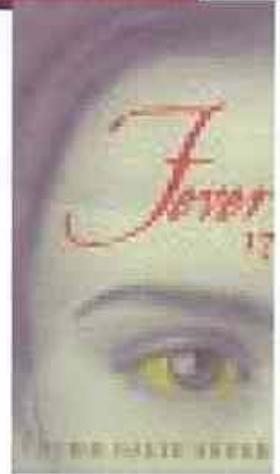


epidemic!

The World of Infectious Disease

The Party's Over-



but the Band Plays On

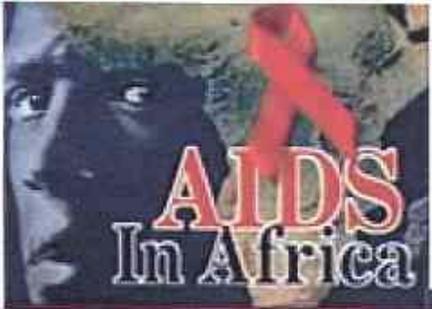


SAFER • HEALTHIER • PEOPLE

An Integrated,
Interdisciplinary,
Thematic Study of
Viral, Bacterial,
and Parasitic
Epidemics that
have Affected
Mankind from
1340 to the
Present

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Burning the Fabric that Binds Us



OVERVIEW

I. CONTENT:

Recently, the world has turned its attention to the AIDS epidemic in Africa. 17 million Africans have died since the AIDS epidemic began in the late 1970s, and AIDS has orphaned an additional 12 million children. This plague threatens to wipe out the African population. Similarly, historians have estimated in the 14th century that the Bubonic plague wiped out about 32% of the European population. This interdisciplinary integrated unit is designed to guide students to an understanding of both historic epidemics, like the Bubonic Plague, and contemporary plagues, such as AIDS, so they can make more informed decisions now and in the future.

II. PROCESS: (How are the thinking skills developed?)

Students will be guided as they discover knowledge, comprehend the knowledge, and apply historic and contemporary information concerning epidemics. They will examine how major epidemics have altered the course of political, economic, and social history. Students will analyze human anatomy, trace disease transmission, and the body's corresponding response to infection. Throughout the unit, various hands-on lab experiments, fictional and non-fictional accounts, and analytical activities will be utilized. Students will work both independently and cooperatively to reach these goals.

III. PRODUCT: (What will kids do/know as a result of this unit?)

Students will gain basic knowledge of human anatomy and cell structure. They will analyze historic and contemporary epidemics and its effects on society. Students will examine political and economic decisions concerning epidemics. They will be able to synthesize this information to make informed decisions concerning themselves, their neighborhood, and the international community.

State/District Pupil Performance Outcomes

GOAL 1: Students will evaluate the United States and other economic systems on their ability to achieve broad social goals such as freedom, efficiency, equity, security, development, and stability.

GOAL 2: Students will describe how major world issues and events affect various people, societies, places, and cultures in different ways.

GOAL 3: Students will evaluate the responses of individuals to historic violations of human dignity involving discrimination, persecution, and crimes against humanity.

GOAL 4: Students will explain why people may agree on democratic values in the abstract but disagree when they are applied to specific situations.

GOAL 5: Evaluate foreign policy positions in light of national interests and American values.

GOAL 6: Students will examine how historical, political, and social factors affect developments in science.

GOAL 7: Students will compare and contrast the chemical composition of different cell types.

GOAL 8: Students will describe and compare basic cell functions.

GOAL 9: Students will explain the basics of human anatomy with understanding of pathogenic infection.

GOAL 10: Students will compose both informal and formal writings concerning the effects of epidemic on society.

GOAL 11: Students will read Fever 1783 to understand how one historic epidemic affected society.

GOAL 12: Students will analyze, interpret and translate among representations of patterns including tables, charts and graphs.

GOAL 13: Students will explore symmetries of figures and use writing to communicate and explore ideas.

GOAL 14: Students will efficiently and accurately apply operations with real numbers in solving problems.

GOAL 15: Students will make predications and decisions based on data.

GOAL 16: Using Edgar Allen Poe's, "Masque of the Red Death," students will analyze symbolism in literature.

I-SEARCH INDEPENDENT RESEARCH PROJECTS FOR GIFTED AND TALENTED STUDENTS

1. PARADOXES:

In Medieval times, during the Black Plague, it was generally thought that cats (especially black cats) were from Satan and the cause of the plague. This led them to kill the cats, thus causing the rat population to increase and spread the plague even more.

Product: Research and discover another medical malpractice in the history and/or contemporary times. Create a “problem-solver” report that uncovers the truth behind the case.

2. ATTRIBUTES:

You have decided to pursue a career in research science involving the spread of disease. What skills and background will you need to earn a degree in this profession to not only gather and interpret data, but also in the creative thinking involved in developing new technology?

Product: Create an informative pamphlet that a guidance counselor would distribute to students interested in a career in medical research.

3. ANALOGIES:

Some people say that human rights can be compared to an epidemic.

Product: Examine how human rights can be analogous with epidemics. Write a poem that utilizes symbolism and metaphors of epidemic to illustrate this analogy.

4. DISCREPANCIES:

While scientists have learned a lot about HIV, much more is still left to be learned. In addition, the public does not necessarily understand all that science has revealed.

Product: Research the aspects of HIV that are unknown and/or misunderstood. Create an advertisement that informs people about these discrepancies.

5. PROVOCATIVE QUESTIONS:

Many people feel that employees should be required to inform their employers about existing medical conditions. In addition, many people feel that doctors should reveal to their patients if they are HIV-positive.

Product: Research the history of medical confidentiality and interpret if it applies in cases of HIV-positive individuals. Create a television program (CNN’s “Crossfire”) that examines both aspects of this issue.

6. EXAMPLES OF CHANGE:

Throughout history people regarded others inflected with disease in many different lights. While some people have displayed compassion, others have showed ignorance through their fear.

Product: Research the public treatment and opinion of people with disease throughout history. Find film clips (edited into one continuous film) depicting this treatment. Write a comparison essay that illustrates the changes and/or consistency of this treatment over time.

7. EXAMPLES OF HABIT:

The use of intravenous drugs is an obvious risk to one’s health; however, with diseases like AIDS and hepatitis, the risk is even greater.

Product: Research how the habits of intravenous drug users have changed with education programs concerning communicable disease? Have these educational programs been successful? Research the infection rates of intravenous drug users today as compared to the 1980s. Create a puppet show that will depict the change, if any, and educate people about the dangers connected with intravenous drug use and disease.

8. **ORGANIZED RANDOM SEARCH:**

The physical structures of bacteria and viruses are chemically similar. This commonality makes it easier for researchers to learn about disease. Cancer is thought to be caused by a problem with the cell cycle; however, one may argue that is caused by a virus or bacterium that is so chemically different than those currently known that it has gone undetected.

Product: Research cancer and develop a hypothesis pinpointing the specific cause of the disease.

9. **SKILLS OF SEARCH:**

Throughout history the United States has shifted its role in the world from an isolationist to a leader in the global community. Politicians, scientists, and world leader's debate about the role the U.S. government should take in international issues.

Product: Research the role of the United States in the world prior to World War I. What position would Woodrow Wilson take on the current AIDS epidemic in Africa? Prepare a speech for a press conference as Wilson informing the public about the U.S.'s stance.

10. **TOLERANCE FOR AMBIGUITY:**

You are in a long-term relationship and you are considering marriage and intimacy with this person. You find out that your partner has recently tested positive for HIV. Do you continue the relationship?

Product: Research other couples that have either stayed together or broken up after learning one partner was positive. Write a journal or diary that explains your feelings and your decision making process. Be sure to include your final decision.

11. **INTUITIVE EXPRESSION:**

Scientific research depends on careful observation using all senses (touch, smell, sight, hearing, and taste). A hunch that a scientist feels during an investigation, or the feeling a doctor has when making a diagnosis, can be important.

Product: Research medical practices to find out if doctors and nurses are taught to ignore their hunches. Prepare and tape (either audio or video) an interview with a medical profession concerning this issue.

12. **ADJUSTMENT TO DEVELOPMENT:**

Georges Santayana once said, "Those who do not learn from their mistakes are condemned to repeat them." Do mathematicians, scientists and/or politicians learn from their mistakes?

Product: Research a mistake that has been perpetuated throughout history in either the disciplines of science, math or politics. Create a painting that depicts what life would be like today if this problem had been solved initially.

13. **STUDY CREATIVE PEOPLE AND PROCESS:**

One of the qualities to develop new mathematical formulas is creativity. Likewise, creativity is necessary in the advancement of technology.

Product: Research a prominent mathematician or scientist in history (Rene Descartes, Albert Einstein, Stephen Hawking, Sir Isaac Newton, etc). Dress in costume and present to the class about the importance of creativity in discovery and invention.

14. **EVALUATE SITUATIONS:**

Risk is a strong component of medical research. Many people believe that human life should not be risked in turn for scientific advancement. Others think that no living organism's life should be put at risk for research. Where would we be in medical technology if people did not take risks?

Product: Form a debate to answer the question. Is scientific research worth the risk? Prepare arguments for both sides of the issue. Try to be specific to disease research.

15. **CREATIVE READING SKILL:**

Primary sources are filled with information about current issues in the world. They may be one of the most important tools that world leaders and researchers have to solve or identify problems in society.

Product: Read three primary source articles related to epidemics and write summaries of what the articles say. Make a list of ideas that are more current than your textbook information.

16. **CREATIVE LISTENING SKILL:**

Much of the information we acquire about the world is through listening to others; however, individuals gain different information as they interpret the speaker.

Product: Locate a speech in which scientific information is given. (This can be from a movie clip). Analyze the speech and interpret its meanings. Rewrite the speech in your own everyday language.

17. **CREATIVE WRITING SKILL:**

Science fiction is a great example of how creative writing can be used in science. We learn about situations that represent realistic human behavior as they deal with disease.

Product: Read Michael Crichton's Andromeda Strain. Rewrite the story as if it occurred 1000 years after its original setting.

18. **VISUALIZATION SKILL:**

Science and mathematics use many forms of beautiful art. (Fractals from Chaos Theory and da Vinci's anatomical studies are examples)

Product: Design a collage with examples of art from math and science. Label the collage with a detailed explanation of each image.

CRITICAL THINKING SKILLS - ACADEMIC ANALYZING HUMAN ACTIVITIES! (AHA!)

1. PRODUCING, EXCHANGING, AND DISTRIBUTING [ECONOMICS]

Textbook: Global Insights

MCF SS IV 4.3 Students will be able to evaluate the United States and other economic systems on their ability to achieve broad social goals such as freedom, efficiency, equity, security, development, and stability.

KNOWLEDGE:

Anticipatory Set: Play Barenaked Ladies song, “If I Had a \$1,000,000”.

Activity: List at least ten ways money affects (or has affected) their life.

E.g.: kind of clothes they can buy, type of neighborhood they live in. . . .

COMPREHENSION:

Proportionately, Africa has a large infection rate of HIV and AIDS. Examine the economic conditions in Africa that contribute to this epidemic. Explain how economic issues may promote epidemics in some countries and curb the disease in others.

Activity: In collaborative groups, examine the GDP, GNP, average family income, and unemployment rate of assigned African countries. Discuss how these factors may inhibit the availability of health care in that particular country.

APPLICATION:

Anticipatory Set: Show movie clip from Philadelphia and Jeffery that illustrate medical care in the U.S. Show movie clip from City of Joy to illustrate conditions in developing countries.

In order to understand how economics affects availability of health care worldwide, students will examine health care conditions in African countries (or other developing countries). Then students will compare and contrast medical conditions between industrial countries (United States) and developing countries (Africa).

Product: Students will create an original drawing that accurately illustrates the conditions of treatment in the two countries.

Mathematics Link: Using present mortality rates of AIDS, predict the population of Africa in 10 years, 20 years, 50 years.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Students will read excerpts from Martin Luther King Jr.’s “Letter from a Birmingham Jail” to examine an appeal to others.

Students will appeal for economic assistance through a public speech.

Product: Write a two-minute speech to appeal to the World Health Organization (United Nations) for economic assistance in Africa. Students should include not only factual evidence, but also, a passionate plea.

INDIVIDUAL JOURNAL ASSIGNMENT: Describe a time when the amount of money your parents make affected your life. How did you feel? Did you talk to your parents about the issue? If so, what did you say?

HOMELINK: Interview your parents about the health care coverage that your family has. Do you have full medical coverage including vision and dental? Are you allowed to choose your own doctor?

2. TRANSPORTATION (Textbook: Biology: The Living Science)

MCF S III 2.2 Students will describe the life cycle of an organism associated with human disease.

Throughout history, from the first recorded epidemic in 430 BC to the current AIDS epidemic, disease has ravaged and altered the course of society. The following list details several important dates in epidemic history.

- **430 BC, the plague of Athens**--resulted from 200,000 inhabitants and villagers fleeing into Athens when threatened by the Spartans. An unidentified infectious agent, from Ethiopia via Egypt, killed one third of this population and ended the Golden Age of Athens.
- **166 AD, the Antonine plague** was brought to Rome from Syria by returning Roman troops. The marauding Huns had introduced the plague to Syria from India. The plague (probably small pox, bubonic plague, and measles) devastated the Roman Empire, killing 4–7 million people throughout Europe. The resulting social and political upheaval led to the collapse of the Roman Empire.
- **Circa 160 AD, Bubonic plague** ('Barbarian boils')--carried by invaders from the north, led to the collapse of the Han Empire in China.
- **1346 to 1350, Bubonic plague**--the pandemic started in China and moved along the trade routes through South Russia to the Crimea, which was besieged at the time. This bubonic plague killed more than one third of the population of Europe.
- **1492, influenza, small pox, tuberculosis, and gonorrhea**--began when Columbus went to the Caribbean. The local inhabitants did not have immunity to these endemic European infections, and consequently, the 8 million people on the island of Hispaniola (where Columbus first set foot in the New World) died. Replacement of the population by African slaves introduced African infectious diseases such as malaria and yellow fever into the Caribbean and Americas, which, in turn, killed many European settlers.
- **1542, bubonic plague**--started in Egypt, killed 40% of the population of Constantinople, and spread all over Europe.
- **Early trading period**, blackwater fever (malaria), yellow fever, bloody flux (dysentery), and worm infestations--trading with the continent of Africa was made difficult by a large number of these 'new' diseases. The impact on travelers and soldiers was so severe that Africa was called 'the white man's grave.'
- **16th century**, similarly devastating epidemics with European and then African infections--introduced by the Spanish into Central and South America. After the Spanish invasion, the population of Mexico decreased by 33% in 10 years and by 95% in 75 years.
- **As trade journeys lengthened**, chronic infections such as tuberculosis and venereal diseases--introduced by European sailors to the Pacific islands, which lost 95% of their population as a result.
- **Present time**, Lyme disease and Rocky Mountain spotted fever (in the United States), and AIDS, genital herpes, and chlamydia (worldwide)--even during the past few decades, there has been a resurgence of epidemics.

KNOWLEDGE: How do diseases become epidemics?

Anticipatory Set: Students will participate in a game that simulates the transmission of a bacterial infection. Do not tell students that they are participating in a game about disease transmission. Students are given an envelope with 5 black stickers and instructions at the beginning of the day and they are instructed not to open the envelope unless they receive a black sticker. Divide the class into four groups that will represent different countries such as South Africa, U.S., India, and England. Randomly choose two-four students to become "infected" with the virus.

Secretly, inform these students that they should open their envelopes and follow the instructions that read "Give a sticker to anyone with whom you verbally communicate." Inside the envelope they will also receive a note card in which they should record the names and times that they passed on stickers to other students. At the end of the day, have students who are "infected" stand on one side of the room and those

who are healthy (if any) stand on the other. Students who were in the U.S. and England group will have money for antibiotics while those in the other countries will “die”.

Activity: List reasons how people received a sticker. List ideas about what the black sticker may represent. Explain to students that the sticker represents the Bubonic Plague of the Middle Ages that has been estimated to have killed 30% of the European population. Analyze data generated by the “plague day activity” and compare to the historical estimate of 30%.

COMPREHENSION:

Explain how a disease is transmitted. Discuss terms associated with disease infection. E.g.: vector, host, etc. Give examples of various diseases and how they affect the body.

E.g.: HIV attacking the immune system

APPLICATION:

Anticipatory Set: Show clip of And The Band Played On when the CDC employees trace the transmission of HIV back to the airline steward from New York. Show clips from Outbreak with man sneezing on airplane and person coughing in the movie theater.

Activity: Students will discuss different ways disease is spread through society.

Product: Create a chart showing the sequence of disease transmission within the team community. Show the point of origin and the individuals that became vectors.

Humanities Link: Students will read and discuss the short story “The Way We Live Now” to examine disease transmission among a small community.

School-to-career link: Invite a speaker from the local office for the Center of Disease Control to discuss disease transmission and the aspects of their career.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory set: Play Reba McEntyre song “She Thinks His Name Was John” to discuss the dangers of ignorance of disease transmission.

Product: Design and complete a lab that simulates disease transmission.

INDIVIDUAL JOURNAL ASSIGNMENT: Sometimes gossip can spread like an epidemic. Discuss a situation in which you were a “VICTIM” of gossip. Who started it, which brought it back to you? What damage was caused?

HOMELINK: Describe an illness that a majority of your family contracted. Describe origins, path through family, and travel beyond family.

3. **COMMUNICATIONS** (Textbook: Biology: The Living Science)

MCF S III 1.4 Students will compare and contrast chemical compositions of different cell types.

MCF III 1.3 Students will compare and contrast ways cells are specialized to carry out functions.

KNOWLEDGE:

How do cells communicate when a disease is introduced to the immune system?

Anticipatory Set: Show movie clip from Nutty Professor where the family is eating dinner and it is extremely chaotic with many conversations taking place at once.

Activity: List ways your family communicates with one another. How is this similar or different to how you communicate with your friends?

COMPREHENSION:

View educational film “Body Defenses Against Disease” to identify the functioning of the immune system.

Students will identify, in sequence, the order of communication within the immune system.

1. Macrophage
2. Helper T cell
3. B cell/ Killer T cell
4. Suppressor T cell

5. Memory B cell

APPLICATION:

Anticipatory Set: Manipulate puzzle pieces to gain a better understanding of protein (lock/key) recognition between cells.

Activity 1: Students will explain the steps of communication of the immune system.

Product 1: Class/team product: Students will write a diary entry from the viewpoint of a cell in the immune system.

Activity 2: The helper T-Cell is fundamental in the immune system's communication. Students will play the telephone game to simulate a healthy immune system. First students will play the game with the traditional rules; then students must pass on message without using verbal forms of communication. They should discuss how difficult it was to communicate and how the message became even more distorted from the first game. Compare this to the helper T-Cell in the immune system and what happens to the immune system when HIV destroys it.

Humanities Link: All cultures have different symbols to communicate within the society. Without knowledge of these symbols misunderstandings and culture shock may occur. Compare and contrast various symbols in the world.

School-to-career Link: Read a current article about medical malpractice and discuss the importance of communicating.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Display current newspaper comics to examine the format.

Activity: Students will interpret the immune systems' importance and functions.

Product: Student should create an original comic strip, with a minimum of five panels, which illustrates the immune system process.

INDIVIDUAL JOURNAL ASSIGNMENT: Describe a time when you had an argument as a result of miscommunication. Who was involved? How did you resolve the conflict?

HOMELINK: Talk to your parents about a time when they had an argument that was a result of miscommunication.

4. **PROTECTING AND CONSERVING** (Textbook Biology: The Life Science)

MCF S III 2.2 Students will describe the life cycle of an organism associated with human disease.

MCF II 2.4 Students will describe how historical, political, and social factors affect developments in science.

KNOWLEDGE:

How do vaccines slow or stop a disease?

Anticipatory Set: Students will share what diseases/illnesses that they have had, for example, measles, TB, smallpox etc.

Students will analyze the data and the class will discuss the reason for the results.

COMPREHENSION:

Students will distinguish between an antibiotic and a vaccine. Class will discuss the difference between a viral and a bacterial infection. Explain how a vaccine stops disease.

APPLICATION:

Anticipatory Set: View recent press conference clip from either a sporting event or "West Wing", or clip from "And the Band Played On".

Students will show how vaccines work by preparing an interview about a specific disease and its prevention.

Product: Posing as an expert in a specific disease/vaccine, students will interview peers to discover how the vaccine works. Students will be experts in smallpox, TB, measles, and chicken pox, etc.

Multicultural Link: Students will examine how different cultures and religions view vaccines.

Humanities Link: Students will examine the economic implications of vaccine availability worldwide.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Read excerpts from The Hot Zone.

Students will examine why some diseases can be stopped with vaccines and others cannot.

Product: Students will compose an original science fiction short story that illustrates the need for a vaccine to be developed.

INDIVIDUAL JOURNAL ASSIGNMENT: Should vaccines be mandatory? If so, should they be federally funded through tax dollars?

HOMELINK: With the help of your parents, make a list of the vaccines that you have received.

5. **PROVIDING EDUCATION**

MCF SS VI 2.1 Students engage each other in elaborate conversations that deeply examine public policy issues and help make reasoned and informed decisions.

KNOWLEDGE:

Examine the importance of educating and distributing information to the general population.

Anticipatory Set: Play song clip from Pink Floyd’s “Another Brick in the Wall Part 2”.

Students will: list ten reasons why their survival depends on education.

COMPREHENSION:

Explain the role of international and national agencies that serve to educate the public about disease. For example: Center for Disease Control, World Health Organization, etc.

APPLICATION:

Anticipatory Set: Play game and sing “Ring around the Rosie”. Watch clip from Monty Python’s “Holy Grail” where people are calling to bring out your dead and they kill the cat because they believe it spread the plague.

Students will: Predict what conditions would exist without education. Use bubonic plague as an example to illustrate how disease can easily spread without education.

Class/team product: A graph that statistically defends and projects a future without the infrastructure for education about disease.

Humanities Link: Students will read Edgar Allen Poe’s “A Masque of the Red Death” to illustrate how lack of education led to the character’s death.

School-to-career Link: Invite a guest speaker from the Center from Disease Control to speak about the importance of education in disease control.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Clips and posters of Anti-Drug campaign

Students will design a method to instruct others in the community about a contemporary disease.

INDIVIDUAL JOURNAL ASSIGNMENT:

Who has educated you (parents, grandparents, aunts, uncles, or siblings) regarding “safeguarding” yourself against disease? What was the most memorable point they made?

HOMELINK:

Ask parents if they know anyone who has helped to educate someone outside the community.

6. **MAKING AND USING TOOLS AND/OR TECHNOLOGY**

MCF S II 1.3 Students will show how common themes of science; mathematics and technology apply in real-world contexts.

KNOWLEDGE:

How has technology improved disease treatment over time?

Anticipatory Set: Article read-aloud. “Greatest technological advances in the 20th Century”

Students will brainstorm additions and/or subtractions to the list. Discuss why each invention made the list.

COMPREHENSION:

Students will generalize how advances in technology have improved disease control.

APPLICATION:

Anticipatory Set: Play Billy Joel and R.E.M’s “It the End of the World as I Know It” timeline songs – Bob Dylan “Times Are A Changin”

Students will examine the advances in medical technology from the Bubonic Plague to contemporary times.

Product: Students will produce a timeline of the significant scientific advances in medicine

Humanities Link: Students will read poem about AIDS.

School-to-career Link: Students will research various careers in the medical research field.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Watch a clip of a recent Presidential debate.

Students will examine the costs and benefits of technological advances in medicine. In cooperative groups, students will generate at least 10 pros and 1 cons of the advancement of medical technology.

Team Product: Students will engage in a guided debate that discusses the pros and cons of scientific advances in medicine. Students will also examine how these advances affect statistical information about disease

INDIVIDUAL JOURNAL ASSIGNMENT:

Students will email this journal assignment. When you feel ill, what kinds of things do you do to feel better? Do you go to the doctor immediately, or do you not go to the doctor at all?

HOMELINK:

Prior to technological advances many people relied on home remedies to cure illness. Talk to your family about the types of remedies that were used in your home.

7. **PROVIDING RECREATION** (Textbook: Biology: The Living Science)

MCF S III 2.5 Students will describe technology used in the prevention, diagnosis, and treatment of diseases.

KNOWLEDGE:

How mental and physical fitness can help to fight disease progression.

Anticipatory Set: View clips from public health awareness ads on television that emphasize nutrition.

Students will list 10 daily tasks they do to promote general health and wellness.

COMPREHENSION:

Explain the importance of physical and mental fitness in fighting disease progression. Students will examine examples from cancer patients, HIV positive patients, etc in the United States and compare their disease progression with those in countries that lack physical stimulation and mental health support. Students will generalize about the factors that influence over-all health, such as support groups and nutritional awareness.

APPLICATION:

Anticipatory Set: Play “Red Rover”, “Duck, Duck Goose”, and “What Time is it Mr. Fox” (or other childhood games) to show how games improve personal health.

Students will demonstrate the importance of physical and mental fitness by preparing a game that encompasses both aspects.

Product: Students will develop an original fitness game that will stimulate both the mind and the body.

Multicultural and/or Bilingual Link: Connect with Modern Language teachers and students who recently immigrated to the United States to discover other childhood games. Play these games in class. In addition, find out what countries, like Japan, do to encourage public health.

Humanities Link: Read excerpts from The Ryan White Story to how the support of his community helped Ryan battle AIDS.

School-to-Career Link: Have students research fields involved in mental and physical health, such as support counselors, physical trainers, or nutritionists.

HIGHER ORDER THINKING SKILLS (H.O.T.S.)

Anticipatory Set: Students are to bring in one healthy item to eat or drink or a mental inspirational item (such as a piece of music or a poem) to share with the class. Students will share their items and why they believe they are important for health and wellness.

Students will analyze these items and identify which of these items are available to individuals in developing countries. Students will then project how life and disease progression might change if these items were available to all people.

Product: Students will create a weeklong personal nutrition plan that breaks down the nutritional contents. The plan should also include time for physical exercise and mental rest.

INDIVIDUAL JOURNAL ASSIGNMENT:

Describe a time when you have been extremely busy. What did your body feel like? Did you get sick? Did you become more cranky and short with others?

HOMELINK:

Talk to your parents about how they stay mentally and physically fit.

8. **ORGANIZING AND GOVERNING** (Textbook: Global Insights)

MCF SS III 5.1 Students will describe the influence of the American concept of democracy and individual rights in the world.

KNOWLEDGE:

Anticipatory Set: View clip from “West Wing” episode in which African leaders come to the United States to appeal to the president for their support with the AIDS epidemic in his country.

Students will list the reasons the African leaders gave when appealing to the president.

COMPREHENSION:

Explain and generalize the role of governments in historical and contemporary epidemics. Using selected readings, discuss what governments have done either domestically or internationally during an epidemic.

APPLICATION:

Anticipatory Set: Play clip from And the Band Played On in which President Reagan’s gives speech about AIDS.

Students will take the information gathered about the government’s role across time and compare and contrast the role.

Product: Create a Venn diagram that illustrates the differences and similarities in the government’s reaction to epidemics

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Read article, “Paying for AIDS Cocktails: Who should pick up the tab for the Third World?” from the February 12, 2001 Time magazine.

Students will conclude and justify what the role of the United States government should be in the world’s epidemics. In cooperative groups, students will discuss their opinion and support it with facts.

Product: Write either a Letter to the Editor or an Editorial Essay that explains and justifies the responsibility of the United States in the world’s epidemics.

INDIVIDUAL JOURNAL ASSIGNMENT:

Describe a time when someone in power has made a decision that affected your life. How did this make you feel?

HOMELINK:

Explain to your parents your position on the role of the government in the world's epidemic. Ask them to explain their position.

9. **MORAL, ETHICAL, AND SPIRITUAL BEHAVIOR**

MCF SS I 4.2: Students will evaluate the responses of individuals to historic of violations of human dignity, involving discrimination, persecution, and crimes against humanity.

KNOWLEDGE:

How are moral and ethics connected to the treatment of individuals?

Anticipatory Set: Students will watch the movie clip from Philadelphia in which Tom Hanks is fired because he is HIV positive.

Students will list at least 10 ways that people are treated unfairly due to things they cannot control. (Race, height, etc)

COMPREHENSION:

Explain the treatment of people inflicted with diseases such as the Bubonic Plague, Yellow Fever, tuberculosis, and AIDS by society. Discussions will involve the ostracism and the shift of blame to different groups in society. (For example: Jews blamed for Bubonic Plague and homosexual men blamed for AIDS).

APPLICATION:

Anticipatory Set: Students will read the story of "The Good Samaritan" from The Bible, to examine ethical and moral dilemmas individuals face when confronted with people inflicted with disease.

Students will examine ways that they can participate positively in society by exploring their reactions to specific situations.

Team Product: In collaborative groups, students will examine how they can implore ethics and morals in their daily lives. They will create a sketch of bulletin board displays that will educate others about the ethical dilemmas facing medical treatment and the appropriate reactions.

Multicultural Link: Students will examine values in other cultures and compare and contrast them to their own culture.

School-to-career Link: Students will list professions that face moral dilemmas daily and those that do not face ethical choices.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Show clip from Vertical Limit in which the son faces the dilemma of cutting the rope to save himself and his sister.

Students will discuss what they would do if they were in that position.

Students will discover the motivations of those who treated the ill unjustly. They will pose and answer questions to defend what they would do in specific situations.

Team Product: Given a situation, collaborative groups will create and act out a skit that depicts an individual's (or group's) reaction to a moral and ethical dilemma. The skit will depict the motivation for the reaction, the class will discuss, and explain each decision and if the reaction was justified.

INDIVIDUAL JOURNAL ASSIGNMENT:

Describe a time in which your morals were tested. Did you compromise your morals? Do you feel that you were justified?

OR

Describe a time that in retrospect, you feel you compromised your present moral and ethical beliefs.

HOMELINK:

Talk to your grandparents about their morals and evaluate their relevancy to modern times.

10. AESTHETIC NEEDS

MCF M I 1.4: Students will explore patterns characteristic of families of functions; explore structural patterns within systems of objects, operations or relations.

KNOWLEDGE:

Does the expression “Beauty is in the eye of the beholder” pertain to epidemics?

Anticipatory Set: View the video clip from “Outbreak” where Dustin Hoffman is standing before a screen containing the virus in question and comments on its beauty.

Students will list all of the traits that they believe makes something beautiful. E.g.: well constructed, colorful, etc.

COMPREHENSION:

Give examples of what could be considered beautiful in nature – even if it is a destructive force.

E.g.: tornados, viruses, bacteria, etc.

APPLICATION:

Anticipatory Set: Show a slide show presentation of magnified pictures of bacteria, viruses, etc.

Students will look at slides and sketch the structures, making note of the shapes, symmetry, etc.

Product: Create a model, sculpture, or painting of a pathogen.

Multicultural Link: What are seen as traits of beauty in other cultures?

Mathematics Link: Examine each of the pathogens and describe any polygon structures, lines of symmetry, etc.

Humanities Link: Read excerpts from the novel The Elephant Man. Discuss how people can find beauty in others even if they are not beautiful by society’s standards. Discuss “Beauty is only skin deep” and “Beauty is in the eye of the beholder.”

School-to-career Link: List all of the careers that are focused on aesthetics of an individual.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: View class member’s products and list several traits about each that make them beautiful.

Students will view a PowerPoint presentation and list reasons why the student products may be perceived as ugly and their reaction to the picture. Discuss when and why things are described as ugly. (Especially if they are unknown to the person observing the object).

Product: Write a newspaper article that defends the beauty of a non-traditional object or an object seen by most as ugly.

INDIVIDUAL JOURNAL ASSIGNMENT:

Describe all of the traits that make you a beautiful person.

HOMELINK:

Talk to a male or female adult, and find out what traits they consider to be beautiful in a person.

11. BIOLOGICAL WARFARE: A MANMADE EPIDEMIC

MCF SS V 1.2: Use traditional and electronic means to organize and interpret information pertaining to a specific social science topic and prepare it for in-depth presentation.

KNOWLEDGE:

Is biological warfare just another justified technological development in war or is it a deadly epidemic with the potential to destroy humankind?

Anticipatory Set: Show clip from War Games in which Mathew Broderick’s character is able to crack into the U.S. Department of Defense and start a war with Russia.

Activity: Students will examine technological developments that have brought more negative effects to society than positive. (Or the negative points outweigh the positive) E.g. Internet, computer, automobile

COMPREHENSION:

Students will examine the development of weapons throughout history. Give examples of the most important technological developments in war. For example: catapult, airplane, machine gun, and atomic bomb.

APPLICATION:

Anticipatory Set: Show clips from the films Braveheart, Saving Private Ryan, Hiroshima: Out of the Ashes, and a current clip about the U.S.'s concern with Iraq's development of biological warfare to show change in weapon technology.

Discuss how the developments of weapons have changed the nature of war. They will also show how these developments have affected individuals and society.

Product: Students will create a picture collage that illustrates the impact of one of these developments. Collage should depict the impact on both individuals and society. The nature of the pictures selected should show if this development was more beneficial or detrimental to society.

Multicultural Link: Examine the drop of the atomic bomb on Hiroshima and Nagasaki from the viewpoint of the Japanese government and civilians.

Science Link: Describe the medical aftermath of the Hiroshima and Nagasaki survivors.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: View clip from The Rock when a vial of bacteria threatens to destroy San Francisco.

Student will identify reasons why people would want to develop germ warfare/ biological weapons. (E.g.: political control, economic power, insanity, etc.) Students will discuss the ramifications of releasing a potential epidemic into a community. Could the epidemic be controlled?

Product: Students will create a website that educates the public about the potential dangers of biological warfare. The website should include an editorial link that explains if the use of these weapons is justified.

INDIVIDUAL JOURNAL ASSIGNMENT:

The government has recently declassified information stating that they secretly released disease into communities for research purposes. (For example: syphilis into the black community) How would you feel if you learned that you had an illness that was purposely given to you?

HOMELINK:

Ask your grandparents (or older family members) what they remember from the bombing of Hiroshima and Nagasaki. Have them describe how they felt when they heard how many innocent men; women, and children were killed. Do they feel it was justified?

12. **MATHEMATICS** (Textbook: Integrated Mathematics 1)

MCF M II 1.1: Students will use shape to identify plane and solid figures, graphs, loci, functions, and data distributions.

KNOWLEDGE:

How polygons and symmetry are found in everyday life.

Anticipatory Set: Listen to the song "Particle Man" by They Might Be Giants

Using construction paper, students will produce polygons that contain symmetry.

COMPREHENSION:

Students will list all polygons, their names and properties. The polygons include:

Number of Sides	Name
3	Triangle
4	Quadrilateral
5	Pentagon
6	Hexagon
7	Heptagon
8	Octagon
9	Nonagon
10	Decagon
11	11-gon
N	N-gon

APPLICATION:

Anticipatory Set: Read and sing lyrics to songs about polygons.

Students will explore and explain the properties of polygons through creative songs.

Product: Students will write and perform original poems and/or songs about polygons and their properties.

Multicultural and/or ESL and/or Bilingual Link: Use various languages to find “nicknames” for your polygon. Use these words in your poem/song.

Science Link: Explore symmetry in the human body.

School-to-career Link: Explore how careers like construction, architecture, civil engineering, etc use polygons and symmetry in their daily world life.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Look at da Vinci’s human anatomical drawings.

Students will use a system of transparencies to show how objects in daily life use symmetry.

Products: Students will compile anatomical drawings and define the lines of symmetry in the human body.

INDIVIDUAL JOURNAL ASSIGNMENT:

Describe which polygon you are most like. Explain why you feel you are that particular polygon.

HOMELINK:

Look around your home and write down all the polygons you can find.

13. **HUMAN ANATOMY** (Textbook Biology: The Living Science)

MCF S III 2.4: Explain how living things maintain a stable internal environment.

KNOWLEDGE:

Anticipatory Set: View clip from Inner Space that shows Dennis Quad inside of Martin Short’s body.

Students will match body systems to their overall functions.

COMPREHENSION:

Students will use the think/pair/share strategy using selected pages from chapter 35 –39 in Biology: The Living Science.

APPLICATION:

Anticipatory Set: Using transparencies, view DaVinci’s anatomical drawings.

Students will gain a better understanding of their own bodies and how each body system performs a different function.

Product: In collaborative groups, students will write and perform a song or poem about the functions of an anatomical system.

Multicultural and/or ESL and/or Bilingual Link: Share names for human anatomy in various languages such as French, German, and Spanish.

Mathematics Link: Use human anatomy to examine symmetry in nature.

Humanities Link: Look at how different disease affects people in various cultures/ countries.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Show medical book with transparency section on anatomy.

Students will use their knowledge of anatomy to trace a pathogen through the human body.

Product: Diagram a body system with all organs and tissues labeled (including structure and functions) and where and how the pathogen travels the body.

INDIVIDUAL JOURNAL ASSIGNMENT:

Imagine that you are Dennis Quad's character and you are traveling through the body. Describe what you would see. How do you feel?

HOMELINK:

Ask your parents if anyone in your family has had a medical problem involving an organ. Describe the illness and treatment.

14. **LITERATURE** (Fever 1793)

MCF E I 1.1: Students will use reading for multiple purposes, such as enjoyment, learning complex procedures, completing technical tasks, making workplace decisions, evaluating and analyzing information, and perusing in-depth studies.

KNOWLEDGE

Students will use the novel Fever 1793 to compare and contrast epidemics of the past and present and their influences on culture and personal accomplishment.

Anticipatory Set: View film clip of Outbreak where the military is "collecting" disease stricken residents.

Students will describe how a disease may have a devastating effect on individuals, and on the fabric of society itself.

COMPREHENSION:

Students will predict what effects an epidemic would have on Macomb Township. For example: school closings, business closings, hospital over-crowding)

APPLICATION:

Anticipatory Set: Students will listen to the poem entitled about AIDS.

Students will discover how the Yellow Fever epidemic in 1793 affected the life of one fictional character.

Product: Write a newspaper story depicting the lifetime achievements of Matilda Cook.

ESL and/or Bilingual Link: Students will write the newspaper story, depicting the achievements of Matilda Cook, in their native language.

Mathematics Link: Calculate how many people died in the Yellow Fever epidemic. Compare that calculation with the current mortality rate from the AIDS epidemic.

School-to-career Link: Students will discuss writing as a profession with a guest speaker.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Students will view a music video from the early 1980s and compare technology used to that of a video clip from today.

Product: Diagram the greatest advancements American society has made since 1793. Also, how have we regressed?

INDIVIDUAL JOURNAL ASSIGNMENT:

Students will list words used in 1793 that we do not use today, such as "balderdash" and "bunkum".

HOMELINK:

Students will discuss with a grandparent, or a great-grandparent, how the life of a fourteen year-old is different today compared to when they were fourteen.

15. **LANGUAGE ARTS** (“Masque of the Red Death”) MCF E I 8.1: Students will identify and use selective mechanics that facilitate understanding.

KNOWLEDGE:

Students will use the Edgar Allen Poe short story, “Masque of the Red Death” to identify symbolism, theme, setting, and character and to make predictions.

Anticipatory Set: Students will watch a film clip of The Masque of the Red Death in the seventh room, dressed in black, with the clock strikes midnight.

Students will identify symbols that represent life (blood) and death (grim reaper).

COMPREHENSION:

Before completing story, students will predict the ending and the fate of Prince Prospero using symbolism in the text.

APPLICATION:

Anticipatory Set: Students will watch a film clip of Prospero’s Abbey’s main hall in “The Masque of the Red Death”.

Activity: Students will explore the symbolism in the story.

Product: Students will create a labeled diagram of Prince Prospero’s Castellated Abbey. They should include all colors, people, and furnishings.

Multicultural Link: Explain reference of “sevens”

Science Link: Discuss whether or not it is biologically possible for a person to “bleed out of the pores”.

School-to-career Link: Students will find out if it is possible to build an airtight establishment.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Play “And When I Die” by Blood, Sweat and Tears.

Activity: Students will explain symbolism, theme, setting and character within “The Masque of the Red Death” using a graph provided.

Product: Students will write use the elements of “The Masque of the Red Death” to write their own short story and perform it for the class.

INDIVIDUAL JOURNAL ASSIGNMENT:

Describe an incident in your life where you predicted what the outcome would be. What clues did you have that brought you to your conclusion?

HOMELINK:

Ask your parents to describe a time when they thought that they knew the answer, but it was actually something else.

16. **COMPASSION**

MCF SS III 3.2 Students will explain why people might agree on democratic values in the abstract, but disagree when they are applied to specific situations.

KNOWLEDGE:

Why is compassion important in the dealing with disease?

Anticipatory Set: Listen to the song “We are the World”

Listen to the song “Between and Father and a Son” by Elton John

Students will describe when someone was compassionate and helpful to you during a time when you were ill.

COMPREHENSION:

Give example of the expression of compassion in our society. E.g.: Get well cards, etc.

APPLICATION:

Anticipatory Set: Read the excerpt about lepers from the Bible.

Students will: Show how individuals have helped society by demonstrating compassion to persons suffering from disease. Discuss the impact of those actions.

Product: Students will create fact tiles with information about individuals or organizations that demonstrate compassion.

School-to-Career Link: List occupations that require the most compassion. Guest speaker, i.e. Nun

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Song “Imagine” by John Lennon; “Come Together” by the Beatles

Students will relate real life examples of compassion into a fictional children’s story.

Team Product: Write and illustrate a children’s story.

INDIVIDUAL JOURNAL ASSIGNMENT:

Do you think it is your responsibility to show compassion to people world wide suffering from disease?

HOMELINK:

Ask your parents about a time when people showed compassion to you or your family and how that impacted their life.

17. **MEDIA’S INFLUENCE ON EPIDEMICS**

MCF SS II 1.2: Students will explain how culture might affect women’s and men’s perceptions.

KNOWLEDGE:

Anticipatory Set: View clip from Wag the Dog where Hollywood producers create a scene with a young girl escaping a fictional war. View clip from Good Morning Vietnam in which the military shuts down Adrian Cronour’s (Robin Williams) program because he read the news before it went to censorship.

Students will list different ways that they learn about their world and how this information may sometimes be misleading. (From school, to community, etc)

COMPREHENSION:

Explain how the media has the power to control information. Students will explore media’s influence by examining historical examples such as war (Vietnam) and the 2000 Presidential Election (announcing Florida incorrectly).

APPLICATION:

Anticipatory Set: Watch film clip from And the Band Played On that shows newscasts from the 1980s of the first reports of AIDS.

Students will understand how the media controls information and how this may influence the spread of an epidemic. They will examine the lack of information in historic epidemics such as the Bubonic Plague and Yellow Fever along with contemporary reports of the AIDS epidemic as compared to other diseases.

Team Product: In cooperative groups, students will prepare a newscast that provides information about an epidemic that is new to their community. The group will be responsible for providing all information for the classroom community.

Multicultural Link: Explore censorship of news in countries such as Iraq and Serbia. Explain how this may lead to citizen ignorance and shape entire countries cultures and attitudes.

Science Link: Discuss how the media has the power to create public concern and, possibly, panic about a situation.

HIGHER ORDER THINKING SKILLS (H.O.T.S.):

Anticipatory Set: Play Smashmouth song “All-star” that incorrectly attributes the hole in the ozone layer to global warming. View clip of Wizard of Oz in which scarecrow incorrectly recites the Pythagorean Theorem after he receives his brain.

Students will distinguish between accurate and complete information presented by the media.

Product: Students will examine three web sites looking for incorrect or misleading information. They will create a written evaluation that discusses the accuracy and completeness of each website. The class will then compile the web sites rated superior to create a database of research websites.

INDIVIDUAL JOURNAL ASSIGNMENT:

A reporter interviews you and their article misinterprets your ideas and words. What is your reaction? Would you do anything to resolve the situation?

HOMELINK:

Ask your family members if a news report and/or public announcement has ever misinformed them. Have them describe their feelings and reactions.

MORAL/ETHICAL/SPIRITUAL REASONING AND DILEMMAS

ESSENTIAL QUESTION: How does the content of this unit reflect character education through Moral and Ethical dilemmas?

1. Producing, Exchanging, and Distributing [Economics]

Dilemma: You are an executive in an international pharmaceutical corporation. Your profits last year exceeded 100 million dollars. Your responsibility is to ensure that your profit margin increases at least with the rate of inflation. You have received several letters and e-mail correspondences from people who feel that your company should provide free (or at least low cost) drugs to Africans who are HIV positive and/or have AIDS. In addition, you cross a picket line every morning set up by an international group who has demanded a meeting with you to discuss this issue. If you provide these people with the necessary drugs of survival your company profits may not exceed the appropriate financial projections. This may result in this loss of your job.

You agree to meet with the representative of the organization picketing your office. What do you tell them?

2. Transportation

Dilemma: You are a doctor who has sworn to the Hippocratic oath. You have a patient who walks into your office with symptoms of a fatal disease that is spread through closed contact.

Do you treat her?

3. Communications

Dilemma: You are the coach of the basketball team. One of your team members is HIV-positive. During practice, he and another player collide, resulting in open wound injury to both students. Legally, you are to preserve the right of medical confidentiality of all students; however, you feel that the other student may now be at risk.

Do you inform the parents and/or the student that they may be at-risk for contracting HIV?

4. Protecting and Conserving

Dilemma: You are a doctor that has been assigned to travel to Zaire and administer a vaccine to villagers who have been stricken with the Ebola virus. On your way to the village you encounter another village in which several people have symptoms of the Ebola virus. Your boss has assigned you to only administer the vaccine in the assigned village and you do not have enough for both villages. You know

by the time communication reaches the U.S., these villagers will be dead; however, if you do not continue to the other village you may be reprimanded and lose your job.

What do you do?

5. Providing Education

Dilemma: You are a writer for the Michigan Department of Health. You have been assigned to create announcements for radio, television and print newspapers concerning HIV infection. You have read research that claims that by showing people's success stories with additions such as drugs and alcohol people become less inhibited to try these things. Your boss has informed you that it is important to make the announcements positive in nature and illustrate that people can live a normal life with HIV. Your research has told that being physically and mentally fit is an essential element in this normal life. You fear that announcing this information may lead people to believe that HIV is not a deadly disease thus contributing to higher rates of infections.

How do you design your public service announcement?

6. Making and Using Tools and/or Technology

Dilemma: You have developed a medication that will cure an epidemic. You know that there are long-term negative side effects that may potentially lead to further illnesses for the patients.

Do you push for FDA approval in hopes that future technology will find a solution to the side effects?

7. Providing Recreation

Dilemma: Your best friend is extremely self-competitive (an over-achiever). It is important for her to earn all As on every assignment and test, participate in extracurricular activities and work a part-time job. She becomes extremely run down and much more susceptible to illness. You know that mentally if she slows down it will add to her emotional stress; however, you know that she is physically putting herself in danger. Either way she is in a bad position.

How do you handle the situation?

8. Organizing and Governing

Dilemma: You are president of the United States and you were informed of a low profile deadly disease that impacted a small percentage of the population. You have the economic and medical tools necessary to help save these people; however, you do not have the support from Congress or citizens. It is a reelection year and the media and public will analyze every move you make. In your heart you know helping these people is the right thing to do, but you also know that if you are reelected you have the potential to help many more people over the course of four years.

Do you write an Executive Order that would provide the necessary medical treatment?

9. Moral, Ethical, and Spiritual Behavior

Dilemma: It is public knowledge that a student in your school is HIV-positive. The student is constantly ridiculed and ostracized by all groups in your school. Your assigned seat is next to this student and you have been forced by your teacher to work with him in cooperative activities. From this you have discovered that he is funny, smart and has a great personality. You are planning your sixteenth birthday party and your parents have told you to invite as many people as you wanted. You are considering inviting him, but know that when others find out they will ridicule you and possibly ruin your party and subsequent social life.

Do you invite him?

10. Aesthetic Needs

Dilemma: You are a research scientist and have found a new virus. The uniqueness and beauty of the virus fascinates you. It has already killed several people in a small town in Northern Michigan, however,

you feel that rather than destroy the virus, you should keep it to study its effects on living organisms. You know, however, that it has the potential to kill many more innocent people.

PRODUCTIVE THINKING SKILLS DIVERGENT/CREATIVE THINKING

1. BRAINSTORM MODEL

- A. BRAINSTORM ALL OF THE _____:
- AHA #1. Things that cannot be purchased with money.
 - AHA #2. Ways you can give someone an illness.
 - AHA #3. Systems of communication you use in your daily life.
 - AHA #4. Ways your family protects you from disease.
 - AHA #5. Forms of education available to you on a daily basis.
 - AHA #6. Disadvantages of technological advancements.
 - AHA #7. Ways you can rejuvenate your mental health.
- B. BRAINSTORM AS MANY _____ AS YOU CAN THINK OF.
- AHA #8. government agencies
 - AHA #9. community service organizations
 - AHA #10. qualities of beauty in nature
 - AHA #11. deadly diseases
 - AHA #12. real-life objects that display symmetry
 - AHA #13. organs
 - AHA #14. real-life objects that have symbolism
- C. HOW MANY WAYS CAN YOU COME UP WITH TO _____?
- AHA #15. rewrite the end of the story "Masque of the Red Death"
 - AHA #16. show compassion to others
 - AHA #17. obtain accurate information from the media

2. VIEWPOINT MODEL (Human or Animate) (Use Cultural Literacy Terms)

- A. HOW WOULD _____ LOOK TO A (N) _____?
- AHA #1. complete health care/African village struck with an epidemic
 - AHA #2. helper T-cell/ HIV virus
 - AHA #3 immune system/ da Vinci
 - AHA #4. vaccine/flagellants
 - AHA #6. microscope/Hippocrates
 - AHA #7. an aerobics class/George Washington
 - AHA #8. George Bush/ African AIDS patient
- B. WHAT WOULD A _____ MEAN FROM THE VIEWPOINT OF A (N) _____?
- AHA #9. Hippocratic oath/ Grim Reaper
 - AHA #10. Cosmo magazine/ leper
 - AHA #11. quarantine/ pathogen
 - AHA #12. parallel line/ polygon
 - AHA #13. red blood cell/ artery
 - AHA #14. antibiotic/ Matilda Cook
 - AHA #15. inoculation/ Prince Prospero party guest
 - AHA #16. pharmaceutical corporation/ Mother Theresa
 - AHA #17. web site/ Louis Pasteur
- C. HOW WOULD Thomas Jefferson VIEW THIS?
- 1. the HIV virus
 - 2. President George W. Bush

3. the encoding of DNA
4. mass media

3. **INVOLVEMENT MODEL (Personification/Inanimate object brought to life)**

A. HOW WOULD YOU FEEL IF YOU WERE _____?

- AHA #1. inadequate health plan
- AHA #2. proboscis of a mosquito transmitting Yellow Fever
- AHA #3. immune system that was infected with HIV
- AHA #4. the needle inoculating a child against polio
- AHA #5. pamphlet being thrown away without being read

B. IF YOU WERE A _____, WHAT WOULD YOU (SEE, TASTE, SMELL, FEEL)?

- AHA #8. Executive Order stating that the U.S. will fund the medical treatment for epidemics worldwide
- AHA #9. South Africa
- AHA #10. protein
- AHA #11. germ warhead released into the air
- AHA #12. triangle
- AHA #13. drawing of da Vinci
- AHA #14. cart being pushed through the street to collect dead bodies

C. YOU ARE A _____. DESCRIBE HOW IT FEELS.

- AHA #15. bleeding pore
- AHA #16. panel on the AIDS quilt
- AHA #17. microphone that will transmit false information

4. **CONSCIOUS SELF-DECEIT MODEL**

A. SUPPOSE _____. WHAT _____.

- AHA #1. financial resources were limitless/ for what disease would you fund research
- AHA #2. they understood how the Bubonic Plague was transmitted/ what would the outcome have been
- AHA #3. your immune system did not exist/ what would life be like
- AHA #4. vaccine was discovered for HIV/ who would receive it first
- AHA #5. there was no organized education about disease transmission/ life is like
- AHA #6. microscope had not be invented/ life be like
- AHA #7. fitness was proved to be totally generic/ the McDonald's lines look like
- AHA #8. money and power did not factor in politics/ world look like
- AHA #9. random acts of kindness cured disease/ it is like at midnight in at New York subway station.

B. YOU CAN HAVE ALL THE _____ WHAT _____?

- AHA #10. bodily attributes you want/ use it to gain
- AHA #11. antidotes/ would you do with it
- AHA #14. past to repeat/ would use it to correct mistakes.
- AHA #15. money in the world/ would you do to protect yourself

5. **FORCED ASSOCIATION MODEL (Use cultural literacy terms here)**

A. HOW IS _____ LIKE _____?

- AHA #1. economics/ racism
- AHA #2. viral infection/ wildfire
- AHA #3. T-cell/ Achilles' heel
- AHA #4. vaccine/ clock
- AHA #5. education/ bikini
- AHA #6. RDA of the FDA/ magazine

- B. GET IDEAS FROM _____ TO IMPROVE _____.
- AHA #8. ants/ government
 - AHA #9. grim reaper/ health care
 - AHA #10. Typhoid Mary / make-up artist skills
 - AHA #11. Hannibal Lector/ germ warfare
 - AHA #12. Pythagoras/ vaccine development
 - AHA #13. anatomy/ salad
 - AHA #14. Dr. Benjamin Rush/ medical conditions today
- C. I ONLY KNOW ABOUT _____. EXPLAIN _____ TO ME.
- AHA #15. the black and red death/ the blue death
 - AHA #16. hate/compassion
 - AHA #17. newspaper/internet

6. **REORGANIZATION MODEL**

- A. WHAT WOULD HAPPEN IF _____ WAS TRUE?
- AHA #1. money grew on trees
 - AHA #4. you could feed a cold and starve a fever
 - AHA #5. you could judge a book by its cover
 - AHA #6: technology could have a cure for everything
- B. SUPPOSE _____ (HAPPENED)
WHAT WOULD BE THE CONSEQUENCES?
- AHA #8. the U.S. no longer had the resources we have. Who would help us?
 - AHA #9. Good Samaritan were alive today
 - AHA #10. your inner beauty directly formed your outer beauty
 - AHA #11. the U.S. launched a biological weapon on their enemies
 - AHA #12. no statistics were calculated about the mortality rates from disease
 - AHA #14. The Free African Society had not been formed.
- C. WHAT WOULD HAPPEN IF THERE WERE NO _____ ?
- AHA #15. Ways to diagnose disease.
 - AHA #16. everyone showed compassion toward others
 - AHA #17. the media was still strictly censored

CULTURAL LITERACY/SPELLING LIST

Names

President George W. Bush
President Bill Clinton
Leonardo advance
Thomas Jefferson
George Washington
Dr. Benjamin Rush
Jean Pierre Blanchard
Charles Willson Peale
Catherine Phiri
Dr. John Snow
Dr. Mary Wilson
Louis Pasteur
Typhoid Mary
Sulk
Flagellants

Phrases

Abandon hope all ye who enter here
Actions speak louder than words
Bad news travels fast
Feed a cold starve a fever
Clean bill of health
Don't judge a book by its cover
Do unto others as you would have them do unto you
Eat, drink, and be merry for tomorrow we die
For whom the bell tolls
An ounce of prevention is worth a pound of cure
Where there's a will there's a way
Where there's life there's hope
Those who cannot remember the past are condemned to repeat it
Beauty is skin deep
All the news that's fit to print
Bite the dust
Ring around the Rosie
Zimbabwe
Zambia

Places

Africa
Angola
Calcuta
Kenya
Madagascar
Philadelphia
Malawi
Mozambique
Botswana
Namibia
South Africa
Lesotho
Swaziland
Iraq
India

China

Ideas

Abolition	Gorge apparatus	Pasteurization
AIDS	Homosexuality	Pestilence
Achilles' heel	Hippocratic Oath	Plague
Adaptation	Host	Pandemonium
Aerobic	HIV	Paranoia
Aesthetics	Helper T Cell	Percentage
Antibiotic	Hexagon	Phobia
Antibody	Heptagon	Protein
Antigen	Immune system	Polygons
Armageddon	Indentured servant	Pathogen
Angle	Influenza	Pentagon
Bacterium	Inoculation	Perpendicular
Balanced diet	Integument System	Parallel
Biology	Jaundiced	Quarantine
Bell curve	Killer T cell	Quadrilateral
Black death	Lymphocytes	RNA
B Cell	Lysosome	Rheumatic fever
Cells	Macrophage	Ribosome
Cell wall	Microorganisms	Reproductive system
Cell membrane	Matrix	Respiratory system
Chloroplast	Molecular biology	Syphilis
Containment	Mononucleosis	Small pox
Cytoplasm	Malaria	Suppressor T cell
CDC	Mass media	Skeletal system
Cytoskeleton	Media	Symmetry
Circulatory system	Measles	Typhus
Defense mechanism	Mean	Typhoid Fever
DNA	Meningitis	Tumor
Digestive System	Memory B cell	Tetanus
Decagon	Mitochondria	Triangle
Epidemic	Muscular system	Venereal Diseases
Empathy	Nucleus	Virus
Ethics	Nervous system	Vaccine
Endoplasmic reticulum	Nonagon	Vaccination
Excretory system	Organs	Vector
Fatalism	Organelles	Vertex
FDA recommended intake	Octagon	Whooping Cough
Good Samaritan	Polio	WHO
Grim Reaper	Penicillin	Yersina pestis

RESOURCES

I. Bibliography – Teacher/Professional Books and Resources

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- O'Rourke, P.J. (1994). *All the Trouble in the World*. New York: The Atlantic Monthly Press.
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- Time*. February 12, 2001.
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II. Bibliography – Student Books on loan from Media Center for classroom use

- Aaseng, Nathan. (1992). *The Common Cold and the Flu*. New York: Franklin Watts.
- Altman, Linda Jacobs. (1998) *Plague and Pestilence: A History of Infectious Disease*. Berkeley Heights, New Jersey: Enslow Publishers, Inc
- Bender, David. (1997). *The Spread of AIDS*. San Diego: Greenhaven Press.
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- Biddle, Wayne. (1995). *A Field Guide to Germs*. New York: Anchor Books.
- Brown, Joe. (1992). *A Promise to Remember: The Names Project Book of Letters*. New York: Avon Books.
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Sirimarco, Elizabeth. (1994). *Life Issues: AIDS*. New York: Marshall Cavendish.

Taylor, Barbara. (1995). *Everything You Need to Know about AIDS*. New York: The Rosen Publishing Group, Inc.

Watstein, Sarah Barbara. (1998). *The AIDS Dictionary*. New York: Facts on File, Inc.

White, Ryan and Ann Marie Cunningham. (1992). *Ryan White: My Own Story*. New York: Penguin Group.

III. Educational Films/Videos
Body Defenses Against Disease

IV. Commercial Films/Videos

<i>And the Band Played On.</i>	<i>Nutty Profession</i>
<i>Inner Space</i>	<i>Outbreak</i>
<i>City of Joy</i>	<i>Philadelphia</i>
<i>Jeffery</i>	<i>Wag the Dog</i>
<i>Masque of the Red Death, The</i>	<i>Wizard of Oz</i>
<i>Mad City</i>	<i>Vertical Limit</i>

V. Literature/Language Arts (on reserve in Media Center)

Fiction

Arrick, Fran. (1992). *What You Don't Know Can Kill You*. New York: Laurel Leaf Books.

Hoffman, Alice. (1988). *At Risk*. New York: Berkley Books.

Kerr, M.E. (1986). *Night Kites*. New York: Harper Collins.

McDaniel, Lurlene. (1992). *One Last Wish: Sixteen and Dying*. New York: Bantam Books.

Shilts, Randy. (1988). *And the Band Played On: Politics, People, and the AIDS Epidemic*. New York: Penguin Books.

VI. Music

"All star", Smashmouth
 "Imagine", John Lennon
 "We Are the World," Quincy Jones
 "Times are a Changing," Tracy Chapman or Bob Dylan
 "We Didn't Start the Fire", Billy Joel

“It’s the End of the World As We Know It”, R.E.M.
“If I Had A Million Dollars”, Barenaked Ladies
“Between a Father and His Son,” Elton John
“Particle Man”, They Might Be Giants
“Another Brick In the Wall”, Pink Floyd
“She’s Thinks His Name Was John,” Reba McIntyre

VII Poetry

Prelutsky, Jack *Mold, Mold*
Mosquitoes, Mosquitoes!
I’ve Got a Terrible Headache
Gussie’s Greasy Spoon
A Microscopic Topic
Robinson, E.A. *Richard Cory*
Dickinson, Emily *I Felt a Funeral in my Brain*
Ransom, John Crowe *Chills and Fever*

VIII Drama

Shakespeare, William, *Romeo and Juliet*
Steel Magnolias –
Williams, Tennessee, *The Glass Menagerie*
Zindel, Paul, *The Effect of Gamma Rays on Man-in-the-Moon Marigolds*

IX Art Works

Louis Pasteur, George G. Wilder
The Plague Protective Clothing Illustration
Electron Micrographs
I-Red Images
STM-Micrographs
Anatomical Studies, Leonardo da Vinci
The Discus Thrower, Myron

X Resource People/Mentors

Family doctor
Librarian
Police department
Counselor

XI Field Trips

Hospital
Medical School
Research Lab
School kitchen
Family Practice

XII Other Materials

Bookshelf – CD-Rom
Encarta Encyclopedia – CD-Rom
Groliers Encyclopedia –CD-Rom
Print House –CD-Rom
The Incredible Machine-CD-Rom
WWW
MoreNet
Gopher
Magazines: *Discover*

Journal of Chemical Education
National Geographic
Newsweek
Science News
Science Teacher
Scientific American
The Smithsonian
Time
U.S. News and World Report