

**Get ready to discover mathematics all around you this spring!**

**Just like reading, regular practice with problem solving, computation, and math facts will maintain and strengthen the mathematic gains you have made over the school year.**

**Enjoy these activities to explore problem solving at home. The goal is for you to have fun thinking and working collaboratively as a family to communicate mathematical ideas.**

**While you are working ask how the solution was found and why a particular strategy helped you solve the problem.**

**Literature and websites are also recommended to explore mathematics in new ways.**

Keeping a **Math Journal** is a great way for children to log their ideas about Math as well as strategies for arriving at solutions. Here is an example of a journal entry:

April 26,

I noticed when flying my kite that sometimes it would soar higher than at other times. I began to wonder what might be the reason that the same kite that I flew at the same time of day was able to soar higher on some days than on other days. I was not sure if it was the wind speed or the temperature that made my kite fly higher. My mom loaned me a device that tells the temperature and wind speed. So I started out by marking each yard on the string with a red marker so that I could have an exact measure of how high the kite was flying.

Sun: 65 degrees	19 MPH	13 Yards
Mon: 77 degrees	15 MPH	15 Yards
Tue: 63 degrees	10 MPH	20 Yards
Wed: 78 degrees	7 MPH	15 Yards
Thurs: 75 degrees	12 MPH	25 Yards
Fri: 80 degrees	7 MPH	12 Yards
Sat: 76 degrees	10 MPH	15 Yards

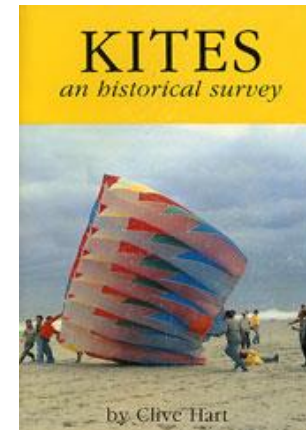
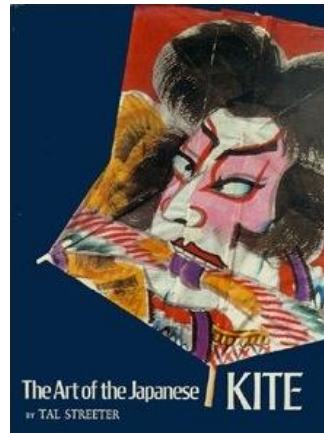
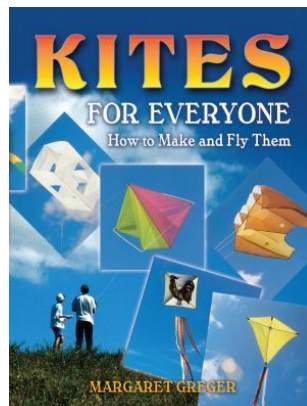
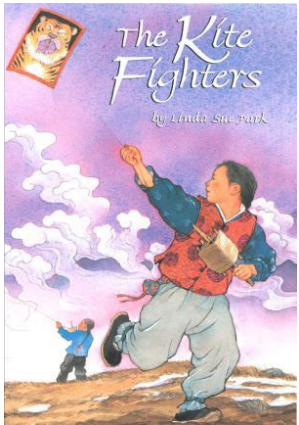
(Draw a graph of the height the kite flew)

WOW was it so cool to test out my ideas! After flying the kite over several day I could not say exactly for what reason the kite soared higher on some days than on others. Although the temperature stayed the same the wind speed did not always stay the same. So I wrote the speed of the wind after flying the kite for 10 minutes. I am not sure if this was the right thing to do. I learned that I had LOTS more questions to think about after trying to figure out what was the 1 cause for the kite to fly higher. I thought since I really had fun and did not get an exact answer that I wanted to learn more about kite so I did some research on the web an found the following information and videos.

<http://www.aviation-for-kids.com/kites.html>

## Math Books to Read Anytime

Check out the sampling of great Math/Literature Connections at



Explore this web pages for Spring Math Family Fun

<https://www.gombergkites.com/nkm/math.html>

## Kite Math

[from https://www.gombergkites.com/nkm/math.html](https://www.gombergkites.com/nkm/math.html)

### PROBLEM ONE:

In 1820, George Pocock connected several large kites to a carriage and pulled it from Southampton to London. Since road taxes were based on the number of horses used to pull a carriage, he was able to avoid any taxes! The 60 mile trip took two hours. Modern kite buggies now go twice as fast but seldom go as far.

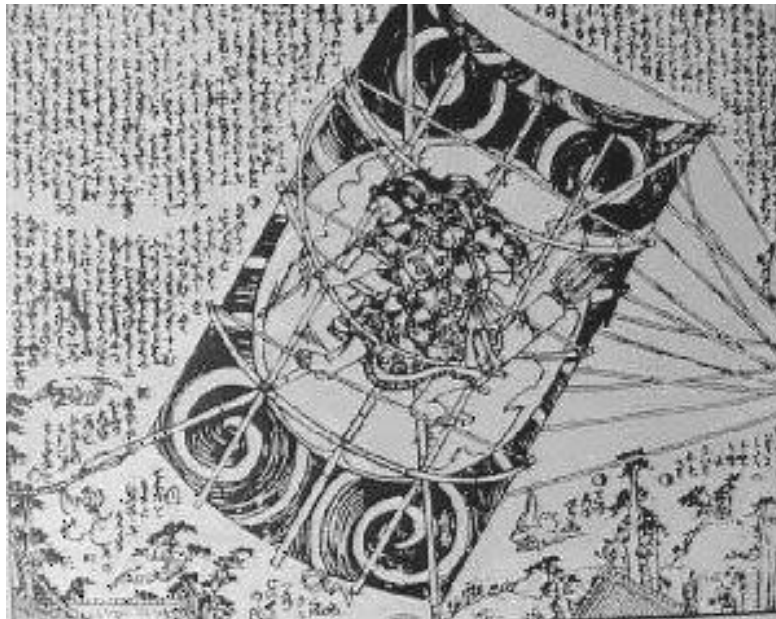
How fast was the carriage moving? [Hint](#)



PROBLEM TWO:

In the year 169 BC, the Chinese General Han Hsin used a kite to measure the distance between his camp and the wall of an enemy city. His soldiers then dug a tunnel the same distance in order to crawl under the wall and attack from inside. The city was conquered by a kite!

How can you measure a minimum distance with a kite? [Hint](#)



### PROBLEM THREE

Under the direction of Harry Osborne, the Edmonds Community College kite team kept a parafoil in the air from August 21 to August 29, 1982. Their 180 hour, 17 minute flight created a world record for duration flying.

If there were eight members of the team, and each took three hour shifts watching the kite, how many shifts would each team member be responsible for? [Hint](#)



#### PROBLEM FOUR:



The largest kites built in Japan are flown in Hoshubana every May. The kites are 36 feet wide and 48 feet tall with bridle lines more than 100 feet long. It takes fifty members of the O-dako (Giant Kite) Association of Hoshubana to launch this giant creation. Each team member is suitably uniformed in a traditional festival jacket that matches the kite

The kite is made from individual pieces of rice paper, each glued together at the edges. If each sheet is 18 inches wide and 24 inches tall, how many sheets are needed to create the sail of this Japanese kite? [Hint](#)

## PROBLEM FIVE:

On February 28, 1889, in Milton Massachusetts, near the Blue Hill Observatory outside of Boston, a large box kite with about 86 square feet of sail are rose more than two miles over the earth's surface. The kite's flying line was piano wire with a breaking strength of 330 pounds. The flight was conducted by meteorologists Henry Helm Clayton and A.E. Sweetland. Eventually they determined that their kite had risen to an altitude of 12,471 feet. Over 100 years later, this record was broken by Richard Synergy at over 14500 feet in August 2000. How can you measure the altitude of a kite using mathematics? [Hint](#)





## Fun Websites to Explore all Year Long:

[www.funbrain.com](http://www.funbrain.com)

[www.aplusmath.com](http://www.aplusmath.com)

[www.pbskids.org](http://www.pbskids.org)

[www.illuminations.nctm.org](http://www.illuminations.nctm.org)

Click on **ACTIVITIES**. Click on **K-2** and press **SEARCH**.

## **Games To Play All Year Long (You will need a deck of cards)**

### **1. Compare**

Remove the face cards from a deck of cards. Remember an Ace is the same as 1. Pass out all of the cards in the deck among all of the players. Each player flips over one card at the same time. The player with the higher number keeps both cards. If the two cards are the same, turn over another card. The player with the higher number keeps all four.

### **2. Double Compare**

Same as above, but turn over two cards each time and find the sum. The one with the larger sum takes the cards.

### **3. Close to 10**

Remove the face cards from a deck of cards. Deal 3 cards to each player. Which two cards brings you closest to 10? Which player is closest to 10? Example: You turn over the cards 5, 4, 3 and your opponent turns over an Ace, 8, and 3. You can make 9 (5 and 4) and your opponent can make 9 (Ace and 8) or 11 (8 and 3). It's a tie since you are both 1 away from 10!

### **Other games to play:**

Checkers, Memory, Chutes and Ladders, jigsaw puzzles, Parcheesi, Fish, Crazy Eights, Candy Land, Blink, Connect Four, Legos, K'Nex.

Check out the PDF: [Making Math More Fun Board Games](#) that contains a variety of board games for different grade levels.