Chapter 5

One-Player Games

Probably you are familiar with one or more versions of the type of card game called solitaire. Most often solitaire games are played by a person playing alone, using one or more standards decks of playing cards, or playing electronically. However, some solitaire games have been adapted to involve more than a single player.

This chapter discusses some one-person solitaire games that can be played with physical cards or electronically. It also contains a brief discussion of Tetris, a one-player computer game that does not make use of a deck of cards.

There are many Websites that allow a person to play a variety of solitaire games for free. Some sites provide free software downloads, and many sites sell collections of solitaire programs that can be purchased (McLeod, n.d.). In addition, there are many books that describe a variety of solitaire games and contain the rules for playing these games.

Learning to Play a Game

The process of learning any game consists of:

1. Learning some vocabulary so that you can communicate about the game. It is useful to think of a particular game as a self-contained sub discipline of the overall discipline of games. Thus, each game has its own vocabulary, notation, history, culture, and so on. Precise vocabulary is important in order to understand the rules and to facilitate communication among people playing the game.

   Note how this same idea applies to solving real world problems. Suppose your computer is not working right. Do you know precise vocabulary to describe the problem? If not, you will have difficulty using information retrieval to find help, or talking to a person to get help. Getting help from stored information and from people is a very important strategy in problem solving. It requires effective communication between you and the information source.

   More generally, consider reading across the content areas. To read with understanding within a discipline content area, you need to know how to read, you need to have an understanding of the special vocabulary and notation used in the discipline, and you need to have some understanding of the discipline.

2. Learning the legal moves (plays). Each game has a set of legal moves. Notice that this is consistent with the formal definition of the term “problem.” One can create a variation of a game (in essence, a new game) merely by
changing the rules. If the game is computerized, then there is a good chance that the computer program will detect and prohibit illegal moves.

3. Gaining knowledge and skill that help one to make “good” moves. Often this knowledge is in the form of strategies that help to govern one’s overall play as well as one decisions on individual moves or small sequences of moves.

4. Gaining speed and accuracy at making good moves.

**Solitaire (Patience)**


*Solitaire* or *patience* is any of a family of single-player card games of a generally similar character, but varying greatly in detail. The games are more commonly known as "Patience" in British English whilst "solitaire" is the American English term.

These games typically involve dealing cards from a shuffled deck into a prescribed arrangement on a tabletop, from which the player attempts to reorder the deck by suit and rank through a series of moves transferring cards from one place to another under prescribed restrictions.

There are many different solitaire games. The most commonly played one is called Klondike. For many years, Microsoft has provided a free electronic version of Klondike in its Windows operating system. Thus it is probably the most widely played electronic game in the world.

It is assumed that you are at least somewhat familiar with Klondike. It uses a standard 52-card deck of playing cards. The card deck is shuffled and then dealt out, as illustrated Figure 5.1. If you are not familiar with the game, you might want to read a little about its rules at [http://en.wikipedia.org/wiki/Klondike_solitaire](http://en.wikipedia.org/wiki/Klondike_solitaire).

![Figure 5.1. The start of a game of Klondike solitaire.](image)

(The Klondike solitaire screen shots used in this section were made from Eric’s Ultimate Solitaire; see [http://www.deltatao.com/ultimate/](http://www.deltatao.com/ultimate/).)

The top row of the layout in Figure 5.1 is the computer representation of the four foundation stacks where cards will be built up in sequence, starting with the ace. Collectively, these four
stacks are called the foundation. There are no actual cards in the foundation at the beginning. The game is won by getting all 52 cards onto the foundation.

Below the foundation are seven piles of cards, containing 1, 2, … 7 cards, respectively. The top card of each pile is exposed, while the remaining cards are face down. Finally, the remaining cards in the deck (shown in the lower left corner) are face down and are called the reserve or the stock. To their right of the reserve is an empty space for the waste pile.

Figures 5.2 shows the results after the game player has taken the top three cards from the reserve, turned this set of three cards over in a manner that does not display the first and second cards, and placed the three cards on top of the waste pile. The player has also moved the 9 of spades onto the 10 of hearts, and then turned up the card that was beneath the 9 of spades.

Figure 5.2. The display after early in playing the game.

Figure 5.3 shows the game after a number of different moves have been made by the player. Three of the foundation stacks now have cards in them.
Figure 5.3. Later in the game …

Winning and/or Playing Well

Klondike is fairly easy to learn to play. You win the game if you get all 52 cards into the foundations. However, that does not occur very often. If you have played Klondike a large number of times, you probably have a sense of how often you win.

If you are mathematically inclined, you might wonder what percentage of deals are winnable, or what percentage of the time a good player wins. It turns out that the first question is a math problem that has not yet been solved.

However, (using the strategy of pose a simpler but related problem) some people have explored a variation of this problem. Suppose that the player can see all of the cards (that is, all cards are face up). Then a computer program has been developed that wins about 70% of the time, and good human players win about 35% of the time. See [http://en.wikipedia.org/wiki/Klondike_(solitaire)](http://en.wikipedia.org/wiki/Klondike_%28solitaire%29).

To answer the second question, one merely has to keep statistics for a number of good players, as they play a large number of games. In addition, Klondike is sometimes used as a gambling game in casinos, so that data should be available on the odds of winning. After I spent a good deal of time searching the Web, I found Aldous and Diaconis (1999):

Rabb [41] simulated a common form of Klondike in which cards are turned over three at a time (with only the top card exposed) and where one can cycle through the deck indefinitely. She found that the computer won about 8% of games whereas she won about 15%. In work in progress, Diaconis – Holmes – Koller study modern game-playing heuristics applied to Klondike. Preliminary results suggest a win probability around 15%

Personally, I sometimes cheat when playing Klondike, and yet my win percentage is probably less than 10%.

Many players also use a measure of how well they did when they did not win—namely, the number of cards you have added to the foundation stacks. Note, however, this may not be a very
good measure of how well you have played in a particular game. You have no idea of how many
cards a good player will have added to the foundations when playing the exact same deal.

I find it interesting to think about the intrinsic motivation that drives so many people to play
Klondike over and over again. The possibility of winning is somewhat motivational. However,
yet winning perhaps 10% of the time or less is not very encouraging—rather, I find this to
be discouraging. However, I feel somewhat good when I am able to play a large number of cards
onto the foundation stacks.

What holds my attention and keeps me motivated, however, seems to be the overall process.
My mind/brain seems to interpret the process as one in which I am accomplishing something that
it deems worthwhile.

As I play the game, I am continually involved in doing something. I am turning up cards
from the reserve and remembering the location of some of these cards. I am thinking about
possible moves, trying to figure out good moves. I am following the rules as I make moves. New
cards are displayed because of my moves. In summary, my mind and body are engaged, small
rewards are occurring all of the time, and occasionally I win.

The previous paragraph reminds me of the P. T. Barnum statement, “You can fool most of
the people most of the time.” A mind/brain is a complex thing. However, in a mind/brain,
pleasure can come from quite simple things. Playing Klondike stimulates my mind/brain in a
manner that brings me pleasure. The same holds true for many other games. Over the years, I
have come to understand this. I have also come to understand that from time to time I fall into an
addictive-like behavior of playing games rather than doing other things that have greater
“redeeming” values.

I have talked to a number of people about this type of game-playing experience. They tell me
about how they have learned to carefully restrict (ration) their game playing. Their level of
addiction is not so strong that it overwhelms their determination to use their time for other more
productive activities.

Applications to Other Games and General Problem Solving

In Klondike, as well as in many other games and problem-solving situations, there are
possible moves, plays, or actions. While you would like to make a good move, you often fail to
do so. As you play, you can learn more about problem solving by reflecting on your play. For
example:

• You do not “see” (discover, recognize) a possible move, so that it receives no
consideration. This can be through carelessness and oversight, or it can be caused by
just not spending enough time in careful thinking and searching for possible moves.
While some problem-solving situations require very quick decision making, the
majority allow time for reflection and for consideration of consequences of moves.

• You find a possible play or move, give it consideration, but make a relatively obvious
mistake in this consideration. Immediately upon making the move you recognize the
mistake and want to take the move back. The message is clear—look before you leap,
think before you act.
• You find two or more possible legal moves and do a compare/contrast consideration of the moves. If one is clearly better than the others, you make it. However, quite likely you will not know for sure which is clearly the best move. It may turn out that the one you think is best isn’t, because you lack information on what will happen because of your move. (In Klondike, for example, you may not know what card will turn up. In negotiating a business deal, you do not know for sure how a person will react to your proposal.) This type of uncertainty to literally petrify some people. They just seem unable to make decisions in the face of uncertainty. Practicing in a game-playing environment, where it is easy to take back moves, may help such a person get better at making decisions under uncertainty.

The Solitaire Game Eight Off

Eight Off is my favorite one deck solitaire game. It is mentally challenging, but I can win most of the time if I think and play carefully enough. I find this game to be far more mentally challenging than Klondike. Moreover, it better illustrates the value of thinking many moves ahead when making a decision of what move to make.

Eight Off is available in many commercially available bundles of computer solitaire games. It can be played free at a number of Websites. All but one of the screen shots used in this section are from the Eight Off game # 31853 from Acescardgames.com (available free) at http://www.acecardgames.com/en/. As you cycle through the choices to bring up an Eight Off game, you will eventually come to a dealt out game and some small symbols in the upper right corner. Click on the # symbol and you can key in the number 31853 to be playing the exact deal discussed in this section.

Figure 5.4 shows the layout for the specific example of Eight Off that will be used to illustrate the rules and playing the game.

A regular deck of 52 playing cards is shuffled. The first 48 cards and then dealt face up in eight columns (called Main Stacks) of six cards each. The remaining four cards are dealt face up
into four of the eight Free Cells. Some players like to have half of these Free Cells on each side of the Main Stacks, while others like to place all of them below the Main Stacks. The choice does not affect the playing of the game.

Figure 5.4A shows an alternative layout from a version of Eric’s Ultimate Solitaire computer software.

Figure 5.4A. A nice computer display of an Eight Off layout. One card has been played to the Club Object Stack.

Above the Main Stacks is space to build four Object Stacks. An Object Stack is built up in a suit, starting with the Ace and continuing with 2, 3, 4… Jack, Queen, and King of the suit. The object of the game is to build all four Object Stacks until they contain the entire 52-card deck.

The rules for playing are as follows:

1. Cards are played one card at a time.

2. The last card in each Main Stack (in the example of Figure 4.4, these include the 5 of spades, the 3 of spades, the 6 of clubs, and so on) and each card in the Free Cells is available to play.

3. Cards that are available to play may be played as follows:
   - If the card is an Ace, it is played in an empty Object Stack.
   - The card may be added to an Object Stack, provided that it is the next card in rank of that suit and Object Stack.
   - The card may be played to any empty Free Cell or to any empty Main Stack.
   - The card may be played by adding it to any Main Stack whose top card is of the same suit and is the card immediately above it in rank. In Figure 4.4, for example, the 2 of spades can be played on the 3 of spades. However, the 5 of spades cannot be played on the 6 of clubs.
The set of rules is relatively simple. Some people can read and memorize such a set of rules quite quickly, while others will find they need to refer back to the rules from time to time until all become familiar. This situation gives us some important insights into schooling. Often, schools expect students to memorize information in advance of when they will need to use it. The students are tested over the memorized information outside of the context in which they might eventually used the memorized information.

However, most people learn best when they are immediately find use of what they are memorizing. The memorization is interspersed with the using. The learner eventually memorizes what needs to be memorized through frequently looking it up and using it.

This can be summarized in a problem-solving strategy memorize through use. A different name for the strategy in the only memorize if quite useful strategy.

For convenience is discussing the game, I have lettered the eight Main Stacks a through h. See Figure 5.5.

![Figure 5.5. The 8 Main Stacks are lettered a through h.](image)

Eight Off is a solitaire game that requires thinking in sequences of moves. Notice the Ace of spaced is the second card in Main Stack b. If I move the 3 of spades to an empty Free Cell (currently we have 4 empty Free Cells), this will expose the Ace of spaces, so that it can be played in one of the Object Stacks. The result is shown in Figure 5.6.
You can see that the 2 of spades in Main Stack g and the 3 of spades in the Free Cells can now be played on the Ace of spades in the Object Stack. The result is shown in Figure 4.7.

Figure 5.6. A sequence of 2 moves is completed.

Figure 5.7. Two more cards have been added to the spade Object Stack.

**Strategies Used So Far in Our Eight Off Game**

Okay, that was a good start. We started out by designing a sequence of moves. This is an important strategy that we will call the *sequence of moves strategy*. The idea is to think in terms of multi-step sequences of moves or actions when attacking a complex problem. These steps may be done sequentially, they may be done in parallel (all at the same time), or they may be done in a combination of sequential and parallel steps. Large problems that are being worked on by a
team of people are attacked using the sequence of moves strategy. Thus, this strategy should be part of your repertoire and your students’ repertoires of high-road transferable problem-solving strategies.

The first sequence of moves that was used was designed to get an Ace into the Object Stacks. Just for the fun of it, let’s call this the getting an Ace into the Object Stacks strategy. This strategy is useful in playing Eight Off. Indeed, it is a strategy useful in many different solitaire card games. However, it is not a general-purpose problem-solving strategy that we will want to add to our repertoire of high-road transferable problem-solving strategies.

**Score, and Then Work to Improve Your Score**

But wait! Perhaps there is something akin to this. Consider events such as the long jump, discuss, and the shot put in a track meet. A contestant gets three tries, with only the best one counting. A foul in a try counts as a distance of zero. Many contests will focus heavily on not fouling on their first trial, not trying to get as great a distance as they are capable of. That is, the athlete has two goals: get a relatively good distance, and get as long a distance as possible. The athlete decides to focus on the first goal in the first try. If the athlete does not foul in this try, then the second and third tries are all out efforts to achieve the greatest distance possible.

So, we have another general-purpose strategy that is suitable for adding to one’s repertoire of high-road transfer problem-solving strategies. Let’s call it the score, then improve your score strategy.

For example, suppose that the problem a person faces is a short answer or objective test. The score and improve strategy might lead the student to browsing through the test, answering the questions that he or she is confident about an answer. Then go back and spend time on the other questions.

For another example, consider being faced by a complex problem, but one that can readily be broken into a number of smaller or somewhat easier subproblems. After using the strategy of breaking the original problem into subproblems, one might use the strategy of first solving some of the easier subproblems. This assumes, of course, that the subproblems are independent of each other, so can be done in any order. Progress on the easier subproblems is somewhat like first answering the easier questions on a test. However, it also has the advantage that solving the easier subproblems may provide one with insights that will help in solving the more difficult subproblems.

**Returning to the Eight Off Solitaire Game**

The moves that we have made so far can all be viewed as contributing to an incremental improvement toward the goal of having all 52 cards in the Objects Stacks. However, it may well be that this particular Eight Off solitaire game cannot be solved by just “any old” collection of incremental improvement sequences. For example, look back at the start of the game given in Figure 4.4. Consider the sequence of moving the 2 of spades onto the 3 of spades, moving the King of diamonds into an empty Free cell, and moving the Ace of diamonds into an empty Object Stack.

This sequence of three moves results in an incremental improvement, just as did the sequence of moves that we actually made. Which of these two sequences of moves is better? Might one be a good start on winning the game, while the other be a start on losing the game? Remember the
incremental improvement picture in Figure 3.1, where the choice of starting point determines whether incremental improvement moves you to the highest peak.

**Mobility: An Important New Strategy**

Probably you have heard the adage, “Don’t paint yourself into a corner.” It is applicable in many game-playing and non-game situations.

I have played Eight Off many times, winning more often than I lose. I tend to lose when I fill up my Free Cells, thereby cutting down in my freedom to make sequences of moves that involve use of empty Free Cells. Having quite a few empty Free Cells gives me lots of options that can be carried out in a sequence of moves.

In games such as chess and checkers, the word mobility is used to describe having options. A high level of mobility of one’s collection of pieces means that one has many possible moves; a low level of mobility means that one’s possible moves are severely restricted.

Let’s use the same term in discussing Eight Off. Having lots of empty Free Cells and empty Main Stacks gives one a high level of mobility in developing a sequence of moves. In many games and in many real world problem-solving situations, it is desirable to keep one’s options open—to maintain or increase one’s mobility. Let’s call this the mobility strategy. Another name for this strategy is don’t box yourself into a corner. This is an important strategy to add to your repertoire and your students’ repertoires of high-road transferable problem-solving strategies.

The mobility strategy helps me to decide between the opening sequence of moves that I actually made, and the sequence that would have led to getting the Ace of diamonds into the Object Stacks. This latter choice would have decreased my mobility.

**Returning to the Eight Off Game**

Now, finally, back to our Eight Off game. I examine the current situation given in Figure 4.7. I think in terms of incremental improvement, but I hold in mind the mobility strategy. An obvious incremental improvement would be to use the sequence of 2 moves that ends with the Ace of diamonds being played in the Object Stacks. However, this sequence of moves decreases my mobility. Therefore, I spend some more time analyzing the current situation. Soon I see that a three-move sequence will add the 4 and 5 of spades to the spade Object Stack. This sequence does not decrease my mobility, so I make it, producing the position shown in Figure 5.8.
After long and careful thought about the situation shown in Figure 4.8, I see how I can get the Ace of hearts into the Object Stacks in a complex (8-move) sequence that results in only one card being added to the Free Cells, and the 10, 9, 8, and 7 of hearts being in Main Stack a. (See if you can figure out how to do this.)

However, I decide on the 2-move sequence focusing on the Ace of diamonds, as this is a more likely choice for a beginner. The result is shown if Figure 5.9.

Again, we have made some incremental progress by this sequence of two moves. However, we now have only 3 empty Free Cells. As I stare at the game situation shown in Figure 5.9, I remember the 6-move sequence that I decided to not use. This time I see how to do an even
longer sequence. I will begin by playing the 6 of clubs on the 7 of clubs, they by making the Jack of hearts a playable card. I will then move the top three cards in Main Stack a to the three empty Free Cells. I will continue by playing the Ace of hearts to an Object Stack, and the Jack, 10, 9, 8, and 7 of hearts to Main Stack a. (Note that moving the 8 and 7 of hearts to Main Stake a requires first moving the 7 of hearts to an empty Free Cell). The result is shown in Figure 5.10.

Figure 5.10. The game situation after a very long sequence of moves.

I am now down to having just two empty Free Cells. However, I have created a Main Stack with a long ordered sequence of hearts. Experience in playing the game has taught me that this is desirable to create Main Stacks that contain long sequences of a suit. In this particular example, suppose that I eventually manage to get the 2, 3, 4, 5, and 6 of hearts to the Object Stack. Then I will be able to add my long sequence of hearts in Main Stack to the heart Object Stack.

Undaunted, I plunge ahead, planning another sequence of moves. I notice that by moving the 5 of clubs onto the 6 of clubs, and then the 5 of diamonds to an empty Free Cell, I can move the Ace of clubs to the Object Stacks. If I then move the 4 of clubs onto the 5 of clubs, I will be able to add the 3, 7, and 8 of spades to the space Object Stack. The result of this 7-move sequence is shown in Figure 5.11.
This was an excellent 7-move sequence. It increased the number of cards in the Object Stacks, and it increased my mobility.

The next sequence of moves that seems to me worth exploring is to move the King of diamonds to the empty Main Stack, the Queen of diamonds onto the King of diamonds, and the 2 of clubs onto the Ace of clubs in the Object Stack. This sequence of three moves does not change my mobility, and it adds a card to the Object Stacks. However, I see that the sequence can be continue by playing the 9 of spades to the spade Object Stack, and the 9 of diamonds onto the 10 of diamonds. This will increase my mobility. Figure 5.12 shows the results of this 5-move sequence. Note that I have added cards to the Object Stacks and I have increased my mobility.
It now becomes evident that if I move the Queen of hearts onto the King of hearts, I can play a sequence of clubs onto the club Object Stack. The result is shown if Figure 5.13.

Figure 5.13. A sequence of clubs is added to the club Object Stack.

Based on my long years of experience in playing this game (one of my “mild” game addictions), it is now clear that I will the game. I can see, for example, that I can create another empty Free Cell by adding the 6, 5, 4, and 3 of hearts to Main Stack a. I will follow that by moving the 9 of clubs onto the 10 of clubs and using Main Stack h as I create a sequence of diamonds. The result is shown in Figure 5.14.

Figure 5.14. Notice the large number of Free Cells.

Even if you have never played Eight Off before, you should have no trouble continuing from the situation in Figure 5.14 and winning the game.
A Warning About the Building Sequences Strategy

In playing this game, I have made use of a strategy of building sequences in the Main Stacks. However, I did not provide an appropriate warning to go along with this game-specific strategy. Imagine that the game situation looked exactly as in Figure 5.14 except that the two of hearts was the first card in Main Stack a. Would I still be able to win the game?

It is not immediately obvious that I can win. To uncover the 2 of hearts, I need to move the 9 cards sitting on top of it. I only have 7 empty Free Cells. If I am clever enough, I still might win.

After a little thought, I see that if I begin by creating an empty Main Stack, I can eventually free up the 2 of hearts.

This illustrates an important concept in game playing and more general problem solving. As you employ various strategies to decide on actions that seem to help move toward winning a game or solving a problem, you may well be working yourself into a hole from which there is no recovery except back tracking. In some games and in some real-world problems it is easy to back track. In others, it isn’t easy, and it may be impossible. An increasing level of expertise in a game or in a real-world problem solving allows one to avoid some of the dead end, losing sequences of actions that various strategies suggest might be helpful. Having a large repertoire of problem-solving strategies is helpful, but it does not guarantee success.

The one-deck solitaire game fortress (available for free play at http://www.acecardgames.com/en/) has some characteristics somewhat similar to Eight Off. If you have learned to play Eight Off and not learned to play Fortress—or, vice versa—this provides a good opportunity to analyze transfer of learning between the two games.

Tetris

There are relatively few computer games that women enjoy more than men. Tetris is one of these. It is a solitaire(one-player) game, but it is not played using a deck of cards. Tetris (sometimes called Penta) is available on a huge range of handheld, game machine, and computer platforms. Quoting from http://en.wikipedia.org/wiki/Tetris:

Tetris is a puzzle game invented by Alexey Pazhitnov (last name sometimes transliterated Pajitnov) in 1985, while he was working for the Academy of Sciences in Moscow, Russia during the days of the Soviet Union. Pajitnov has cited pentominoes as a source of inspiration for the game. Its name is derived from the Greek word "tetra" meaning four, as all of the blocks are made up of four segments.

The game (or one of its many variants) is available for nearly every video game console and computer operating system, as well as on devices such as graphing calculators, mobile phones, and PDAs. Tetris has even appeared as part of an art exhibition on the side of Brown University’s 14-story Sciences Library [1]. The game first gained mainstream exposure and popularity in the late 1980s beginning in 1988 citation needed. Tetris consistently appears on lists of the greatest video games of all time; it is believed to be the best selling game ever, due to its wide availability on almost every modern computer and game system made.

Gameplay

Seven randomly rendered tetrominoes or tetrads - shapes composed of four blocks each - fall down the playing field. The object of the game is to manipulate these tetrominoes with the aim of creating a horizontal line of blocks without gaps. When such a line is created, it disappears, and the blocks above (if any) fall. As the game progresses, the tetrominoes fall faster, and the game ends when the stack of tetrominoes reaches the top of the playing field.
Playing this game requires hand-eye coordination, as well as quick recognition of figures in two dimensional space and quick decision-making. I am relatively poor in all of the abilities that it takes to become good at this game. Thus, it is not surprising that I do not enjoy playing Tetris.

However, I find it interesting to introspect as I play the game, and I find it interesting to see how practice makes me better at the game. At a beginner’s level, the game can be set so that the pieces fall very slowly and one can experience success. One’s mind/brain/body adjusts to the demands of the game (learns).

I find it interesting to see/sense this learning occurring, and that with practice I get better. Through playing this game, I have gained increased appreciation for the learning capabilities of my mind/brain/body.

Final Remarks

I suppose that meditation and one-player games have certain things in common. For me, when I am playing a game such as Klondike, I shut out the outside world.

Activities for the Reader

1. If you have had experience with meditation, think about some of the similarities and differences between meditation and playing one-player games.

2. Select a solitaire game that you have not previously played. Introspect, and then write notes to yourself about these introspections, as you learn to play the game. For example, you might think about the challenge of learning the rules, and how this challenge compares with learning the rules of appropriate social behavior in a particular situation, or learning the “rules” for carrying out some job or task. You might think about how you get better at playing the game as the rules become internalized—sort of automatic, governing your behavior with little conscious thought. You might think about how the game is similar to and different from other solitaire games you have played.

3. Suppose that you are playing a game of solitaire, and you “take back” a move or “peek” at a hidden card, in violation of the rules of the game. Is “cheating” an appropriate word to describe this situation? Compare and contrast this activity with that of cheating on a test or cheating on one’s income tax return. Can you think of a more appropriate term to use in a one-player game-playing situation?

Activities for use with Students

1. Playing cards and card games have a very long history. Select some aspect of this history that interests you, study it, and write a report on your findings. To the extent possible, tie your findings in with other historical events and people. For example, it is speculated that Napoleon Bonaparte developed the solitaire games Napoleon at St. Helena and Napoleon's Square.

2. Find a game of solitaire that you have not played before. Learn to play it. Then do a personal compare and contrast with a solitaire game that you
already know how to play. Which game is more fun, more challenging, more attention-holding, and so on. Which game would you recommend to a friend, and why?

3. In your own words, explain the difference between a puzzle and a one-player game. Which do you like better, and why?