to do to survive in society. For example, rather than writing an essay about urban development, students studying structures might be assessed in their group work determining what kind of building is most appropriate for an urban, residential area. Give an example of an assessment that could be used to evaluate what students learn about the civil rights movement or the deforestation of rain forests.
6. How does an understanding of multiple intelligences change how you view your own abilities?

Evaluation:

Use the following three-point rubric to evaluate students' work:

Three points: Students actively participated in classroom discussions, thoroughly completed the Classroom Activity sheet, worked cooperatively in their groups to develop ideas about how schools would be organized in light of multiple intelligences theory, and completed the Take-Home Activity Sheet with thoughtful, complete answers.

Two points: Students took some part in classroom discussions, partially completed the short Classroom Activity sheet, worked somewhat cooperatively in their groups to develop ideas about how schools would be organized in light of multiple intelligences theory, and completed some of the Take-Home Activity Sheet.

One point: Student participated a little in classroom discussions, completed one part of the short Classroom Activity sheet, had trouble working cooperatively in their groups to develop ideas about how schools would be organized in light of multiple intelligences theory, and completed one question on the Take-Home Activity Sheet.

Extensions:

The Origin of Multiple Intelligences Theory

Howard Gardner's theory of multiple intelligences has been evolving since 1983, when he proposed it. Have students research how his theory has evolved since then. For example, have the number of intelligences changed? Have Gardner's ideas about how to implement his ideas in educational settings evolved? The following Web sites will help students with their research:

http://www.education-world.com/a_curr/curr054.shtml

<http://pzweb.harvard.edu/SUMIT/MISUMIT.HTM>

Design a New School

Based on what students have learned about the theory of multiple intelligences, have them design a school that makes use of these theories. Have students consider the layout of the school, how students are grouped, how the main subjects are taught and assessed, and the strengths the teaching staff should have. Suggest that students sketch the school and write a paragraph describing it.

Suggested Reading:

Living With Our Genes: Why They Matter More Than You Think

Dean Hamer and Peter Copeland. Doubleday, 1997.

How much of who we are is controlled by our genes and how much from what we experience? By examining a range of human behaviors from worry and anger to hunger and aging, the authors explain how research helps clarify how both control our lives. This is a lengthy, satisfying investigation that uses many case-study examples.

Entwined Lives: Twins and What They Tell Us About Human Behavior

Nancy L. Segal. Dutton, 1999.

This is a fascinating study of the results of research on twins and the role that genes play in human development. Chapters on different kinds of twins explore gene influence on the individual. Other chapters address twins raised apart, conjoined twins, the loss of a twin, triplets, and other multiples. A glossary and extensive notes add to this rich source of information.

Vocabulary:

intelligence

Definition: The capacity to learn, reason, and understand and the demonstration of such capacity

Context: Howard Gardner's definitions of **intelligence** take specific abilities into account.

interpersonal

Definition: Existing or happening between persons; of or pertaining to a relationship between persons.

Context: Professions such as teaching, counseling, and sales attract people with strong **interpersonal** abilities.

kinesthetic

Definition: Pertaining to the position and movement of the body through stimulation of the nerves in muscles, joints, and tendons

Context: Teachers may use **kinesthetic** activities that allow students to manipulate materials.

spatial

Definition: Of, relating to, or occurring in space

Context: Tests asking students to imagine how a flat piece of cardboard would look folded into a box assess **spatial** relations abilities.

talent

Definition: A natural ability or aptitude

Context: Gardner asks whether Leonardo DaVinci's painting ability is a **talent** or intelligence.

Academic standard:

Grade level:

9-12

Subject area:

Behavioral Studies

Standard: Understands that interactions among learning, inheritance, and physical development affect human behavior

Benchmark: Understands that differences in the behavior of individuals arise from the interaction of heredity and experience

Credit:

Lisa B. Green teaches English and Theory of Knowledge in the International Baccalaureate program at Robinson Secondary School, Fairfax County, Virginia.

DiscoverySchool.com
<http://www.discoveryschool.com>

Copyright 2001 Discovery.com.

Teachers may reproduce copies of these materials for classroom use only.

Howard Gardner's Theory of Multiple Intelligences

In 1983 Harvard psychologist Howard Gardner published his theory of multiple intelligences in his book *Frames of Mind*. Gardner identified eight separate intelligences. He defines intelligences as independent mental abilities characterized by core operations. For example, musical intelligence focuses on the core operations of recognizing pitch and rhythm. Gardner states that most people have at least seven of these intelligences, but that in some people one intelligence may dominate, and in other people the intelligences blend. Below are descriptions of Gardner's eight intelligences.

Linguistic intelligence: the ability to use language to express one's thoughts and to understand other people orally or in writing

Musical intelligence: the ability to hear music in one's head, and to hear tones, rhythms, and larger musical patterns

Logical-mathematical intelligence: the ability to manipulate numbers, quantities, and operations accompanied by a love of dealing with abstraction

Spatial intelligence: the ability to represent the spatial world visually in one's mind

Bodily kinesthetic intelligence: the ability to use the whole body or parts of the body to solve a problem, create a product, or put on some kind of production.

Intrapersonal intelligence: the ability to know and understand one's self, including goals, tendencies, talents, limitations

Interpersonal intelligence: the ability to notice and make distinctions among other individuals; a strong understanding of other people

Naturalist intelligence: the ability to discriminate among living things and to see patterns; also, a sensitivity to features of the natural world

Short Biographies of Eminent People

Page 1 of 2

For each of the following people, explain how you would consider them to be intelligent using Gardner's eight intelligences. You may find that some of these people display more than one type.

Michael Jordan, former basketball player, Chicago Bulls

The greatest player in the history of the National Basketball Association, Michael Jordan possessed an intellectual understanding of the game of basketball. In addition to his jumping, shooting, running, passing, and guarding skills, Jordan had an uncanny ability to sense what other players would do before they did it, and adjust accordingly, even after leaving the ground. His predictions were based on his understanding of other players' skills, tendencies, and personalities. Jordan could also visualize the geometry of the game, anticipating with great accuracy where a ball would bounce, how high he would have to jump, and how fast other players could move into position. Jordan's long career required that he re-create himself as his physical abilities changed with age. As an older player, he couldn't jump as high, so he developed a mid-range jump shot to get to the basket past younger players.

Mohandas Gandhi, political and religious leader in India

Mohandas Gandhi's life was guided by his search for truth. He believed one could find truth only through tolerance and concern for others. As a teacher, he taught others to master fear and to practice nonviolent solutions to problems. Gandhi developed a method of direct social action based on nonviolence and truth that reflected his belief that how one behaves is more important than what one achieves. Gandhi's teachings enjoyed widespread following, ultimately leading to India's independence from Great Britain and the beginning of social change.

Short Biographies of Eminent People

Page 2 of 2

Charles Darwin, naturalist and writer

After Charles Darwin received a bachelor's degree in theology from Cambridge University, he studied medicine at the University of Edinburgh. In 1836 he was a naturalist aboard the H.M.S. Beagle, an English science vessel, that traveled throughout the world. On that expedition, Darwin found fossils of extinct animals that closely resembled modern species. On the Galápagos Islands in the Pacific Ocean, he discovered variations among plants and animals of the same general type. Back in England studying his specimens, Darwin noted each organism's inherited combination of traits. From this work, he developed his theory of evolution and the idea of natural selection as a way to explain why some species disappeared and others changed and survived.

Oprah Winfrey, TV talk show host, actor, producer, educator, philanthropist

Oprah Winfrey is best known as host and producer of her own show, seen by 22 million viewers a week in the United States and aired in 113 countries. She has won prestigious awards in broadcasting, as well as the National Book Foundation's 50th Anniversary Gold Medal for her influential contribution to reading and books through her Oprah Book Club. Viewers trust Oprah's judgment and suggestions, appreciate the skill with which she engages others in discussion, and admire her forthright candor about her own life and struggles.

A Personal Look at Multiple Intelligences

Consider the personal application of Gardner's theory by responding to the questions below.

1. In which of Gardner's intelligences do you believe that you excel? What evidence can you show?

2. How does this affect the way you currently approach learning and school assignments?

3. How might the theory of multiple intelligences affect your thinking about your future?