

Human Decision-Making: Rationale of Our Reasoning

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Academic Setting

This study and curriculum is for students at Ernie Pyle Middle School in the gifted language arts / literature program. The focus is on eighth graders, but this unit may be used in simplified form for sixth and seventh graders. Although the gifted program is offered through language arts and literature, the material is covered in thematic units that encourage participation of other disciplines. The majority of students are Hispanic and many speak Spanish at home. The school is situated in a low socioeconomic community where education is not necessarily a high priority.

The students need exposure to a wide variety of writings that promote conscious thought and will hopefully make them competitive with other students in the city. Developing thinking strategies, exercising creative thought, and practicing problem solving are three main goals of the gifted program. Character development is also important as well as making students aware of choices and discussing responsibilities and ramifications of choices.

Decision making models need to be clarified in order to help the students understand the process necessary for making rational decisions. Groundwork must be laid in giving general information, examples, tools, and practical experiences. A "decision tree" is one tool that will be given to the students to help them see a clear layout of the problem that shows all choices considered. Graphs, experiments, and game situations will reinforce the material given. Uncertainty and emotional influences also need to be addressed to help students see how they play a part in decision-making. Hopefully this unit will heighten the students' consciousness of choice and will lead to making better decisions.

The topic of rational and irrational thought is something that can be incorporated quite easily into the curriculum. Students are making many decisions every day. At their age, many of their decision-making processes are not based on sound judgment. Students falter on which group of friends to hang around with, which homework has the highest priority, and what is actually important to them in their own social-emotional development. At the same time they are trying to appease their parents and friends who often have conflicting points of view. An opportunity cost model will be introduced to show the tradeoffs of different scheduling practices. The simple benefits given with the same time invested may yield varying affects. The students are trying to understand the concepts of fairness and morality, taking a stand, and making a difference. However, many are not very aware of the complexities their lives are based upon. Life could be easier if a little more time was spent on the planning of the actions.

This unit will be the introductory unit of the school year relating to who am I – what affects my thoughts and my actions? Background will be given through classic examples of famous accounts of decision-making: Hatfield vs. McCoy, Billy the Kid, Bonnie and Clyde and other villains with a cause. Short stories ("Ransom of the Red Chief" and "Gift of the Magi") and excerpts from novels and plays (Romeo and Juliet, Macbeth) will depict examples of obvious flawed decision making schemes. Essays relating to the topics of fear, belonging, choices, and taking a stand, will be used to intermingle current issues that are highly volatile. One novel, *The Chocolate War*, will be studied to show how decisions develop the character and the importance of outcome in the book. The decisions of the protagonist will be diagramed to clearly show the options of the character. Discussions of choice, emotion, cost, and benefit will be experienced. Students will use the experiences to set personal goals for their behaviors throughout the year. This unit will include reading, writing, "game theory," and strategies for accomplishing goals and making rational decisions.

Narrative

Everyone is continually confronted with conflicts that require problem solving. From the moment we get up in the morning to the time we go to sleep, our minds are constantly being bombarded with issues that require decisions. The decision-making process is not always based on sound judgment. The purpose of this unit is to provide decision-making tools that will help promote rational thinking and thoughtful decisions. The unit is designed as an introduction to the topic of decision-making. General concepts will be introduced through reading, discussion, experiments, and other hands on activities. Students will be asked to use critical reading and thinking skills to relate lessons to literature and to contemporary issues. The unit is then used as a framework for further studies of decision-making throughout the year. Topics will relate to literature, grouping, choices, individual organization, and goal setting.

Goals

The students will receive tools and information about decision-making that will enable them to:

- a) Clarify problems
- b) Understand both sides of issues
- c) Weigh the advantage of both sides of issues
- d) Determine the outcome with the best payoff
- e) Set realistic goals
- f) Prioritize their time.

Concepts of Decision Making

Making decisions occupies much of our time and energy. We make decisions both consciously and thoughtlessly. Yet every decision we make in some way influences our lives. Decisions are based on wants, needs, knowledge or lack of it, capabilities and costs. It is important to establish layers of information that will aid students in developing their own perspectives and methods of decision-making.

Students need to develop an appreciation of the many aspects that influence a decision to better understand society and people and why so many of us do things that are not in our best interest. They need to recognize who is making the decision, what are his goals, and what are the hurdles.

Sometimes we think only in our own frame of reference and do not even pay attention to the fact that some people have very different sets of goals. Many of our goals and our procedures for attaining those goals are based upon our own experiences, so a person who does not have experience with many options may not see that there are choices. For them, the most immediate payoff, whether positive or negative, may serve the purpose for their goal. They do not do a cost/benefit analysis because they feel they have no choice. They react to the problem. They do not look at it normatively to see if they could have done better.

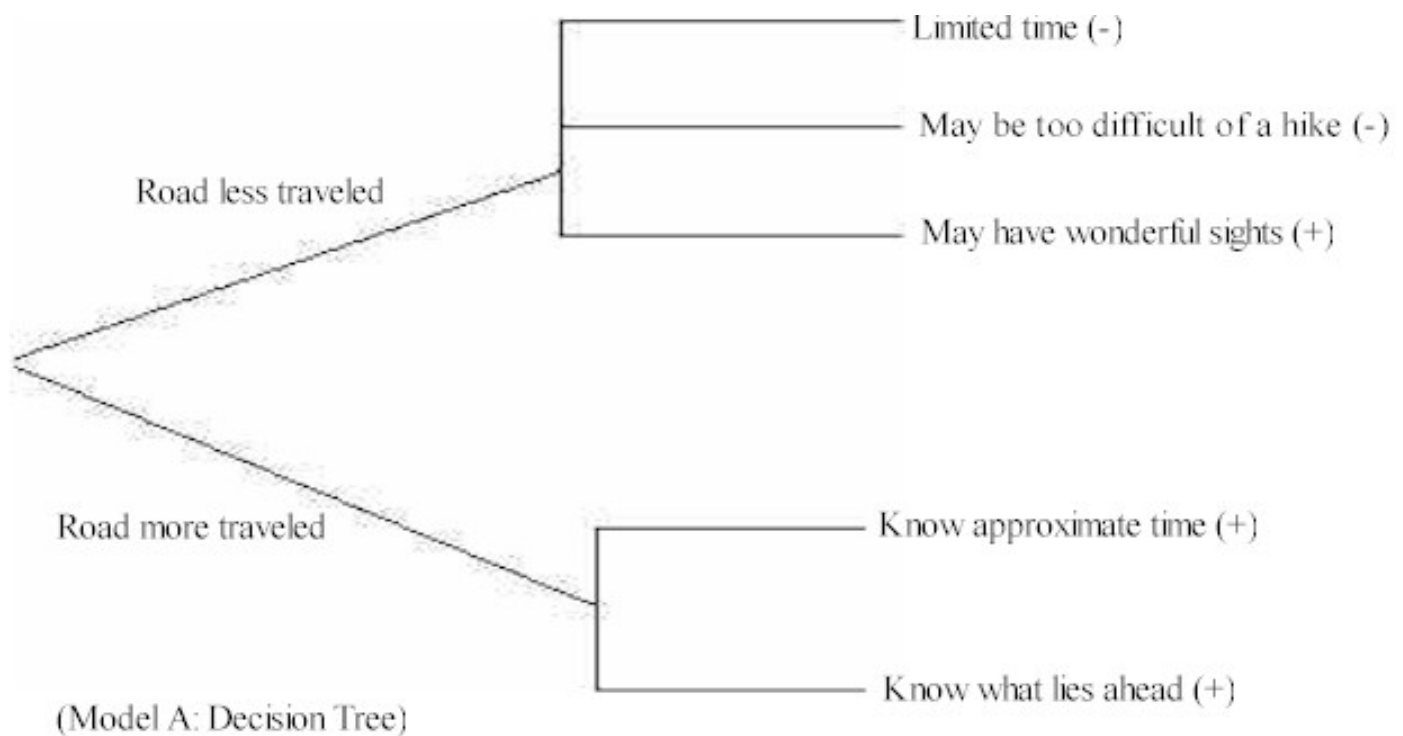
Many decision-making tools allow students to map out possibilities that make it easier to see the choices. Once this is done, the obvious choice is not always as obvious as the decision-maker might have once thought. A list of steps to solve a problem may be similar to the following:

- What are the action choices?
- What are the pros and cons of each possible action?
- What are the consequences of each choice?
- What is the probability of each consequence?
- What is the relative importance of each possibility?
- What is the identification of the best course of action?(Baron)

Decision trees are valuable tools for plotting out possible actions and outcomes. A decision tree starts with the situation and expands into the possible actions to be taken. Each action is in turn broken down

into consequences. The decision tree model helps one to look ahead and then reason from behind or backward. Then one can determine which series of actions more closely align with the best payoff. The decision tree can of course continue on so that future actions can be plotted from the outcomes, thus allowing many branches to be diagramed on the tree. The anticipation of future decisions or goals should help guide earlier choices. The whole decision-making process becomes more objective, which allows us to be more rational.

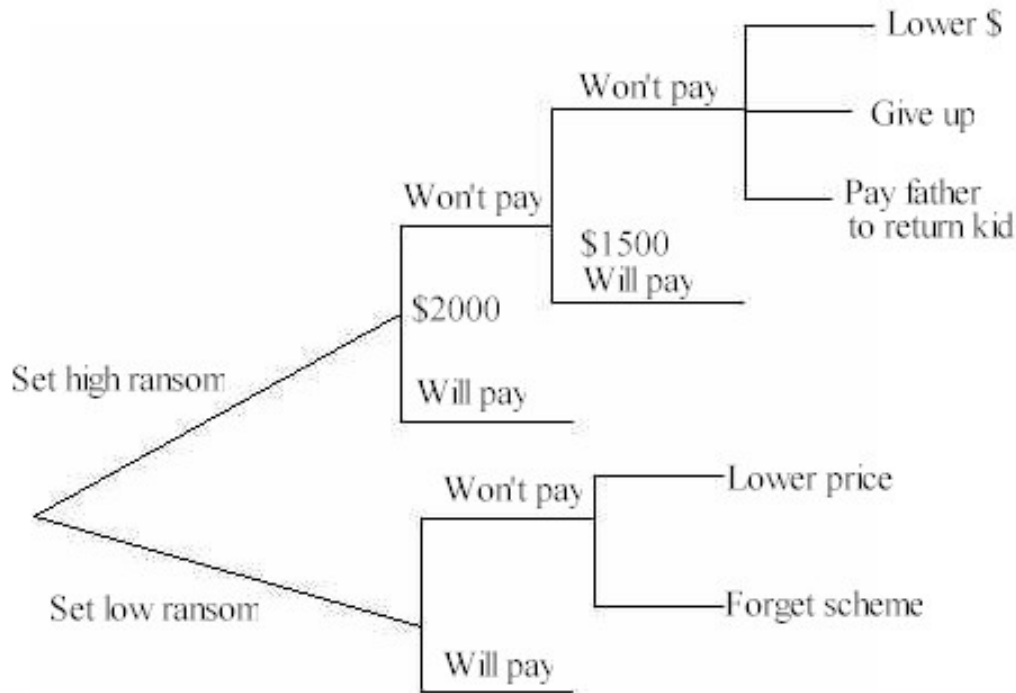
There are three particular decision-making situations that will be considered for this unit. The first and easiest to define consists of a single person deciding on a course of multiple choices. In this circumstance the students will want to examine the possible paths to take. They will need to list the consequences of each choice, and they need to determine the pros and cons of each outcome. Then they simply choose the action that leads to the most economical and desired outcome. Taking a simple decision from Robert Frost's poem "The Road Not Taken," one can diagram a simple decision tree. If the situation calls for limited time to get back home, the decision tree would look something like the following (Model A, Decision Tree). In the case of limited time the rational decision would be to take the road more traveled. If the situation did not require a time limit and the hikers were looking for adventure, the preferred outcome would be for the other path.



By choosing the known path, you give up the benefits associated with other path. The decision tree model explicitly shows the costs of the alternative path not chosen. The opportunity cost of taking the path more traveled is the possible lack of great adventure and exciting scenery. However, in order to meet the goal of getting home one time, this is wise to sacrifice.

The second type of decision-making involves another player in the decision. In this circumstance, you have to respond to the actions of the other person. This is a sequential decision design in that each person reacts to the action of the other until a final outcome is determined. Decisions made at earlier points must look ahead not only to future decisions, but also to the possible responses of the other players. Now all of the steps of Baron's design will come into play. The second-guessing strategies of cost verses benefit as well as the element of empathy will influence the understanding of each person's choices. This type of multiple player decision-making is referred to as game theory. The study of strategic behaviors has a place in conflict situations. When two or more decision-makers have different objectives and act on the same system or share the same resources, they are in a game or conflict situation. In the story "The Ransom of Red Chief" by O. Henry, two kidnappers must determine how

much ransom to ask for the son of a wealthy mortgage financier. They need \$2000 to close a deal in western Illinois. However, after sitting with the kidnapped boy for a night and experiencing his horrid behavior, they begin to doubt the value they should place on the child's ransom. If the mortgage financier pays, everything is smooth. However, the kidnappers are beginning to doubt the big price. They indeed must continue through Baron's six steps to determine a suitable action. And of course, the outcome ends up being worse than they even imagined (Model B). The decision tree was only played out for the two kidnappers. An opposing tree could be drawn of the father's decisions. It is easy to see that the branch on the high ransom side will obviously take more work, time and energy, if the father refuses to pay, which is indeed what happened.



(Model B)

Students can design decision trees for virtually any literature. All stories contain a conflict that requires some form of decision making. There are many game situations that follow this sequential design that can also be plotted. Examples are chess, checkers, centipede game, labyrinth, or any game where the action of one depends on the actions of the other player.

Finally, a spontaneous cooperation design involves a great deal of game theory in determining the action. Both parties respond at the same time making mind play an important part in determining action. Now neither side knows how the other will respond, so it is important to look for signals to cue what the other party may be thinking. Of course, the options open to each are usually known. However, it may be difficult to predict how the other party will respond due to a number of issues. There may be no equality in the outcome. There may be a lack of trust. Will one risk all for his own best outcome knowing that the other player would suffer? Can marginal gain suffice when an apparent windfall will be bestowed to the other player? Is there a way to guarantee a sure win for both players? It is easy to see that signaling and reputation would play a large part of the decision. Also how far the guessing is carried out can aid or deter a beneficial outcome. I may no longer respond the way I truly think I should because I feel that you are following a certain course of action that may make me need to respond differently.

A prisoner's dilemma is a spontaneous strategic game. One such scenario involves two criminals caught at the scene of a crime. The cops know that they have committed the crime, but the evidence is inadmissible. They do have enough information to put the two away for one year that would hardly pay for the deed done. The police offer each partner a chance to confess. If they both confess, they both get five years in jail. If only one confesses, he will get off free, but the other partner will get 20 years. The

partners are in separate cells and cannot communicate with each other. They are both offered the same deal. They both are expected to respond at the same time. The best payoff for each partner is to confess and hope the partner does not (Model C). However, the best mutual gain would be for both to remain silent (Frank, 30).

	Confess Prisoner Y	Remain silent (Y)
Confess Prisoner X	0 years X 20 years Y	0 years X 20 years Y
Remain Silent (X)	20 years X 0 years Y	1 year each

Model C

Equipping students to do this kind of thinking analysis results in positive rational growth. First of all they become skilled in organizing various information. They also become alert to the cues and signals that are often present in daily situations. Their perceptive skills improve, as they become aware that even the smallest decisions affect their goals. The concepts of bartering and mutual gains set up a climate for cooperation. This type of spontaneous game play is seen in literature also. "The Gift of the Magi" is one such story where each partner wants to please the other and sacrifices a treasure of their own to appease the other. The movie *Return to Paradise* is a typical prisoner's dilemma where two men must decide whether or not to return to Malaysia to help a third friend.

When students are empowered to analyze their problems or issues, then they can make decisions that have much better outcomes. Economics is the study of how to best allocate limited resources among competing uses. Considering themselves as a valued commodity, the students can begin to distribute their time and skill to their own desired outcomes or goals. Using the science of economics, tools are given that take out much of the subjectivity in decision making. Instead, we look at probabilities, risk, bounded rationality, cost/benefit analysis, marginal satisfaction and benefits, comparative advantage, and equilibrium. Students study the issues and make a conscious choice relating to the outcome based on economic principles. It is easier to accept responsibility for the outcome when some rational thought has gone into determining the solution. Also students learn that they are not always in full control of the outcome, especially in an area where there must be cooperation in the decision. External factors such as emotion, irrational behavior, greed, and time inconsistencies often impede good selection of actions. However, if students understand the economic principles and apply the tools, they can be rest assured that they made an educated effort in solving the problem, which is always better than reacting without much thought.

Setting Goals and Organizing Efforts

Setting goals is a decision-making technique that takes a little bit of practice, but gives great benefits. By adding the practice of goal setting, students have a much better chance of controlling their situations. Students need to determine a list of their dreams. Then they should scale those down into manageable goals. Sometimes it is better to work in small steps and gain marginally. Diving into 10 feet of water without knowing how to swim can be very intimidating. Possible success needs to be the focus of the goal. Think in small, accomplishable steps. Once a goal is in mind, it needs to be placed in writing to transfer the dream or wish into something more concrete that can be dissected and worked upon.

Once a goal has been written and broken down, it then needs to be prioritized. What activities are

urgent and which are important? This enables a student to determine what needs attention first. Then there needs to be a plan of action. How will one go about reaching this goal? A time commitment needs to be determined for each goal or phase of a goal. A calendar, chart, and/or sticky notes all help to keep a time schedule on track. They are also good reminders or supports for keeping focus. Some of the decision-making tools can be used to aid in this step. Lastly, one has to organize the action to take place that will advance the goal. This action has been planned with the goal in mind so backwards reasoning is again put into place. Many times students can map out a decision tree with possible obstacles to help determine action plans. Students can easily see the overall picture and the roadblocks that may play out. The path of activities then is easier to follow.

Successful students exercise their rational thinking abilities when it comes to setting goals for school. Most take on extraordinary responsibilities in many phases of their lives. Why are they so successful? How do they find the time to do those things that result in such great benefits and create such a powerful reputation? The book *The 7 Habits of Highly Effective Teens* lists seven things that should be considered when searching for success. Many of the habits have substantial costs, but also reap great benefits. The seven habits are be proactive not reactive, begin with the end in mind, prioritize, think positively, seek to understand before giving information, work together to achieve more, and refresh yourself regularly (5). The poem "There's a Whole in My Sidewalk" shows the differences of acting and reacting. Sometimes there are many consequences before one actually learns to stand up and do something new. Some of the obstacles that tend to take place that may effect cost are time inconsistency where we do not plan an appropriate amount of time to do the task, procrastination, peer influences, lack of focus or motivation, overwhelming material, past reputation for failure, and intrapersonal conflict. There is a great deal of literature that supports decision making and goal setting. Almost any novel or story displays decisions—good and bad, played out by various characters. Lessons are numerous and support the many avenues that can be taken. The use of contemporary issues then can be used to practice the decision-making strategies that are introduced through literature. This brings the use of strategies closer to everyday life situations.

Decision-making tools

- a. Brainstorming
- b. Decision Trees
- c. Game Theory
- d. Critical Path Analysis (simplified)
- e. SWOT Analysis
- f. Force Field Analysis

Brainstorming is a technique for developing multiple solutions to a problem. Students are told to generate as many solutions as possible regardless of how off the wall they are. There is no criticism of ideas so that the boundaries of the problem may be stretched to the outer limits and so there is no risk in creating answers. The facilitator usually has a time constraint and encourages students to stay on subject. The brainstorming may be done in a group or done individually. Many times brainstorming will be a step in other methods of decision-making.

Decision trees are mind maps of information in a complex problem. They provide a structure for visually displaying alternative actions and the implications of those actions in relation to a problem. Assessing the possible outcomes becomes easier as the balanced picture of risks and rewards are displayed in the map.

Game theory is a mathematical theory of bargaining in response to multiple decision-makers. Decision trees and Prisoners Dilemma matrices are tools of game theory. They are used to illustrate the strategies and outcomes of each player, allowing the players to make more informed decisions. Game theory focuses on players who choose strategies in order to achieve the best outcome or highest payoff. Usually it is assumed that each player has two or more choices for action, each player has knowledge of the game and the opponent, and that the players know the details of the game and the payoffs

available. It also assumes that the players are rational, they will seek the payoff with the highest yield. There are many instances of second-guessing to try to put each player in the most positive position possible. In game theory, the notion of equilibrium, the balance point, becomes apparent. Here there is nothing to gain by changing strategy. Game theory allows students to analyze the data that drives cooperative venture and helps them understand the view of each person involved.

Critical path analysis is a tool that helps you calculate the time necessary to complete a project. It helps with scheduling and monitoring a project by first laying out the entire project in detail. Some of the activities necessary can be done simultaneously while others must be sequential. First you list all the parts of the project that are to be done, then you line up each task with a date or time schedule. Plot each item and time chart on graph paper. Finally you schedule your line of action paying attention to order, duration, and sequence. Critical path analysis is an effective way of assessing tasks that must be carried out, which parts can be done in parallel, the shortest time necessary for completion, resources needed, task priorities, and the scheduling of the project.

SWOT analysis is a method of identifying strengths, weaknesses, opportunities, and threats by making charts of each and examining obvious deficits. This is a tool that allows the examination of current status as well as future status. It shows problems that require critical decisions. Strengths and weaknesses show internal conditions such as leadership, co-workers, workspace, etc. Opportunities and threats show external factors such as competition, social issues, and social trends. This is a simple tool used to drive strategic thinking. Looking at the columns often reveals changes that can successfully be made or plans that can be put into action.

One could even rate possible outcomes the positive and negative numbers based on how feasible each is to put into action.

Force field analysis is a tool that gives a whole view of forces, both positive and negative, so that the decision can take into account all the interests. The approach is actually a form of focused brainstorming. First you write down the issue to be deliberated. Then you create two cells or lists for the advantages that are considered the driving forces and the disadvantages or the restraining forces. Write down all the forces for that decision in a column to the left, and all the forces against the decision to the right. You then analyze the listed items by assigning numerical values of 1 to 5. Calculate the values and decide in favor of the stronger side. The final decisions are made by objective means, although the assigning of values is somewhat subjective.

Vocabulary

Bartering—the direct exchange of one good for another, without the use of money

Bounded rationality—decisions that consider whether the risk of a less than ideal outcome is worth the time/effort it takes to consider every option

Cognitive dissonance—maintain your own prior self belief in spite of all else including conflicting information

Commodity—a good or article exchanged or traded

Conscious—made with perception, thought, will, or awareness

Comparative advantage—the ability to produce a specific good at a lower opportunity cost than its trading partners

Conspicuous consumption—consuming a commodity to send a signal, such as piercing, tattoos, dyed hair, flashy car, expensive jewelry

Cooperation—act or process of working or associating with others for a mutual benefit

Cost/benefit analysis—the cost of something weighed against the real benefit derived from it

Critical—using or involving careful judgment

Economics—the study of how to allocate scarce resources among competing uses

Emotional—relating to strong feelings of the mind and body

Empathy—the capacity of feeling another persons emotions as one's own

Equilibrium—a balance point or state of affairs that is impossible to improve upon by doing more of one thing and less of another

Externality—outside benefit or risk given beside the intended product, such as the pleasing aroma of a bakery, second hand smoke, air pollution, etc. Fairness—equal treatment of all concerned
 Full disclosure principle—when the first few disclose, then all need to follow suit to stay in the standing
 Inconsistency—not logical in thought or pattern, incompatible, or lacking agreement
 Law of diminishing marginal returns—as more and more of one kind of item is encountered, each additional item gives less positive utility, eating your second candy bar does not have as much satisfaction as the first
 Marginal—taking a small step at a time, incremental to test the market and not risk as much loss
 Maximize—make the most of
 Morality—ethical behavior displaying the principles of right and wrong, virtue
 Mutual—profits, benefits, costs, etc. shared amongst those participating
 Opportunity cost—the most desired goods or services that are forgone in order to obtain something else ("The Road Not Taken" by Robert Frost)
 Probability—the likelihood of an outcome expressed as the frequency with which it is theoretically expected to occur
 Rational—having reason or understanding, the ability to think about what you want
 Reciprocity—mutual cooperation or exchange between people
 Regret theory—theory that one chooses the decision that will bring the least regret
 Risk—the chance of loss or exposure to danger or hazard
 Risk averse—sure money, putting risk aside
 Sequential—following one another in order
 Signals—hints, cues, or signs that suggest a certain message or action, a company may offer a very good warranty signaling that it believes it has a quality product
 Spontaneous—at the same time, simultaneous
 Subjectivity—relating to what is in one's mind or thinking
 Time inconsistency—not enough time is allocated for the task at hand, or person misjudges time necessary to complete a task
 Uncertainty—unknown

Unit Plan

- | | |
|---|--|
| <p>"The Road Not Taken"
<i>Chocolate War</i></p> | <p>1. Determining the problems
 a. Clarification
 b. Possible solutions
 c. Opportunity/cost
 d. Cost/benefit analysis
 e. Risk Averse</p> |
| <p>"Gift of the Magi"
"Ransom of the Red Chief"</p> | <p>2. Uncertainty/Predictability
 a. Cues and signaling
 b. Randomness
 c. Reputation and trust</p> |
| <p>Novel and play Examples</p> | <p>3. Decision trees
 a. Depicting story actions
 b. Evaluating outcomes
 c. Mapping decisions of characters
 d. Changing the decisions
 e. Determination</p> |
| <p>"Ransom of the Red Chief"</p> | <p>4. Game theory
 a. Fairness
 b. Morality
 c. Persuasion
 d. Bartering</p> |

e. Regret theory

5. Organizing
materials

a. Critical Path

Analysis

b. SWOT

c. Force Field

Analysis

6. Setting goals

7. Application of
economic principles

a. Discussion of
contemporary issues

b. Debates

Performance Standards

This unit addresses the following performance standards for Language Arts:

1. Language Arts for communication
 - Language resources from a variety of contexts
 - Expanding vocabulary
2. Language Arts as a learning tool
 - Apply knowledge to solve problems in other curricular areas
 - Use language to understand various sources of information
 - Apply critical thinking skills in listening, speaking, reading, writing
3. Listen and read for a variety of purposes
 - Listen and interpret conversations, drama, music, poems, and stories
 - Read and study a wide range of materials
 - Select and use appropriate reading materials and other sources for specific purposes
 - Use print and non-print sources to generate and apply options to solve problems in the classroom and in daily life
4. Appropriate use of listening and reading strategies
 - Use active listening to acquire information
 - Apply knowledge of culture and context to aid comprehension
 - Use the social skill of audience behavior in various situations
5. Speak clearly and write effectively for a variety of audiences and purposes
 - Use appropriate strategies to organize and deliver oral communication
 - Express facts, ideas, and opinions in a variety of settings, oral and written
 - Adjust language and vocabulary appropriate to various audiences and purposes
 - Draw on prior experiences, knowledge, and culture to speak and write proficiently across the curriculum
6. Speak and write clearly, effectively, and correctly
 - Use correct voice and body language when speaking with an awareness of cultural conventions which influence language
7. Respond personally, analytically, and critically to written and spoken language
 - Analyze and respond to a variety of print and non-print materials
 - Explore how language is used to present differing perspectives

Identify and analyze propaganda, marketing campaigns, and persuasive messages

9. Use language and literature to gain insight and build moral dimensions in life
Use language and literature to build understanding of self and others

Student Bibliography

Conley, Sean. *The 7 Habits of Highly Effective Teens*. New York: Simon & Schuster, 1998.

This is a guideline for decision making for teenagers. It offers advice through cartoons, quotes, and stories about teens.

Cormier, Robert. *The Chocolate War*. New York: Pantheon Books, 1974.

A look at life in private boys' school where Jerry Renault refuses to sell chocolates or fit into a routine controlled by a secret school society. There are many opportunities of decision making.

Davidson, Jeff. *The Complete Idiot's Guide to Reaching Your Goals*. New York: Alpha Books, 1998.

Another resource book to guide goal setting to aid in successful practices in setting reasonable goals and in strategies for attaining the goals.

Frost, Robert. "The Road Not Taken." *Gale Group Poets' Corner*. 2000. Gale Group. 19 July 2000.

http://www.gale.com/freresrc/poets_cn/roadnot.htm

A poem about a decision to be made regarding which path to take in the woods.

Henry, O. *The Best Short Stories of O. Henry*. New York: Random House, Inc., 1994.

A collection of O. Henry's short stories including "The Gift of the Magi" and "The Ransom of Red Chief". These stories are used for examples of decision-making.

Lehmkuhl, Dorothy and Delores Lamping. *Organizing for the Creative Person*. New York: Three Rivers Press, 1993.

An offering of varied styles of organizing, particularly for the creative right brained person to help him find a style of scheduling and organizing that fits his personality.

Miller, Roger, Daniel Benjamin, and Douglass North. *The Economics of Public Issues*. New York: Addison Wesley, 1999.

A book of contemporary issues, many of which are controversial and basically non-economic. The power of economics is used to explain the world around us.

Return to Paradise. Josef Rubin. Videocassette. PolyGram Video, 1999.

An example of a prisoner's dilemma. Two young men leave Malaysia after spending time with a third friend living on the wild side. The two men later find out the third man is awaiting trial due to drug charges that stem from a situation involving them. If the men return, each will face a short sentence. If one returns, the sentence will be longer, but both men will be able to leave in the end. If neither return, the imprisoned man will be put to death. (R)

Turnbell, Michael. "Road Work Benefits Questioned." *Albuquerque Journal* 3 Oct. 1999, Sunday: B1.

Opportunity/cost article regarding road construction and the cost of having major roadwork done.

Twelve Angry Men. William Friedkin. Videocassette. Orion Home Video, 1997.

A 12-man jury needs to deliberate the supposed crime of a young man and determine guilt or innocence. Initially all but one man is convinced the young man is guilty, but after many discussions all eventually find him innocent.

Professional Bibliography

Baron, Jonathan and Rex Brown, eds. *Teaching Decision Making to Adolescents*. Hillsdale: Lawrence Erlbaum Associates, 1991.

Caffee, John. *The Thinker's Way*. New York: Back Bay Books, 1998.

Dixit, Avinash and Barry Nalebuff. *Thinking Strategically*. New York: Norton, 1991.

Frank, Robert. *Passions Within Reason: The Strategic Role of Emotions*. New York: Norton, 1988.

Giesbrecht, Martin and Gary Clayton. *A Guide to Everyday Economic Thinking*. San Francisco: Irwin/McGraw Hill, 1997.

Schiller, Bradley. *The Micro Economy Today*. San Francisco: McGraw-Hill Co., 1997.

Siccone, Frank and Jack Canfield. *101 Ways to Develop Student Self-Esteem and Responsibility, Volume II*. Boston: Allyn and Bacon, 1993.

Lesson Plan--Quiet Decisions (Cooperation, Decision Making, Common Goals)

Procedure:

1. Divide class into groups of five.
2. Purpose is to experience interrelationship between group success and individual success.
3. Goal is that each team member must assemble squares equal in size to everyone else on the team.
4. Allow time for students to complete task.
5. May have to provide clues for groups of students that are having problems.

Operating instructions:

- no talking, pointing, gesturing
- each player on team is required to make a square of the same size
- pieces are mixed
- pieces maybe given to specific people, but not taken
- cannot throw pieces into the middle for community

Clues:

1. Clarify goals
2. Commit to goal and instruction
3. Observe situation, pieces, and team members
4. Plan to help unsure team members
5. No pieces are missing
6. Look at what people need and at what you have to give

Debriefing:

1. What steps made it possible to start the action?
2. What got in the way?
3. What was important for individual/group success?
4. How do we help create an atmosphere where everyone wins? (Siccone, 163)

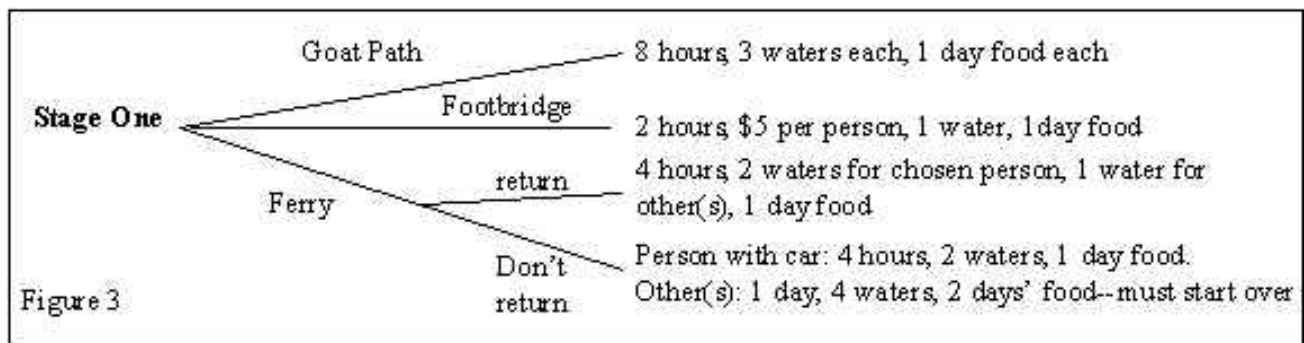
Performance standards:

Language arts as a learning tool—critical thinking tools

Listen and read for a variety of purposes—problem solving

Appropriate use of listening and reading strategies—social skill of audience behavior

Respond to spoken language—analyze and respond to spoken messages and signals



Lesson Plan—Determining the problems, Opportunity Cost

Readings: "Road Work Benefits Questioned"
"Road not Taken"

- Objectives:
1. Students will understand the concept of opportunity cost.
 2. Students will be able to discuss the opportunity cost principle in "The Road not Taken" and in the RoadWork article.
 3. Students will find examples of opportunity in their lives.
 4. Students will be able to create story lines showing examples of opportunity cost.

Define opportunity cost

Give examples

Experiment—Choose 2 prizes of equal value and give each student in class one or the other prize. Offer that each person may trade their prize for the other or keep their prize. Analyze results. In this experiment, the opportunity cost of keeping the original prize is giving up the opportunity to get the other.

Read "The Road Not Taken"

Discussion of opportunity cost in the poem

Read "Road Work" article

Discussion of opportunity cost in article

Personal examples of opportunity cost

Get into small groups and create short scenarios of opportunity cost

Act out stories and discuss and review definition

Performance standards

Language arts for communication

Language arts as learning tool

Reading for a variety of purposes

Speak and write for a variety of purposes

Respond analytically and critically to written language

Use language and literature to gain insight of self

Lesson Plan—Factors that influence our decisions

1. Students will read and study chapter six of *Chocolate War*.
2. Students will look at the decisions of Brother Leon, Bailey, and the other students.
3. Students will make a decision tree of what they would possibly do if in Bailey's position.
4. Students will discuss issues of fairness, urgency, reputation and uncertainty.
5. Students will write about an issue that involves them, the decisions they made or that they are planning to make and the outcomes or expected outcomes.
6. Students will share individual issues and analyze decisions offering critical comments to aid students in better problem solving.

Performance standards:

Language arts used as a tool for problem solving and critical thinking.

Listen and read to solve problems in the classroom.

Appropriate use of listening and reading to aid comprehension and social behavior.

Speak clearly and write effectively.

Respond critically and analytically to written and spoken language.

Use language and literature to gain insight and build moral dimension.

Lesson Plan—Probability in decision-making (Baron 275)

Students will take part in a dice game experiment.

Students will create strategies for earning points/tokens in the game.

Students will discuss economic strategies for making better decisions (rules).

Students will understand and use vocabulary in debriefing (expected value, payoff, decision rules, benefits, costs, and probability).

Dice Game (need 2 ordinary dice and 1 die with 3 spots on 3 sides and blanks on the other 3 sides)

Dice are to be rolled in 25 trials and the number of spots showing will be reported.

Students are to determine by the number of spots whether or not the 3 or 0 was rolled on the unusual die.

Students must make journal entries showing the total number of spots and a 3 or 0 for the unusual die.

Students earn points for correct responses and owe points for incorrect responses.

Students tally up their payoffs that are represented on the board.

Performance standards—communication, learning tool for critical thinking and problem solving, appropriate use of listening strategies, responding to spoken language.

Lesson Plan—Organizing time and meeting goals (Lehmkuhl 39)

1. Students will think about those things important to them.
2. Students will figure out where their time was spent in the last week.
3. Students will examine how much of their time spent went towards their goals or things important to them.
4. Students will receive information on goal setting and organization of priorities to meet goal.
5. Students will set goals for the first 9 weeks.
 - Brainstorm different values in the lives of the students.
 - Discuss setting priorities in their wants and needs.
 - List 3 things in students' lives that have value and are important to them.
 - Hand out worksheet that lists ways we spend using our time. Examples: eating, sleeping, grooming, traveling, school, shopping, exercising, phone calls, homework, hanging out with friends, cleaning or straightening, church related activities, reading, writing, TV, computer, video games, appointments, visiting family members, daydreaming or worrying, hobbies, etc.
 - Write down the hours spent in each category. The total should be 168 hours.
 - Examine how hours were spent. Did they spend time on their 3 values?
 - Debrief by asking if time was spent on themselves, how many things were planned, how many things were put off, what needs more devoted time, what needs less time, are you happy with how your time was spent, how much of your time reflects important values?
 - Short lecture on goal setting and organization strategies (possibly include short story that displays clear goal setting or reading on goal setting)

- Set three goals for the first nine weeks.

Performance standards

Language arts is used as a learning tool for applying critical thinking skills

Listen to and read a variety of writings to aid problem solving

Write effectively for a variety of purposes

Respond analytically and critically to written and spoken language

Use language and reading to gain insight to self

Assessment Strategies

The assessment for this unit is basically through criterion met in assignment and participation.

However, the real evaluation is whether or not the students use the material presented throughout the year. Students will be asked to keep a journal of three goals and the steps towards those goals. These goals will be checked after the first 9 weeks. The journal will be kept in class on a regular basis, once or twice a week. Students will be asked to list actions taken toward goals and results of those actions.