
The Science Literacy Bulletin

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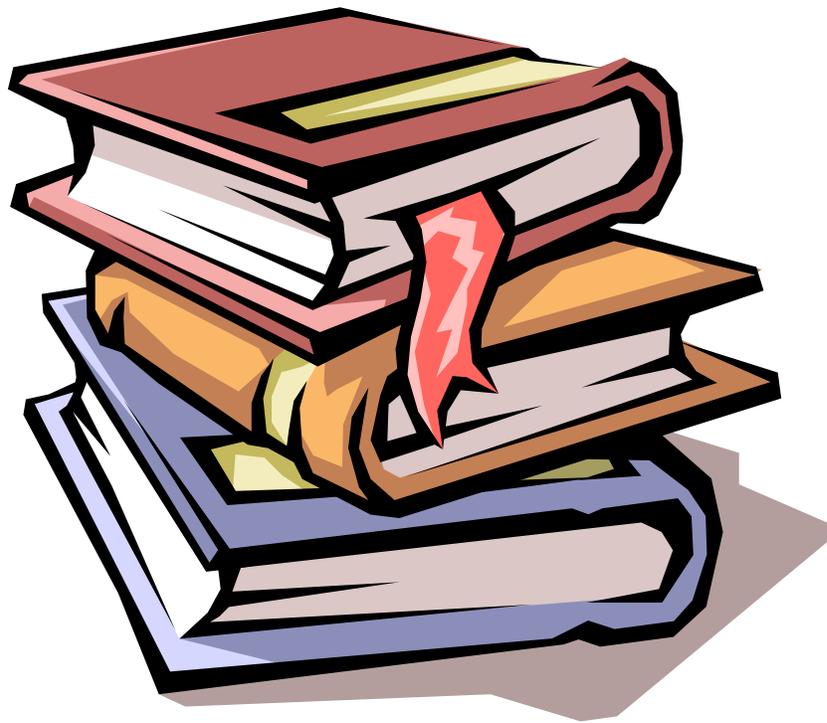
R eading
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Back to the basics

A community outreach project
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**The Science Literacy
 Bulletin**

Volume 1 Number 3

The Science Literacy Bulletin is published by the Science Literacy Project and Friends of FAMU Libraries to promote an understanding of the role of science literacy in daily life.

Editor

Glover E. Jones, Jr.

Science Advisor

Donavan Hall, PhD

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To suggest articles or activities contact:

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The Science Literacy Project (SLP)

The mission of SLP is to promote an increase of science literacy in the general population by developing resources and programs, and by teaching, training, and supporting students and educators committed to learning about and understanding science. To reach this goal, the level of literacy in many different areas in our community must be addressed. Therefore, our mission encompasses the dissemination of information on a number of subjects and interests.

Planned Activities:

- ✓ Development of outreach programs and materials to be used by local community groups, K-12 educators, businesses and individuals interested in science literacy.
- ✓ Researching and writing descriptions of current scientific results targeted for the general public.
- ✓ Recruiting sponsors to support dissemination of information to those unable to pay for books or computers.
- ✓ Developing relationships with businesses and individuals throughout the community who see a need for an increase in literacy. After college science courses, the greatest predictor of science literacy is, "Informal Learning".
- ✓ Working closely with businesses to take advantage of the scientific expertise in the geographical region.
- ✓ Building a better, more scientifically literate work force for North Florida.
- ✓ Building a network of community literacy volunteers to help with the mission of the SLP.
- ✓ Developing science excursions for the general public.

The Science Plan

The Science Literacy Project is based on the concept that science education should be made available to everyone who is interested in it.

The Science Literacy Project would like to introduce you to our concept for combining science education, libraries and the business community. We call this concept *THE BLUEPRINT SCIENCE PLAN*.

The Science Literacy Project, Friends of FAMU Libraries and the Smith-Williams Service Center will sponsor the initial lecture in *THE SCIENCE LECTURE SERIES*, tentatively scheduled for January/2003. The lecture will take place at the Smith-Williams Service Center, located at 2295 Pasco Street, Tallahassee, Florida.

THE SCIENCE LECTURE SERIES was started to expose those interested in science education with scientist from diverse fields of study.

The Science Literacy Project is actively seeking lecture guest speakers who have a passion for science and recognize the importance of science literacy in the community.

If you are concerned about science literacy in daily life and would like to help turn our concept into a reality, please contact Friends of FAMU Libraries.

Who? Why? What?

In our lives we have heard the phrase, "stop asking dumb questions." The Science Literacy Project feels if questions weren't asked there wouldn't be any answers. Take a look at the following questions and hopefully you can provide the answer. If not, look inside the January issue of the Science Literacy Bulletin for the answers.

Why is the sky blue?

Why does water freeze?

Who is Albert Einstein?

What is gravity?

Who is Madam Curie?

Who is Thomas Edison?

What is DNA?

What is the difference between analog and digital?

What are bacteria?

What is H₂O?

The Science Literacy Bulletin

The Science Literacy Bulletin is designed to assist in direct teaching to build cognitive structures necessary for learning. The relationships that will motivate children to learn need to be established. The only way that can be accomplished is to start now. No, we will not save all our children from all effects of environmental deprivation but we can certainly have an impact on some. Environmental deprivation includes forces of heredity and genetics, physical, social, emotional, financial, political issues, and other community factors.

Individuals who read this bulletin should review the activities and information found inside and share it with children. Working with children will build the relationship required for cognitive learning. The articles entitled, For the Little Ones, Color Time, Understanding Numbers, Words to Practice and Science Words are designed to assist you with your efforts. Remember, the effort that you put forth working with your children will motivate them to succeed and become productive in their life.

As role models and educators, we must teach children, provide support, assistance and high expectations. Each person has resources that greatly influence achievement. Their potential should be nurtured.



For The Little Ones

What city do you live in? _____

What is your address? _____

What state do you live in? _____

What is your father's name? _____

What is your mother's name? _____

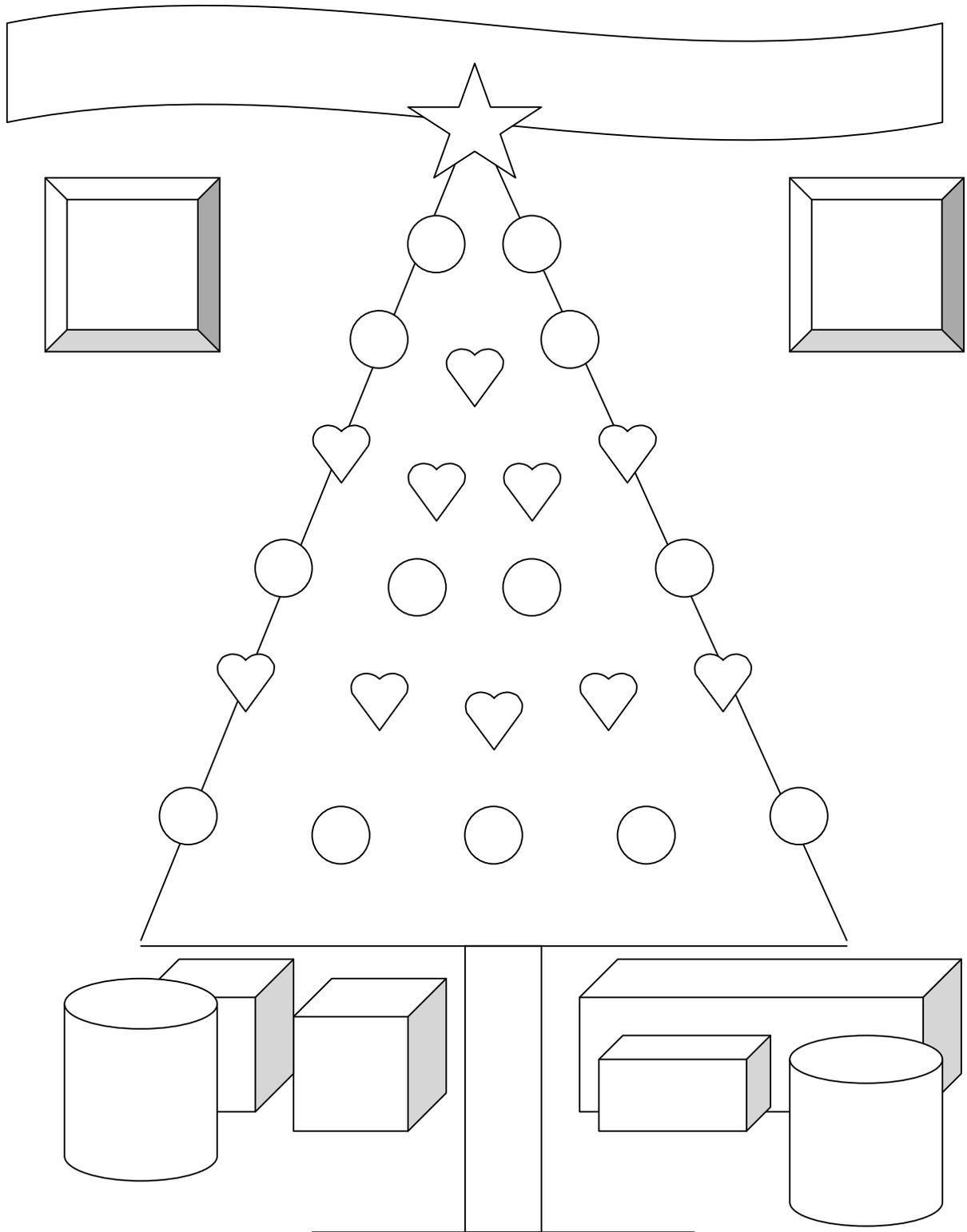
What is your phone number? _____

How many brothers do you have? _____

How many sisters do you have? _____

What is the emergency phone number? _____

Color Time



Understanding Numbers

Word Problem:

1. Sally walked 3 miles on Monday, 4 miles on Tuesday and 6 miles on Wednesday. If Sally wanted to walk 20 miles by Thursday, how many miles must she walk on Thursday?

Solution:

When working with a word problem you should identify the known facts in the word problem. This is often called setting up the word problem. Setting up the word problem will make finding the answer easier.

Setting up the word problem:

Sally walked ...	Monday	3 miles
	Tuesday	4 miles
	Wednesday	<u>6 miles</u>
		13 miles

Sally walked a total of 13 miles on Monday, Tuesday and Wednesday.

Sally wanted to walk 20 miles by Thursday.

Remember: Sally has already walked 13 miles.

Writing out the mathematical equation to find out how many miles Sally must walk on Thursday would be; $20 \text{ miles} - 13 \text{ miles} = 7 \text{ miles}$, Sally must walk 7 miles on Thursday.

QUESTION 1:

If Sally walked 20 miles by Thursday and wanted to walk 30 miles by Friday, how many miles must she walk on Friday?

Answer: Page 15

Understanding Numbers

Word Problem:

2. If a teacher had 32 students in her class and the girls outnumbered the boys 4 to 1, how many boys are in her class?

Solution:

When working with a word problem you should identify the known facts in the word problem. This is often called setting up the word problem. Setting up the word problem will make finding the answer easier.

Setting up the word problem:

There are 32 students in the class.

The girls outnumber the boys 4 to 1.

Remember: The statement 4 to 1 implies 4 girls to every 1 boy.

To find out how many boys are in the class you must find out how many groups of 4 girls are in the class. The equation to find the number of groups is written $32 \div 4$. The answer equals 8. Therefore, for every group of 4 girls there is 1 boy. Since we have 8 groups (of 4 girls) and each group represents 1 boy, the answer is 8 boys in her class.

QUESTION 2:

If the teacher had 40 students in her class and the girls outnumbered the boys 4 to 1, how many boys are in her class?

Answer: Page 15

Understanding Numbers

Word Problem:

3. If Kristen traveled from 8:00am to 1:30pm and Summer traveled from 10:45am to 12:30pm, how much time did each person travel? How much time did they travel all together?

Solution:

When working with a word problem you should identify the known facts in the word problem. This is often called setting up the word problem. Setting up the word problem will make finding the answer easier.

Setting up the word problem:

Kristen traveled 8:00am – 1:30pm
Summer traveled 10:45am – 12:30pm

Remember: There are only 60 minutes in an hour.

To find the total time traveled, first add the total hours and the total minutes. For Kristen the hours would be 8-9, 9-10, 10-11, 11-12, and 12-1 equaling 5 hours. The minutes would be 1:00–1:30 equaling 30 minutes. The total time traveled by Kristen is 5 hours and 30 minutes. For Summer the hours would be 11-12 equaling 1 hour. The minutes would be 10:45-11:00 equaling 15 minutes and 12:00-12:30 equaling 30 minutes. Adding the minutes together we get 45 minutes. The total time traveled for Summer would be 1 hour and 45 minutes. Add the totals together to find the total time they both traveled. Kristen traveled 5 hours and Summer traveled 1 hour for a total of 6 hours. Kristen traveled 30 minutes and Summer traveled 45 minutes for a total of 75 minutes. They both traveled 6 hours and 75 minutes. Remember 60 minutes equals an hour. The answer correctly written would be 7 hours and 15 minutes.

QUESTION 3:

If Seonna traveled from 1:15 pm to 6:20pm, how much time did she travel? How much time did Kristen, Summer and Seonna travel together?

Answer: Page 15

Understanding Numbers

Word Problem:

4. The store sold apples 8 for a \$1.00 or \$0.15 for one. The store sold a 96-ounce orange juice container for \$3.99 or 2 – 64 ounce orange juice containers 2 for \$4.00. The store also sold bread 3 for \$5.00 or \$1.75 for each loaf. Find the better deal for buying 8 apples, orange juice and 3 loaves of bread.

Solution:

When working with a word problem you should identify the known facts in the word problem. This is often called setting up the word problem. Setting up the word problem will make finding the answer easier.

Setting up the word problem:

Apples	8 for \$1.00	or	\$0.15 each
Orange Juice	96 oz \$3.99	or	2 - 64 oz \$4.00
Bread	3 for \$5.00	or	\$1.75 each

Remember: You have to do the math to find the better deal.

First, we look at the 8 for \$1.00 deal first. To find out how much the apples would cost per apple we divide \$1.00 by 8. The answer equals \$0.125 (round the answer up to \$0.13). Comparing \$0.13 (the cost per apple when buying 8 for \$1.00) to 0.15 (the cost when buying one apple at a time), we can see that buying 8 apples for \$1.00 is the better deal. Looking at the orange juice we can get 2 - 64 ounce containers for \$4.00. Two (2) 64-ounce containers added together would be 128 ounces. Buying 128 ounces of orange juice for \$4.00 is better than buying 96 ounces for \$3.99. Approach buying the bread in the same manner we approached buying the apples. Divide \$5.00 by 3. The answer equals \$1.666 (round the answer up to \$1.67). Comparing \$1.67 (the cost per loaf when buying 3 for \$5.00) to \$1.75 (the cost when buying one at a time), we can see that buying 3 loaves for \$5.00 is the better deal.

QUESTION 4:

If you wanted to buy 4 pears and the store sold them for \$1.25 each or 4 for \$5.00, which deal would be better?

Answer: Page 15

Words to Practice

ANALOG
BATTERY
CABLE
DIODE
ELECTRIC
FILTER
GAUGES
HEX
INDUCTOR
JUNCTION
KELVIN
LINEAR
MAGNET

NOBEL
OCTAVE
QUERY
RESISTIVE
SAMPLE
TESLA
UNIVERSAL
VACUUM
WIRE

INSTRUCTIONS:

Find your dictionary and look up the definition for the words. This exercise will help you increase your vocabulary and give you insight about science and technology terminology.

What do Friends do?

The mission of Friends of FAMU Libraries is to assist the library in providing information and services to all library users by developing a strong support system, serve as a sounding board on library issues and as an advocacy group with the university administration.

Friends of FAMU Libraries support the library by:

- Publicizing library programs • Fund-Raising • Serving as liaison to community organizations that can help provide publicity, volunteers, and leadership • Organizing committees to assist the libraries • Planning book and author events, lectures, and exhibits • Assisting with library projects.

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Payment method:

Checks or money orders should be made payable to Friends of FAMU Libraries.

Send completed form to:

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Florida A&M University
Tallahassee, FL 32307-4700



Science Words for the Month

- Comet** a celestial body that consist of a fuzzy head, usually surrounding a bright nucleus, that often when in the part of its orbit near the sun develops a long tail which points away from the sun, and that has an orbit varying in eccentricity between nearly round and parabolic.
- Parabolic** something bowl-shaped.
- Nucleus** the small, brighter and denser portion of a galaxy or of the head of a comet.
- Light Years** a unit of length in interstellar astronomy equal to the distance that light travels in one year in a vacuum or 5,878,000,000,000 miles.
- Interstellar** located or taking place among the stars

Answer Key:

- Question 1. 10 miles
Question 2. 10 boy students
Question 3. 5 hours and 5 minutes, 12 hours and 20 minutes
Question 4. Both deals are the same

The Science Literacy Project

Sponsored by Friends of FAMU Libraries

Special thanks to:

Flossie M. Byrd, Ph.D.

Provost and Vice President for Academic Affairs, *Emerita*
Prairie View A&M University

Please contact Friends of FAMU Libraries
for additional information at:

850.599.8576