

Bridge

How
can
playing
a game
improve
your
students'
test
scores
and
much
more?



Administrators



Parents



Teachers



Students

A Case for Your Student(s) to Learn Bridge

Whether you are a parent, a teacher or a school administrator, there are few activities available to children today that offer more lifelong rewards—or more fun—than bridge. Many of you know about my organization Atlanta Junior Bridge (AJB), which offers free bridge instruction to children in the greater Atlanta area. Some may also know that I work on Youth Bridge at the national level. There is a tremendous upsurge of interest in bridge nationally and internationally, and we who love bridge think this interest should be reflected in Youth Bridge as well. I'd like to take this opportunity to make my case for Youth Bridge and hope you will read and forward this information to anyone you know with children or grandchildren. Bridge should be for everyone, not just adults.

Bridge is available to any child from any socio-economic background and can provide benefits on many levels:

- Academic Enrichment
- Socialization
- Teamwork
- Inferential Thinking
- Competition
- Financial Opportunities
- Social Networking

Academic Enrichment: Studies show that learning bridge can improve your child's ability to perform better on standardized testing. According to a study from Carlinville, Illinois, middle-school children who learned bridge had test scores on the Iowa Test of Basic Skills that were 10-35% higher on the various subtests than their non-bridge playing peers. One teenage bridge player I interviewed



commented that when taking the SAT he was able to concentrate longer and more intently than his peers.

Socialization: Bridge offers many social benefits. How many of your children take part in an activity that allows them to meet, talk and play with others in a safe, controlled environment? How many of your children have the opportunity to meet children from other countries? How many of your children ever get a chance to talk and socialize with adults on a relatively equal footing? All of those opportunities are available through Youth Bridge.

Teamwork: Your greatest success as a bridge player often comes from your ability to depend on information from your partner when you make decisions. Bridge teaches a young player how to trust and communicate with others for mutual gain.

Inferential Thinking: Bridge requires you to analyze the information you receive, translate that information into a vision, make a plan for success based on that vision and **learn to adapt and adjust your plan** when additional information becomes available—all basics of inferential thinking.

Competition: Youth Bridge provides opportunities for play in international, national, regional and local competitions. From serious competition to social play, bridge offers a fun challenge at every level. Even children with physical or emotional disabilities can find a “level playing field” with their peers at the bridge table.

Financial Opportunities: College scholarships are available not only for expertise in play, but character and sportsmanship. Many bridge players obtained their first jobs through people they met through bridge. I know of at least two bridge players whose

investment capital came from players they had met and played against.

Social Networking: Bridge can introduce you to people who will become your friends for life. I know of numerous cases, young and old, where players met their spouses through playing bridge. Young players moving to a new town with their family or for college or for a new job can join a bridge club where they'll meet new friends who can ease the transition. Does your child want to go to an exclusive college or university? He could meet deans, presidents, professors and alumni from every college in North America at bridge clubs and competitions.

Your question shouldn't be 'Why should my child, with his overloaded schedule, add one more activity to his life?' Your question should be 'Why haven't I introduced bridge to my child?'

Patty Tucker

August 23, 2012

Accredited Teacher

ABTA Master Teacher

Emerald Life Master

National Champion Player

Benefits to the School:

Improved academic performance on standardized tests

(see Chris Shaw data in Research Section)

Free

The American Contract Bridge League (ACBL) administers the School Bridge Lesson Series program (SBLS). Through the SBLS schools can obtain bridge textbooks, t-shirts for their students and a stipend for classes consisting of 8 students who are taught 16 hours. In addition, there are duplicate bridge clubs in every major city in the United States. Many of these clubs and bridge players are very interested in supporting efforts to teach children in their area.

Interscholastic Competition

The Collegiate championships are held every year. Qualifying sessions are played on-line in early winter and the winning college teams are given stipends to allow them to attend the summer North American Bridge championship to compete for the Collegiate championship. On a smaller level there are templates for forming school bridge leagues in your city.

Students Learn Cooperation and Communication Skills

Bridge cannot be played singly. It requires a partner. Success in the game is dependent on a student's ability to cooperate and communicate with his partner. As in all other sports supporting and encouraging your partner to play his best is one of the keys to winning. Students will learn the importance of enlisting support in order to succeed.

Opportunities to Create Community Projects

An estimated 18 million people in the United States play bridge. Schools will have an opportunity to initiate family and community events that their students and the adults can enjoy.

STEM Education

(STEM = Science-Technology-Engineering-Mathematics)

In its September 2010 Report to the President, the President's Council of Advisors on Science and Technology stated, "STEM education will determine whether the United States will remain a leader among nations and whether we will be able to solve immense challenges in such areas as energy, health, environmental protection, and national security."

There is an enormous increase of focus on STEM. Students will be called to learn and apply new skills in a classroom setting that will become, with each passing academic year, more "discovery based" rather than lecture based.

Bridge helps develop the mental process of logic analysis and its application to the real world, an essential academic component of STEM discovery. With each card that is played in the course of a hand, new knowledge is presented to the players – knowledge that must be assimilated into a game plan.

The game plan, itself the result of an initial conclusion based on input from the "auction", opening lead and cards in the dummy, is constantly evolving based on the "discovery" of new facts as the play continues.

There is solid evidence that bridge boosts academic performance in science and mathematics. (See Carlville, IL study on ITBS scores in the Research section of this pamphlet).

In an evolving STEM academic environment, bridge should be the "logical" choice for students.

Research Indicates Results

A three year study, conducted by Dr. Christopher Shaw (see Research Section), identified the positive effects of the game of bridge as a student activity. Dr. Shaw's study found students who learned how to play bridge had higher average gains in all five subject areas of the Iowa Test of Basic Skills. The game helped students at all ability levels to develop inferential reasoning skills; which helped in all subject areas, not just math and science.

Fun

When asked why they want to play bridge, young players tell us it's fun and gives them a chance to hangout, play with their friends and make new friends.

Intellectual

Bridge is a "mind game" that can help your child learn to focus his thoughts on an immediate goal and learn that skill improvement comes with study and experience. Since each hand is a separate opportunity, your child will have many opportunities to learn how wonderful it feels to succeed, and thus, will strive to seek more success.

Sportsmanship

Your child will learn how to be a good winner and a good loser. Every hand of bridge offers a new challenge and no one will make a correct decision every time. Your child will learn how to keep his composure through adversity and work through rough patches to ultimately succeed. Awards are available in bridge for excellence of character.

New Experiences

Bridge broadens your child's horizons on social and material levels. Children who play bridge have an opportunity to meet new people – young and old. They can visit other cities and new areas of their own city. Some children even have the opportunity for international travel.

Competition

No one sits on the sidelines. Every game your child will have an opportunity to compete. Partners can always be found which allows your child to experience a social interaction that includes building trust with his partner – and applying learned skills. In bridge, everyone plays.

Safety

Bridge provides a safe, secure environment for your child to meet and play with friends. Provides an opportunity to learn in a structured environment, whether as part of his school curriculum or an after school activity.

Benefits for Teachers and Their Students:

- Coaching stipends available for those who create bridge clubs. (for those who teach at least 8 students, at least 16 hours; paid through ACBL).
- Opportunity to earn CPDUs and be reimbursed for the expense.
- Free supplies.
- A new way of teaching math, logic and communication skills that will meet state standards and be fun for the students.
- Improved student scores on standardized tests (see ITBS results in Research section).
- Learn a wonderful game, acquire a new hobby and meet new people.

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Training for Teachers

Western Illinois University’s (WIU) Star On-Line program offers a bridge package which allows a teacher to earn 40 CPDUs by learning to play bridge and how to teach it to their students. Here is a link to the flier and to one of the tutorials.

http://www.wiu.edu/coehs/oppdt/star_online/staronline_flier_fall_2011.pdf

<http://www.youtube.com/watch?v=993K4WJSZTI>

A ***Learn Bridge in A Day?***[™] class may be available in your area which would allow you to learn bridge quickly. You could then go on-line at WIU and earn your CPDUs at a later date.

We would be happy to follow the class with a one hour bridge teaching tips and a Q&A for the school teachers interested in teaching bridge at their school.

Math Applications

Bridge provides a teacher with examples of practical applications of mathematics. From simple math concepts and operations to the more complex.

Classroom Application Examples



Number Relationship

A-K-Q-J-T-9-8-7-6-5-4-3-2

Highest

Lowest

Points are Awarded to the High Cards (called 'Honor Cards') Based Upon their Relative Strength

High Card Points (HCP)

Ace = 4 King = 3 Queen = 2 Jack = 1

Simple Addition

♠AQ43 ♥QJT8 ♦54 ♣A42

4+2

+2+1

+4

In this hand you have 13 HCP (High Card Points)

Simple Division

There are 52 cards in a Deck of Playing Cards and Four Suits.

How many cards are in each suit?

$52/4 = 13$ cards in each suit

Simple Multiplication

If the honor cards are assigned a value of
Ace=4 King=3 Queen=2 Jack=1

And there are four suits how many High Card Points (HCP) are there in each deck of cards?

$4 + 3 + 2 + 1 = 10$ HCP in each of four suits

$10 \times 4 = 40$ HCP

Algebraic Expression of Scoring

$S = ((N-T)*P) + B$

Where:

S= Score N= Number of Tricks Won

T= Tricks that do not Get Points (Book)

P= Per Trick Score of Trump Suit

B= Bonus for making contract

Contract: 4♠ Result: +5 Vulnerable

$S = ((11-6)*30)+500$

$S = (5*30)+500$

$S = (150)+500$

$S = 650$

Deductive Reasoning

- I opened the bidding and have 14 points.
- My left hand opponent bid and must have at least 10 points.
- My partner raised to three and must have 10 to 12 points.
- My right hand opponent cannot have more than 6 points.

Inductive Reasoning

- There are thirteen hearts in a deck of cards.
- My partner and I have eight hearts between our two hands.
- Our opponents have five hearts between their two hands.
- The expected distribution is that the five hearts will be split three in one hand, two in the other hand.

Suit Distribution Calculation

There are 13 cards in each suit.

My partner and I (North and South) have eight hearts between our two hands.

Our opponents (East and West) have five hearts to share between their two hands.

What is the probability that the five cards will be split three in one hand, two in the other hand?

Chances: West	Q 13/26	Split 3-2	Chances: East	5 13/23
	3 12/25	Q32 West		4 12/22
	2 11/24	54 East		

$$13/26 * 12/25 * 11/24 * 13/23 * 12/22 = .678$$

The remaining cards will split three in one hand two in the other 67.8% of the time.

Language Skills

Bidding Contains the Skills Used in Learning and Using Language

- Building a vocabulary
- Expressing ideas within a given framework
- Recognition of how the component parts convey a message and accomplish your purpose
- Listening and understanding the information provided by your partner and opponents as they bid
- Speak, listen and react appropriately to information

Social Skills

Learning and Playing Bridge Provides Structure and Practice in the Development of Social Skills

- Listening
- Teamwork
- Etiquette
- Concentration
- Dealing with others of a different age
- Working within rules and boundaries
- Dealing with winning and losing

Materials

The curriculum on which the Star On-line course is based on is *Bridge: A Path to Math*. This curriculum is coded to the National Math Standards and is available free on the Bridge Teachers for Youth website <http://www.btfy.org/curriculum/Combined.pdf>

This curriculum was created by Atlanta Junior Bridge teachers and retired school teachers.

Also available on the same website is an Administrators Packet which gives samples of the curriculum, some research data and general information <http://www.btfy.org>.

Teacher Instructions

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.

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.

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.

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.

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 = 1st Handout of Practice Sheet for the days lesson

Sample Lesson

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 turns 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.

Benefits to the Students:

Improve Academic Performance

It has been documented that learning bridge improves many students' performance in standardized testing (see the Chris Shaw data in the Research Section). Students also learn logic and inferential reasoning, both valuable skills in all aspects of learning. In addition many bridge players who learned at a young age have commented on their concentration skills being honed which resulted in their ability to remain focused in the classroom and in testing situations.

Compliance with Proposed New Uniform Standards

Introduces him to many of the skills - math, probability, analytic problem solving – that he will need as his school complies with the new STEM-oriented class schedule.

Make New Friends

Bridge will level the playing field among your students. Race, creed, religion and socio-economic issues are not important in bridge. What is important is the ability to learn, play and communicate.

Travel both National and, perhaps, International

National and regional travel is available to all bridge players. For those who excel in bridge, it can also offer the ability to travel internationally and to represent their country in international competition.

Scholarships available for teaching bridge to their peers, sportsmanship and proficiency

- ◆ \$1000.00 scholarships for the winners of the Baron Barclay Youth Open Pairs at the Youth NABC
- ◆ \$1000.00 scholarships for the winners of the Youth Swiss Teams at the Youth NABC
- ◆ \$1000.00 scholarships for the winner of the Sportsmanship Trophy at the Youth NABC
- ◆ \$500.00 scholarships for high school seniors and college students who teach bridge to their peers

- ◆ \$500.00 scholarship for the King/Queen of Bridge; a graduating high school senior who exhibits excellence in bridge, scholarship and community service

Improve social skills and make social contacts that will assist them in future

At the Youth NABC in Washington DC players met and talked to Bill Gates. How many of your students have ever had that opportunity? Students who learn bridge and continue to play will meet a wide variety of people from various social and economic strata; lawyers, doctors, school teachers, philanthropists, business owners, financiers and others. The students will meet and interact with these people on a social level. What is the value of your students learning how to communicate with ease and intelligence as young adults when interviewing for jobs and schools? Invaluable.

The Effects of Bridge on Students' Standard Scores on the Iowa Test of Basic Skills

There are two studies conducted by Christopher Shaw, Ph.D. that compared the Standard Score gains of non-bridge playing students to the gains of bridge playing students over a three-year period. You may contact him at ccshawjr@yahoo.com for the detailed results.

The first study tracked the progress of 15 students who learned to play bridge and 85 who did not. The Iowa Test of Basic Skills (ITBS) was administered at the beginning of 5th grade and in February of 6th and 7th grades. One section of 5th grade learned bridge as part of their Math instruction. The table below shows the Standard Score average gain from 5th grade to 7th grade. Notice that the bridge students out gained their classmates in all five subject areas of the ITBS. The National Average Gain is 30 for the 32-month interval (September of 5th grade to February of 7th Grade.) Differences in the subject scores show the bridge students gaining between half a year to more than a year more than their non-bridge classmates.

32-Month Average Standard Score Gains

Section (#)	Reading	Language	Math	Science	Social Studies	
Bridge(15)	40.86	51.06	51.53	52.26	45.14	
NB AVE (85)	33.87	45.04	41.48	37.52	36.77	NAG = 30
Difference	6.99	6.02	10.05	14.74	8.37	

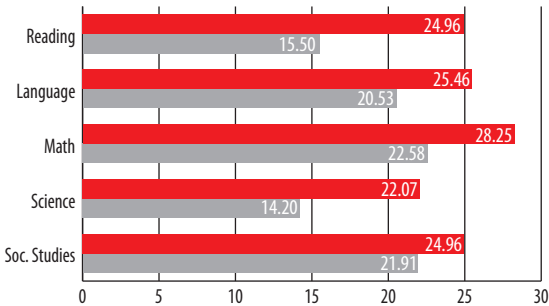
The second study tracked the progress from 6th grade testing to 8th grade testing for two groups of bridge learning students and one group who did not learn to play bridge. All three ITBSs were administered in February. The Beginner Bridge group had lessons twice a week for 9 weeks and the intermediate group had 9 more weeks of lessons twice a week. The beginning bridge students showed some gains in three of the five subject areas, almost equal gain in one area and less gain in Social Studies. The intermediate bridge students had more gain than the

no-bridge students in all 5 subject areas. Based on a National Average Gain of 24 for two years, the intermediate bridge students added 0.71 to 1.64 more years of gain than the no-bridge classmates.

24-Month Average National Standard Score Gains from 6th to 8th Grades

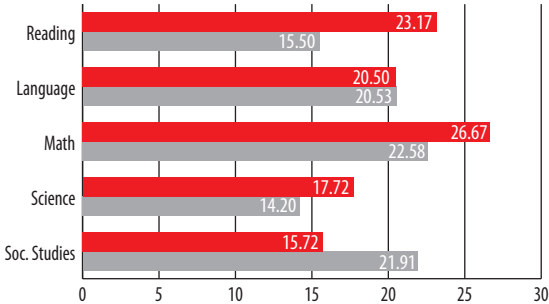
Beginner & Intermediate Bridge vs. No Bridge

(Number of Students: Bridge- 28; No Bridge- 118)



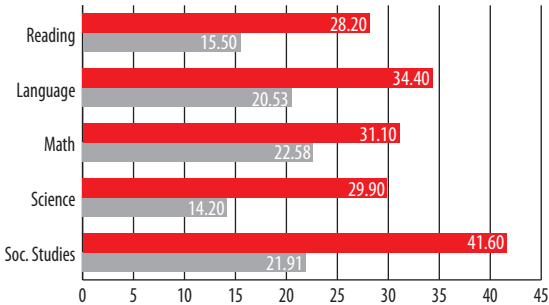
Beginner Bridge vs. No Bridge

(Number of Students: Bridge- 18; No Bridge- 118)



Intermediate Bridge vs. No Bridge

(Number of Students: Bridge- 10; No Bridge- 118)



Bridge
No-Bridge

Carlinville, Illinois Test Score Study

by Dr. Christopher Shaw

There was pre-testing of all the students in the 5th grade and post-testing at the 20th and 32nd 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 5th grade, April of 6th grade and April of 7th grade. Thus, the entire 5th 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 6th graders and again 32 months later as 7th graders.

Reading	<i>Sept 01</i>	<i>Apr 03</i>	<i>Apr 04</i>
Bridge	217.07	238.53	257.93
Non-Bridge	214.83	237.14	248.70

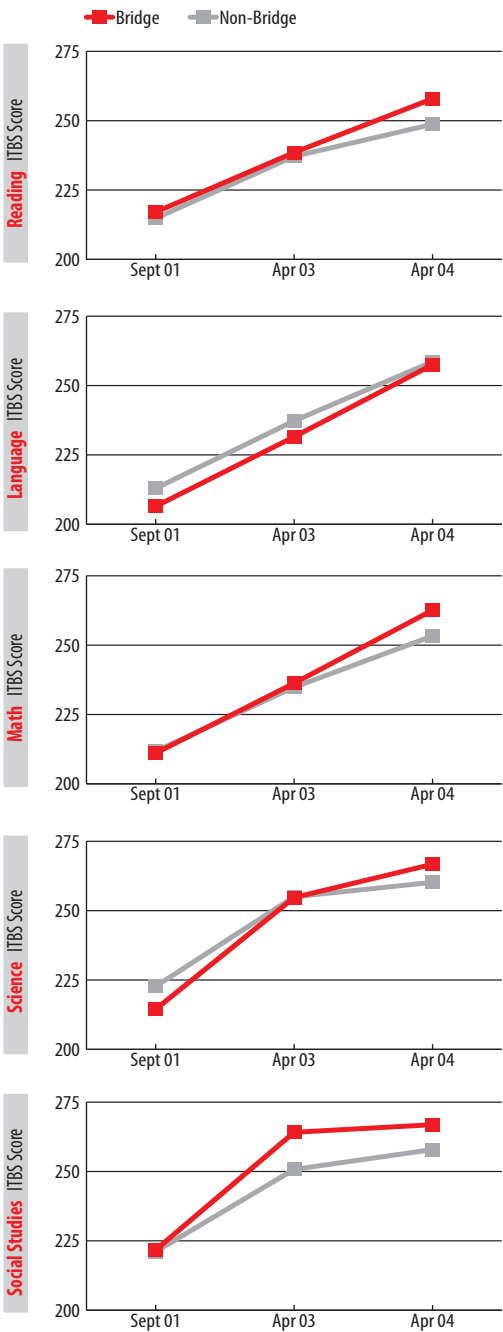
Language			
Bridge	206.47	231.53	257.53
Non-Bridge	212.95	237.26	258.61

Math			
Bridge	211.07	236.27	262.60
Non-Bridge	211.81	234.83	253.30

Science			
Bridge	214.47	254.73	266.73
Non-Bridge	222.70	255.00	260.21

Social Studies			
Bridge	221.73	264.13	266.87
Non-Bridge	221.13	250.76	257.90

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.



What others are saying...

ENTERTAINMENT

Bridge is the most entertaining and intelligent card game the wit of man has so far devised.

- W. Somerset Maugham

FASCINATION

Bridge is such a sensational game that I wouldn't mind being in jail if I had three cellmates who were decent players and who were willing to keep the game going 24 hours a day.

- Warren Buffett

MENTAL CHALLENGE

Many games provide fun, but bridge grips you. It exercises your mind. Your mind can rust, you know, but bridge prevents the rust from forming.

- Omar Sharif

PLEASURE

Playing bridge reflects intelligence. It's one of the really great pleasures of life. Anybody who's missing bridge is missing so much in life.

- Malcolm Forbes

UNIVERSALITY

No matter where I go, I can always make new friends at the bridge table.

- Martina Navratilova

TEAMWORK

What distinguishes bridge from the many other games combining luck and skill? Part of the answer is teamwork. An apt comparison is with basketball. There, players may engage in contests of skill limited in dimension: three-point shooting, slam-dunking, one-on-one, HORSE, and so on. But what makes basketball distinctive, and the most fun to play or watch, are the team interactions: moving without the ball, setting screens and passing on offense; switching and boxing out on defense; using court sense and maintaining court balance.

So it is with bridge. There will be opportunities for three-point shots and slam dunks, but complete bridge players are also forever helping their partners and receiving information in return. Playing good bridge is like throwing an outlet pass, running down court, getting open, and receiving the ball back in perfect position to score. Other games are just plain HORSE.

- Danny Kleinman

Play

Contact Information:

Patty Tucker

Phone: 404-735-4779

Email: wimsey@mindspring.com

Websites of Interest:

Bridge Teachers for Youth

www.btfy.org

Atlanta Junior Bridge

www.atlantajuniorbridge.org

American Contract Bridge League

www.acbl.org