

Teachers, please copy both sides of this page for your students to take home.

Mathfinder

Dear Students and Parents,

We hope you enjoyed your recent day of science exploration and investigation with Pacific Science Center's *Mathfinder* van. The Science On Wheels program, which began operating in 1974, is an interactive outreach program that travels to schools across the state of Washington.

The *Mathfinder* van provides students with hands-on science experiences. Students explore an interactive exhibit area and receive a 45-minute hands-on lesson. Our goal is to foster an interest in science, technology and mathematics.

We encourage you to talk about our visit and investigate the activities below. They require few materials and are easy to do. We hope you enjoy doing these activities together!

~Science On Wheels Teachers

On Which Day Of The Week Were You Born?

Most people know the month and date of their birth. Here's a math trick for finding out the day of the week that your birthday fell on the year you were born. Do this for everyone you live with.

Procedure

- Write down the last two digits of the year you were born. Call this number "a."
- Divide "a" by 4 and drop the remainder if there is any. This answer is "b."
- Find the number of the month you were born in, using the "Table of months" to your right. Call this number "c."
- What day of the month were you born? Call this number "d."
- Add up $a+b+c+d$.
- Divide the sum above by 7. Using the remainder, find that number in the "Table of days" to your right. That is the day of the week you were born.
- This trick will only work for dates in the 20th century. Can you make a formula for figuring out the days of the week for the 21st century?

Materials

- paper and pencil (Important: This will not work with a calculator!)



Table of months:

January.....	1 (0 in a leap year)
February.....	4 (3 in a leap year)
March.....	4
April.....	0
May.....	2
June.....	5
July.....	0
August.....	3
September....	6
October.....	1
November....	4
December....	6

Table of days:

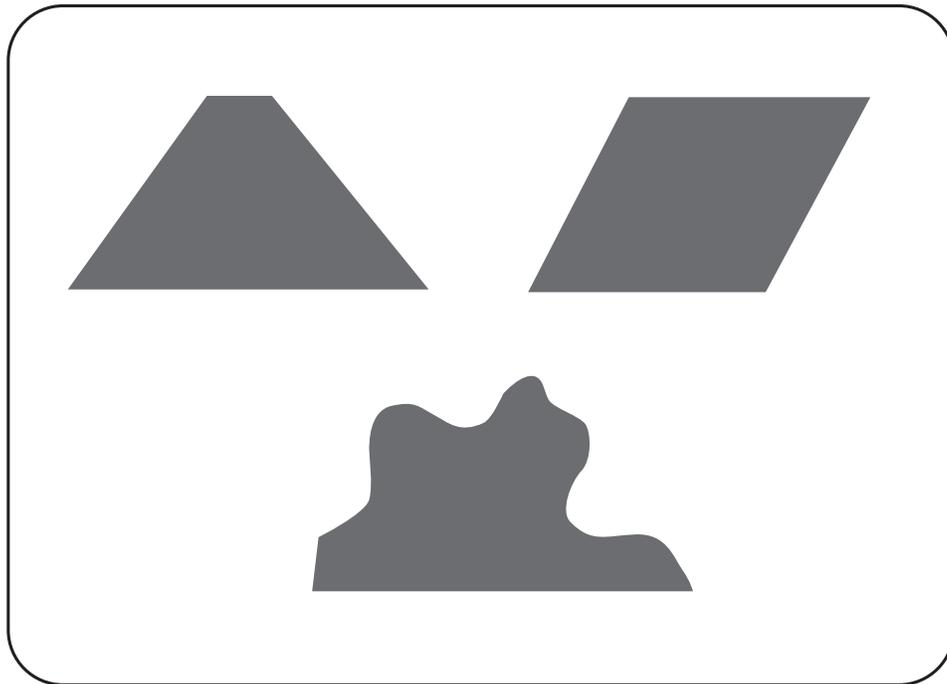
Sunday.....	1
Monday.....	2
Tuesday.....	3
Wednesday....	4
Thursday.....	5
Friday.....	6
Saturday.....	0

Fair And Square

Spatial abilities are important in the study of mathematics. When you are using your spatial intelligence, you are thinking about the placement of objects in relation to other objects, often without being physically able to manipulate them. In this activity, you must first think about where to cut and place the pieces before you make the cut.

Procedure

- Either trace or photocopy the shapes. Carefully cut out shape #1.
- Make one cut somewhere on the shape and then put the two pieces together to make a square.
- Try the same thing with shapes #2 and #3.
- Make up your own shapes and share them with the people you live with.



Materials

- scrap paper
- scissors

Resources

Discovering Careers for Your Future: Math, 2000
Painless Fractions, by Alyece Cummings and Laurie Hamilton, 1998
57 Great Math Stories and the Problems They Present,
by Debbie Haver and Alice Kozial, 1998
*Real-Life Math Investigations: 30 Activities That Apply Mathematical Thinking
to Real-Life Situations*, by Martin Lee and Marcia Miller, 1997
Mega-Funny Math Poems and Problems, by Dan Greenberg, 1999
The Book for Math Empowerment, by Sandra Manigault, 1997
Challenging Math Puzzles, by Glen Vecchione, 1998
Dazzling Math Line Designs, by Cindi Mitchell, 1999

Credits

Science On Wheels Staff

Laura Hamilton
Barbara Johnson
Zeta Strickland
Catherine Valiant

Graphic Designer

Katie Dresel

© 2006 Pacific Science Center
200 Second Avenue North • Seattle, WA 98109
206-443-2001 • pacificsciencecenter.org

 Printed on 100% post-consumer recycled paper.