

### 4.3 ARGUMENTATION - FAKTA

Varför ska man ur skolans perspektiv "ta bort" undervisningstimmar från andra ämnesval och istället satsa på bridge? Skälen är flera men det finns tydliga undersökningar som påvisar hur en elevs positiva utvecklingskurva då man parallellt lärt sig bridge i förhållande till om man inte gjort det. De siffror och den utredning som här hänvisas till är gjord i USA mellan 2001 och 2004. Den metod som använts är The Iowa Test of Basic Skill (ITBS).

Sammanfattningsvis kan man påvisa att det är dramatiska skillnader i elevernas utveckling huruvida man haft bridgeundervisning eller ej på samtliga områden som undersökts. Framförallt talar man om att samarbeta med andra, att tänka kritiskt i kombination med logik och att stärka sitt analytiska tänkande.

Så här blev resultatet, när den första undersökningen gjordes september 2001 var eleverna 10-11 år gamla.

Språk	Sept 01	Apr 03	Apr 04
<b>Bridge</b>	<b>206.47</b>	<b>231.53</b>	<b>257.53</b>
<b>Ej Bridge</b>	<b>212.95</b>	<b>237.26</b>	<b>258.61</b>
Matematik	Sept 01	Apr 03	Apr 04
<b>Bridge</b>	<b>211.07</b>	<b>236.27</b>	<b>262.60</b>
<b>Ej Bridge</b>	<b>211.81</b>	<b>234.83</b>	<b>253.30</b>
Vetenskap	Sept 01	Apr 03	Apr 04
<b>Bridge</b>	<b>214.47</b>	<b>254.73</b>	<b>266.73</b>
<b>Ej Bridge</b>	<b>222.70</b>	<b>255.00</b>	<b>260.21</b>
Sociala Studier	Sept 01	Apr 03	Apr 04
<b>Bridge</b>	<b>221.73</b>	<b>264.13</b>	<b>266.87</b>
<b>Ej Bridge</b>	<b>221.13</b>	<b>250.76</b>	<b>257.90</b>

Det råder med andra ord inget tvivel om hur bridge kan påverka elever i ämnen utanför själva bridgen.

#### **Hela undersökningen**

På följande nittion sidor följer hela den amerikanska undersökningen med all känd information hur de gått till väga för att komma fram till resultaten ovan, med mera tabeller, grafer, mm.

OBSERVERA! Det hela är på engelska och ej översatt till svenska.

Junior Bridge is a fun, challenging program that provides Middle School students an opportunity to develop life-long skills. They learn to work cooperatively with team members, to think critically and logically as well as to strengthen their math skills.

In this packet, you will find the test score study from the Carlinville, Illinois school district where student scores improved over a period of 20 months. Teacher instructions, Georgia Standards and lessons for the first week including quizzes are included for your preview. Additionally, we included newspaper articles about Junior Bridge programs and students.

Please contact \_\_\_\_\_ with any questions.

### **Carlinville, Illinois Test Score Study**

There was pre-testing of all the students in the 5<sup>th</sup> grade and post-testing at the 20<sup>th</sup> and 32<sup>nd</sup> month intervals. There was a large control group that did not learn how to play bridge. There was an experimental group who did learn how to play bridge. The standardized testing program used the same scoring scale for all three tests.

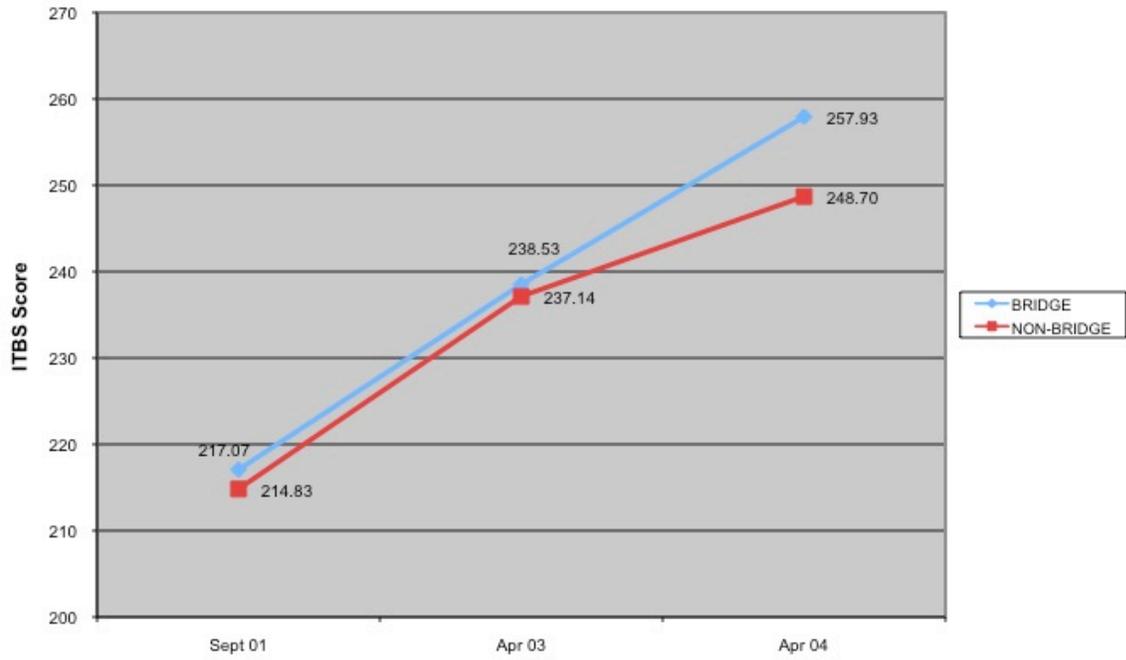
The Iowa Test of Basic Skill (ITBS) has five separate subject areas scored separately. This test structure and scoring scale allowed a comparison of the performance of five non-bridge groups of students to one test group of bridge playing students on all five subjects. The database could track the scores over the three years to see how much gain the two groups would make.

The standardized testing schedule in the Carlinville schools has the kids taking the ITBS in September of 5<sup>th</sup> grade, April of 6<sup>th</sup> grade and April of 7<sup>th</sup> grade. Thus, the entire 5<sup>th</sup> grade in 2001-02 had been tested before one class of the six classes that year learned how to play bridge. They were all tested 20 months later as 6<sup>th</sup> graders and again 32 months later as 7<sup>th</sup> graders.

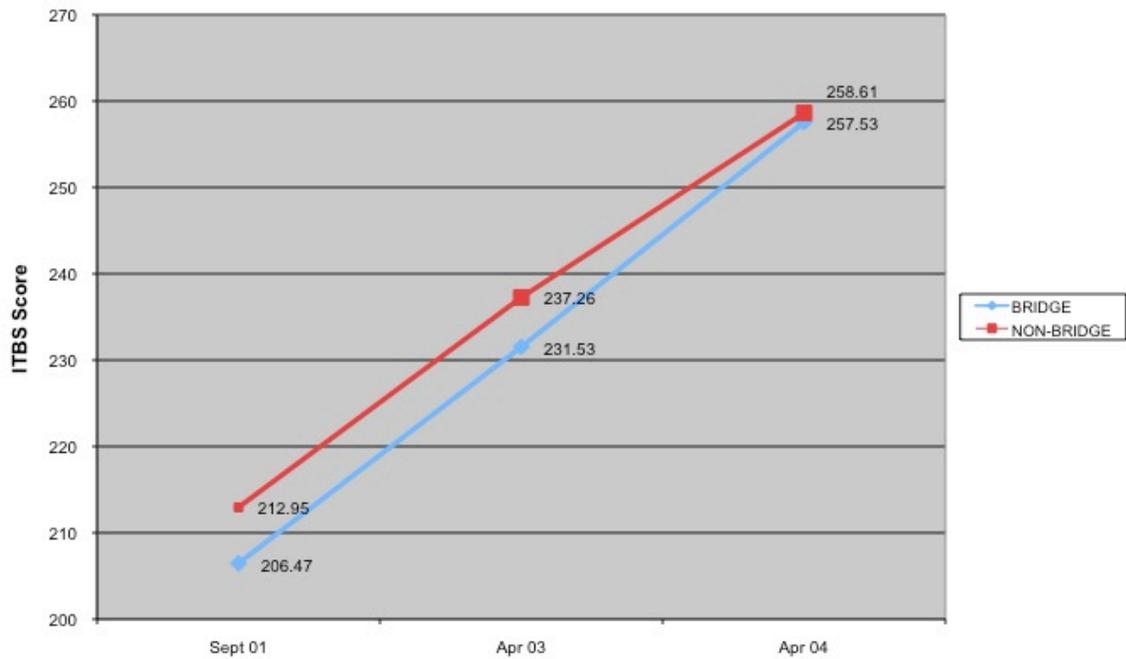
<b>Language</b>	<b>Sept 01</b>	<b>Apr 03</b>	<b>Apr 04</b>
<b>Bridge</b>	<b>206.47</b>	<b>231.53</b>	<b>257.53</b>
<b>Non-Bridge</b>	<b>212.95</b>	<b>237.26</b>	<b>258.61</b>
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<b>Science</b>	<b>Sept 01</b>	<b>Apr 03</b>	<b>Apr 04</b>
<b>Bridge</b>	<b>214.47</b>	<b>254.73</b>	<b>266.73</b>
<b>Non-Bridge</b>	<b>222.70</b>	<b>255.00</b>	<b>260.21</b>
<b>Social Studies</b>	<b>Sept 01</b>	<b>Apr 03</b>	<b>Apr 04</b>
<b>Bridge</b>	<b>221.73</b>	<b>264.13</b>	<b>266.87</b>
<b>Non-Bridge</b>	<b>221.13</b>	<b>250.76</b>	<b>257.90</b>

As you can see from the chart above and the following graphs, the bridge-playing students not only showed greater improvement after 20 months but also increased that advantage over the next 12 months.

## READING



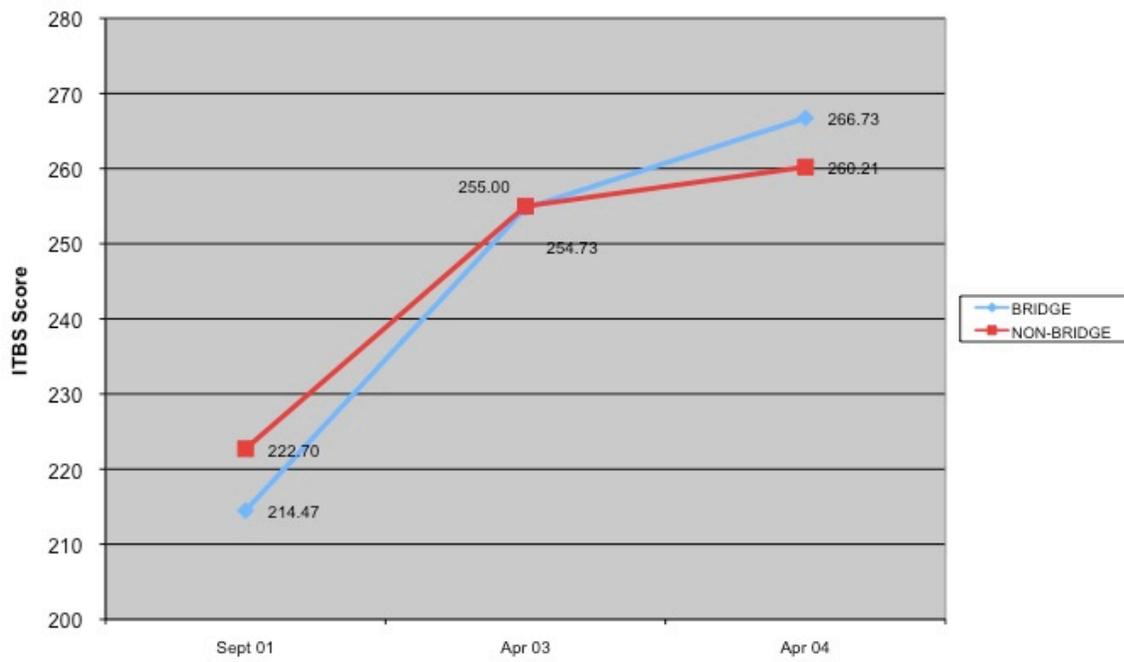
## LANGUAGE



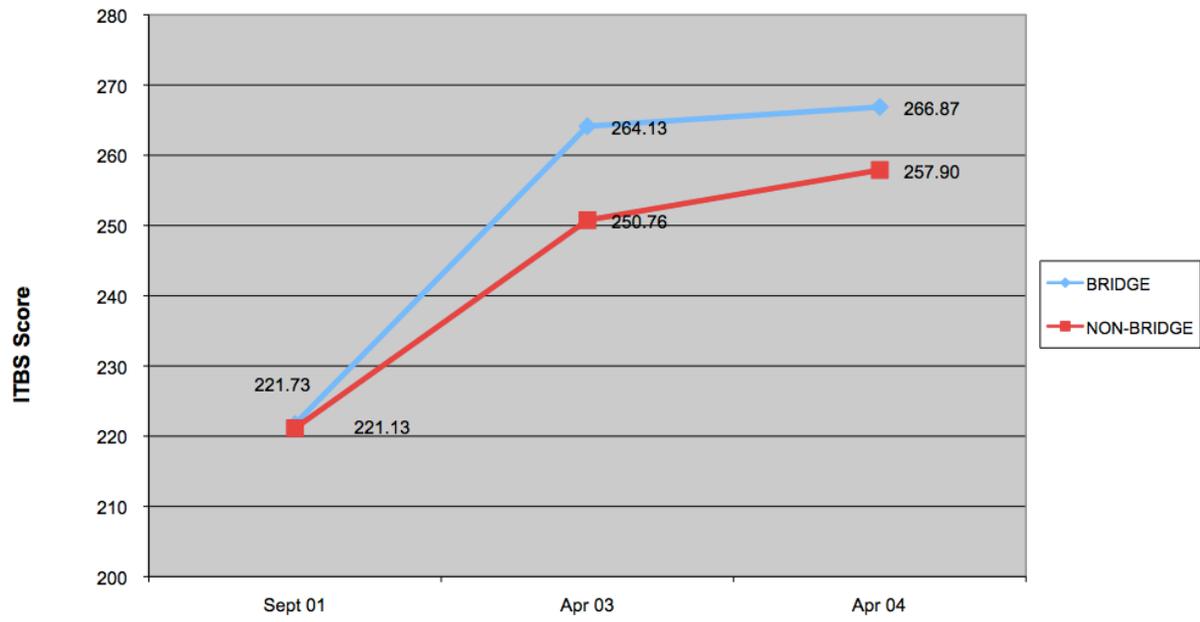
# MATH



# SCIENCE



# SOCIAL STUDIES



## Teacher Instructions

1. Handouts are provided for many of the lessons. These should be printed off on three-hole paper before class, one for each student. They are to be placed in the students' notebooks during the lesson. Students, particularly those with learning disabilities, should be encouraged to refer to them when bidding or playing the Example bridge hands or practice hands.
2. Practice sheets are provided for some lessons. One should be printed for each student prior to class and should go in the students' notebooks. They should be gone over after the lesson before the Duplicated Boards are played.
3. For many lessons, four prepared Bridge hands in Duplicate Bridge Boards will be placed on each table of four students. Handset 1 will be exactly the same at each table, in the lowest numbered board at the table. Handset 2, 3, and 4 will be duplicated similarly, so that at each table, students will play the exact same four hands in the same order. Handsets will have to be dealt and duplicated before the lesson according to the attached Hand Records for the lesson. The commentary for the boards should be gone over with the students after the boards have been played. These are suggested actions to be taken with each hand.
4. If there is time after the lesson and the duplicated boards, it is encouraged to allow the students to play extra hands to emphasize the lessons that have recently been taught.
5. All of the lessons are numbered by week and day. The additional sheets (Practice Sheets and Handouts) are numbered starting with the lesson and then numbered by sheet.

Example: WK4 LP1.1

WK4 = Week 4 of the 9 weeks of lessons

LP1 = Lesson Plan 1 (First day of Lessons that week Probably Monday)

.1 = 1<sup>st</sup> Handout of Practice Sheet for the days Lesson

## Georgia Standards

- M6P1.c.** Apply and adapt a variety of appropriate strategies to solve problems
- M6P2.b** Make and investigate mathematical conjectures
- M6P2.c** Develop and evaluate mathematical arguments and proofs.
- M6P3.a** Organize and consolidate students' mathematical and logical thinking through communication.
- M6P3.d** Use the language of mathematics to express mathematical ideas precisely.
- M7N1.c** Add, subtract, multiply and divide positive and negative rational numbers.
- M7P1.b** Solve problems that arise in mathematics and in other contexts.
- M7P1.c** Apply and adapt a variety of appropriate strategies to solve problems.
- M7P2.a** Recognize reasoning and proof as fundamental aspects of mathematics.
- M7P2.c** Develop and evaluate mathematical arguments and proofs.
- M7P2.d** Select and use various types of reasoning and methods of proof.
- M8D3.a** Find the probability of simple independent events.
- M8D3.b** Find the probability of compound independent events.
- M8P1.a** Build new mathematical knowledge through problem solving.
- M8P1.b** Solve problems that arise in mathematics and other contexts.
- M8P1.c** Apply and adapt a variety of appropriate strategies to solve problems.
- M8P1.d** Monitor and reflect on the process of mathematical problem solving.
- M8P2.c** Develop and evaluate mathematical arguments and proof.
- M8P3.a** Organize and consolidate students' mathematical thinking through communication.
- M8P3.d** Use the language of mathematics to express mathematical ideas precisely.

**Lesson Plan Title:** Week 1 Lesson 1 - Math through Games

**Beginning Bridge:** Card Playing, Card Ranks, and Trick Taking

**Concept/Topic:** To learn card play protocol.  
To learn what tricks are and the card ranks.

**Standards Addressed:** M6P1.c. Apply and adapt a variety of appropriate strategies to solve problems.

**General Goal(s):** To learn a card game involving mathematical and analytical skills.

**Specific Objectives:** To learn that cards have meaning and what that meaning is.

**Required Materials:** Deck of cards  
Paper  
Pencil  
Notebook

**Anticipatory Set (lead-in):**

- Give a brief introductory explanation of the game of Bridge, introducing but not explaining in detail the concepts of trick-taking, partnerships, trump suits, bidding for contracts, and scoring.
- Introduce card play protocol and its important elements – card face and back, shuffling, the dealer and dealing cards out in a clockwise direction, each player’s portion of the cards is called his/her hand, playing one card at a time in clockwise direction starting from the dealer’s left.
- Explain the concepts of “card rank” and “honor card”, and write the thirteen card ranks on the board in ascending order, from the deuce to the ace (the highest card in Bridge).
- Reinforce the concepts of card play protocol by playing a four player version of the card game, “War.” This is a very simple card game, and by the age of six, most students have some familiarity with it.

### **Step-by-step Procedures:**

1. Have students set up a notebook for bridge terms.
  - Write on the board the phrase “card play protocol” and list its important elements; card face and back, shuffling, the dealer and dealing cards out in a clockwise direction, each player’s portion of the cards is called his/her hand, playing one card at a time in clockwise direction starting from the dealer’s left.
  - Write the phrase “card rank” and its definition.
  - Write the word “trick” and its definition. Point out that, in Bridge, the whole deck consists of 13 tricks of four cards each.
  - Have the students make a copy of the information on the board in their notebooks.
2. Set up groups of four students to a table. If there are extra students, the extra student can write the scores of each game and replace the student with the lowest score for the next game. Give one of the students in each group a deck of playing cards. Ask him/her to shuffle the cards briefly.
3. Go over the rules for four player war. The student with the deck is the Dealer. He/she will deal all cards face down into four equal piles, one for each player. Each round, starting from the dealer’s left, each student turn one card face up from his/her individual pile. The highest ranking card wins that match. In case of a tie for high card played, the first player to play the card of the highest rank wins. Play continues until all cards are played (13 matches). Each match is a trick. The student with the most number of tricks wins the game. Continue play as time allows.
4. After all four players have played to a trick, all four put their own card in front of them face down. If you have won the trick, you place the card pointing toward you; if you did not win the trick, you lay the card sideways pointing toward your left and right opponents. When all 13 tricks have been played you will have 13 cards laid out in front of you.

**Plan for Independent Practice:** Allow time for each student to play this game.

**Assessment Based on Objectives:** Quiz on the value of cards.

**Adaptations (For Students with Learning Disabilities):** Allow students to use their written copy of card ranks.

**Extensions (For Gifted Students):** Set a time limit for each game.

**Possible Connections to Other Subjects:** Language arts and communication skills.

**Lesson Plan Title:** Week 1 Lesson 2 - Math through Games

**Beginning Bridge:** Suits and Trumps

**Concept/Topic:** To learn what trumps are.

**Standards Addressed:** M6P1.c. Apply and adapt a variety of appropriate strategies to solve problems.

**General Goal(s):** To learn a card game involving mathematical and analytical skills.

**Specific Objectives:** To learn the concept of trumps and how it applies to card games.

**Required Materials:** Deck of cards  
Paper  
Pencil  
Notebook

**Anticipatory Set (lead-in):**

- Explain to the students that the deck is divided into four suits, Clubs, Diamonds, Hearts, and Spades. Show examples of cards in each suit.
- Explain the concept of trumps and what a trump card is useful for. In some card games, one of the four suits is designated to be the trump suit, a special “wild” suit, where any card in the trump suit beats (outranks) any card of any rank in the other three suits.
- Play partnership war, utilizing the concept of trumps.

**Step-by-step Procedures:**

1. Write the phrase “trump suit” and its definition on the board, and have students write this in their notebook.
2. Set up groups of four students to a table. Explain that the four players are called North, South, East, and West according to the compass direction each is sitting at. Tell them that North and South at each table are partners, and East and West are also partners. Make pairs with the extra students; the extra pairs can write the scores of each game and replace the North-South or East-West pair with the lowest score for the next game.

3. Go over the rules of partnership war. Give one of the students in each group a deck of playing cards. Ask him/her to shuffle the cards briefly. The dealer deals the cards out face down. The dealer then declares one of the four suits as the trump suit for the first round. Each student turns one card face up from his/her individual pile, starting from the dealer's left. If a card in the trump suit is played, it wins the trick. If more than one card in the trump suit is played, the highest ranking trump card wins that trick. If none of the four cards is a trump card, then the highest ranking card wins the trick. The person who wins the trick declares the trump suit for the next round. When all thirteen rounds are played, the pair with the most number of tricks wins the game.
4. After two games, stop the play and announce a change in the rules. The last card is dealt face up. The suit of this last card is the trump suit. Dealer then picks the card up and places it somewhere in his pile of cards, face down. The trump suit remains the same for the whole game. Play four games, allowing each student to be the dealer, in clockwise rotation.
5. After all four players have played to a trick, all four put their own card in front of them face down. If your team has won the trick, you place the card pointing toward you and your partner; if your team lost the trick you lay the card sideways pointing toward your opponents. When all 13 tricks have been played you will have 13 cards laid out in front of you, hopefully with lots of them pointing toward you and your partner, and very few of them pointing toward the opponents.

**Plan for Independent Practice:** Allow time for each student to play this game.

**Assessment Based On Objectives:** Quiz

**Adaptations (For Students with Learning Disabilities):** Allow students to use their written copy of card ranks and the definition of trump.

**Extensions (For Gifted Students):** Set a time limit for each game.

**Possible Connections to Other Subjects:** Language arts and communication skills.

**Lesson Plan Title:** Week 1 Lesson 3 - Math through Games

**Beginning Bridge:** Taking Tricks using Trumps

**Concept/Topic:** To learn what tricks are and how can you win them.

**Standards Addressed:** M6P3.a Organize and consolidate students' mathematical and logical thinking through communication.

**General Goal(s):** To learn how to use math to communicate.

**Specific Objectives:** To learn how to take tricks using trumps.  
To learn to keep score using the "Book" method.

**Required Materials:** Deck of cards  
Paper  
Pencil  
Notebook

**Anticipatory Set (lead-in):**

- Review the concept of card rank and how that applies to taking tricks.
- Review the concept of trumps and how that applies to taking tricks.
- Play partnership War with trumps. Change the rules so that the game becomes Whist.

**Step-by-step Procedures:**

1. Review the concept of trumps and the four suits.
2. Set up groups of four students to a table, with the North-South and East-West pairs as partners. Make pairs with the extra students; the extra pairs can write the scores of each game and replace the North-South or East-West pair with the lowest score for the next game. Give one of the students at each table a deck of playing cards. Ask him/her to shuffle the cards briefly, and then deal them out face down in a clockwise direction, starting with the player on his/her left. The last card is dealt face up. The suit of this last card is the trump suit. Dealer then picks the card up and places it in his pile of cards, face down. Play one round of partnership war under these rules. When all thirteen rounds are played, the pair with the most number of tricks wins the game.

3. After students play one game of partnership war, stop the play and announce a change of rules. Cards are dealt as before, with the last card dealt setting the trump suit. But players are allowed to look at their cards before they play. The players are asked to pick up their cards and arrange the cards with the cards of the same suit together, holding them so they can see the cards, but the other players cannot see the card faces. The person to the left of the dealer must lead a card to the first trick. Each player must play a card of the suit led (follow suit), unless he/she has no cards in that suit. If he/she has no cards in the suit led, the player may play any other card he/she wishes, including a trump. Only a card in the suit led or in trumps can win the trick. If more than one trump is played to a trick, the highest trump wins the trick. The winner of the trick leads to the next trick. Each trick taken counts as one point. The pair with the most points wins the game.
4. Have the students play four games under the new rules, rotating the deal clockwise each time so each player gets to be the dealer. Ask the players to keep a running total of their points from the four games.
5. Announce to the students that the game they have been playing is a form of Whist, an ancient English card game that is the ancestor of Bridge, and that very soon they will be playing Bridge as it is played today. Explain that in Whist, a pair must take at least six tricks, called the "Book", before they can score any points. So a score of 1 means a pair has taken 7 tricks (6 for book, plus 1).

**Plan for Independent Practice:** Allow time for each student to play this game.

**Assessment Based on Objectives:** Quiz

**Adaptations (For Students with Learning Disabilities):** Allow students to use their written copy of card ranks and the written definition of the term trump.

**Extensions (For Gifted Students):** Set a time limit for each game.

**Possible Connections to Other Subjects:** Language arts, communication.

**Lesson Plan Title:** Week 1 Lesson 4 - Math through Games

**Beginning Bridge:** Introduction to Hand Evaluation and Bidding

**Concept/Topic:** To learn what an Auction is in Bridge.  
To learn the purpose of the Auction.  
To learn Hand Evaluation and how to calculate High Card Points.  
To learn the suit ranks and No Trump and what role they play in the auction.

**Standards Addressed:** M7N1.c. Add, subtract, multiply and divide positive and negative numbers.

**General Goal(s):** To learn a card game involving mathematical and analytical skills.

**Specific Objectives:** To learn the rudiments of hand evaluation in Bridge.  
To learn the concept of an auction in Bridge.  
To understand the meaning of the bids and the Contract in Bridge.

**Required Materials:** Deck of cards  
Paper  
Pencil  
Notebook  
WK1 LP 4.1 Handout - Bridge Bidding Scale (attached)

**Anticipatory Set (lead-in):**

- Explain that in Bridge, the pairs bid in an auction, just as in a car auction, for the right to decide trumps.

**Step-by-step Procedures:**

1. Give each student a copy of the bidding scale. Have them place this in their notebooks.
2. Explain that in Bridge, the pairs bid in an auction by naming the trump suit and how many tricks the pair promises to take. A bid consists of a level and a denomination. The level indicates the number of tricks the partners will take, minus the 6-trick book. You are always assumed to take the majority of the 13 tricks, so the first six tricks – the book – don't count. The denomination is most often the trump suit. If the partnership doesn't have an exceptionally long suit between them, they may decide to play without a trump suit (similar to War). This denomination is called No Trump.

3. Explain the bidding scale, from lowest (One Club) to highest (Seven No Trump). Give a few brief examples of bids. An example of a bid is One Spade, meaning that the partners promise to take seven tricks (book plus one) with Spades declared as the trump suit. Another example, Two No Trump, is a promise to take eight tricks without a trump suit. The highest bidding pair sets the contract, which is a statement of the denomination (trumps or No Trump) and the level (the number of tricks to be taken).
4. Explain that in Bridge bidding, it is necessary to evaluate the strength of your hand in order to predict accurately how many tricks you may take. There are also penalties for bidding too high, which will result in your opponents winning points.
5. Explain that an ace is valued at 4 High Card Points, a king is valued at 3 High Card Points, a queen is valued at 2 High Card Points, and a jack is valued at 1 High Card Point. Since there are four aces, four kings, four queens and four jacks in a deck of cards, there are a total of 40 High Card Points in the deck. (*Write these values on the board.*)
6. Point out that an average hand is worth about 10 High Card Points, or one quarter of the total. An above average hand should normally take more tricks than a below average hand. And a partnership that holds more than half of the High Card Points in the deck usually takes the majority of the tricks.
7. Have the students copy the Honor cards and their High Card Point values into their notebooks.
8. Give one of the students at each table a deck of playing cards. Ask him/her to shuffle the cards briefly. The dealer deals the cards out face up. Ask each student to add up his/her High Card Points. Have the North-South partnership and the East-West partnership at each table calculate their combined points, and predict how many tricks they could take. Then place the hands face down, have each player shuffle his own hand, and play partnership War (without a trump suit). Ask the students how closely their actual result compared to their prediction based on high card points. Repeat this process once more.
9. Ask one of the students at each table to shuffle and deal the deck of cards face up. Now ask the North-South partnership and the East-West partnership at each table to each pick a trump suit, based on their combined length (number of cards) in each suit they hold. If the partnership does not have a combined suit of eight cards or more, they should select No Trump as their playing denomination. Have the North-South partnership and the East-West partnership at each table now calculate their combined High Card points, and then select a bid to describe their most likely bid taking contract, naming both the denomination (suit or No Trump) and the level.
10. Repeat this process several times as time permits. Emphasize that trick taking depends both on high card strength and trump length.

**Plan for Independent Practice:** Allow time for each student to play this game.

**Assessment Based on Objectives:** Quiz

**Adaptations (For Students with Learning Disabilities):** Allow students to use their written copy of definitions and the bidding scale.

**Extensions (For Gifted Students):** Set a time limit for each game.

**Possible Connections to Other Subjects:** Communications skills

### WK1 LP 4.1 Handout - Bridge Bidding Scale

7 NT	7 ♠	7 ♥	7 ♦	7 ♣
6 NT	6 ♠	6 ♥	6 ♦	6 ♣
5 NT	5 ♠	5 ♥	5 ♦	5 ♣
4 NT	4 ♠	4 ♥	4 ♦	4 ♣
3 NT	3 ♠	3 ♥	3 ♦	3 ♣
2 NT	2 ♠	2 ♥	2 ♦	2 ♣
1 NT	1 ♠	1 ♥	1 ♦	1 ♣

### **Week 1 Lesson 4 Quiz (15 points)**

Write answers in space provided. If the question asks for a complete sentence, make sure you write in correct sentence format. If you need more room for your answers, write on the back of your paper. Make sure you number the question on the back.

1. In cards, what is a suit? Write a complete sentence. (2 pts)
2. What is a trump suit? Write a complete sentence. (2 pts)
3. In bridge, what is a trick? Write a complete sentence. (2 pts)
4. What wins a trick? Write a complete sentence. (2 pts)
5. What is the highest trump card? (1 pt)
6. What are the values of the face cards? (4 pts)
7. How do you count numbered cards? Write in complete sentence. (2 pts)

**Lesson Plan Title:** Week 1 Lesson 5 - Math through Games

**Beginning Bridge:** Weekly Review and Quiz – Week 1

**Concept / Topic:** To review what has been taught in the first week.

**Standards Addressed:** M6P1.c. Apply and adapt a variety of appropriate strategies to solve problems.

**General Goal(s):** To use math to solve problems.

**Specific Objectives:** To use cards games and values to induce math curiosity.

**Required Materials:** Decks of cards  
Paper  
Pencil

**Anticipatory Set (lead-in):**

- Review week 1 Lessons.
  - Card Playing, Card Ranks, and Trick Taking
  - Suits and Trumps
  - Taking Tricks with Trumps
  - Introduction to Hand Evaluation and Bidding

**Step-by-step Procedures:**

1. Give review quiz.
2. Go over the quiz, reviewing the week's work as you do this.
3. Allow students to form partnerships and play hands of Whist as time permits.

**Plan for Independent Practice:** Allow time for each student to play this game.

**Assessment Based on Objectives:** Review quiz

**Adaptations (For Students with Learning Disabilities):** Allow students to use their notebook.

**Extensions (For Gifted Students):** Have students use the computer to look up the history of bridge and write 5 facts to share with the class.

**Possible Connections to Other Subjects:** communications skills, L.A.

