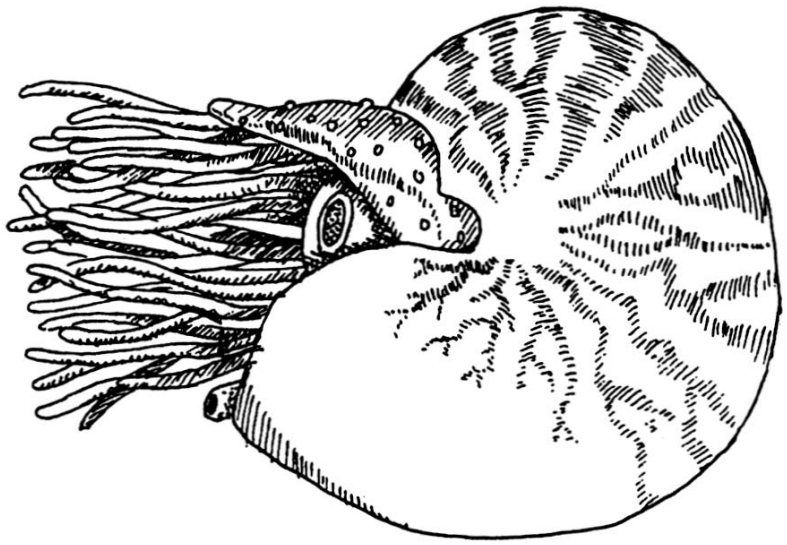
Lyrical
Life Science
Workbook



By
Doug and Dorry Eldon

Illustrations
by
Eric Altendorf

How to use this workbook:

The emphasis of this Lyrical Learning project is to help the student learn the language of life science in an enjoyable way through the avenue of song. The worksheets expand on the information from the songs and may be used to reinforce the information. They may be used for review and learning in which the student refers back to the textbook for the needed information, or they may be used as tests. Answers are given in the answer key at the back of the book, including essay answers. (The student's answers need not be worded the same.) You may wish to remove the answer key before the student begins the workbook.

Each song and chapter of the accompanying textbook and cassette are given three worksheets in this workbook. The pages within a given subject section are progressive in that they require deeper levels of understanding.

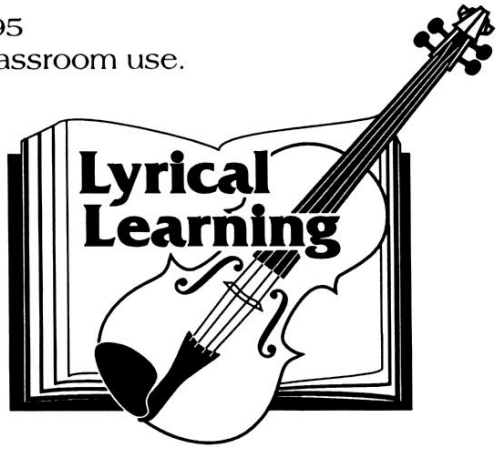
The first page for each chapter is a fill-in-the-blank lyric sheet to simply reinforce information learned by the song. The student should know the song before attempting the worksheet.

The second page of each chapter contains questions which are objective: true/ false, matching, fill-in-the-blank and short answer—which use information from the song and textbook. These pages require more understanding of the subject matter.

The third page of each chapter contains essay questions which often require a further synthesis and application of the information from the textbook and song. Many of the questions require a greater understanding than the recalling of facts on the objective worksheets.

Even more thought-provoking questions are asked on the third page under the heading DIGGING DEEPER. These questions require further research. The student may not be ready to answer these questions, but it would be worthwhile to read the answers supplied to broaden the student's understanding and promote discussion.

Cover design: Susan Moore
Illustrations: Eric Altendorf



Lyrical Learning
8008 Cardwell Hill
Corvallis, Oregon 97330
Telephone 503 754-3579

THE SCIENTIFIC METHOD - Lyrics

Oh, what do you think a_____ does
To solve a _____ found because
Many _____ are scientists
'Cause they're great_____ solvers
There is a_____ way

They go about 'most every day
It's _____ and it's _____
The _____ method

Chorus: A way to_____ a problem, a way, a way
The_____ _____ is a way to solve a _____
A way, a way, a way to _____ a problem
A way, a way, a way to solve a _____

It may not seem important to you
But the _____ thing that they always do
Is state the _____ or ask a _____
So they know just what they're after
Then they _____ everything involved
That might help get the _____ solved
By reading, _____
And gathering _____
Chorus

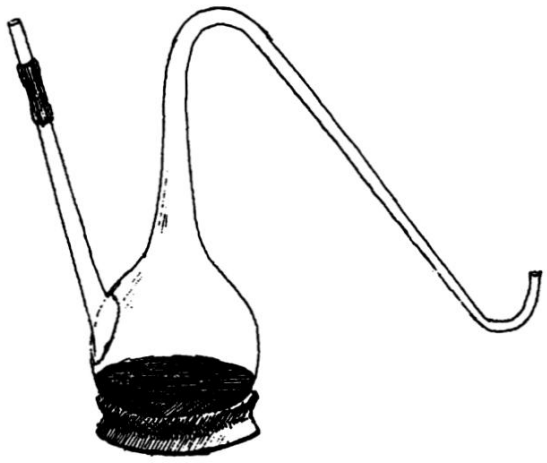
After both of these _____ they take
They go ahead and then they make
An educated guess—a _____—
A possible _____
Then they use _____ tools
To _____ and test some variables
In _____ which are really meant
To give more _____
Chorus

This information they call _____
They put together so that later
They can analyze and _____
To see just what it all means
Only when they have done all these
_____ testing _____
Which may prove, or else _____
Then they'll state their _____
Chorus

This is the_____ way
A _____ may use any old day
'Cause it's _____ and it's logical
The _____ _____

Fill in the blanks, you may use words more than once.

conclusion
data
disprove
experiments
first
hypotheses
hypothesis
information
logical
measure
method
methodical
problem
question
researching
review
scientific
scientist
scientists
solution
solve
steps
synthesize
systematic



THE SCIENTIFIC METHOD - Objective

True or false

1 - _____ Pasteur proved that germs are carried in the air.
2 - _____ Microbes can be easily seen.
3 - _____ A variable does not change the outcome of an experiment.
4 - _____ Microscopes were first used in the early 1900's.
5 - _____ A hypothesis is a possible answer to a problem.

Matching

6 - Pasteur _____	A. Following orderly steps
7 - methodical _____	B. Discovered that microbes were killed by boiling
8 - variables _____	C. An educated guess, a possible solution
9 - Spallanzani _____	D. Factors that may affect the result of an experiment
10 - hypothesis _____	E. Proved microbes were carried on dust in the air

List the six steps of the scientific method in proper order:

11 - _____ Analyze data
12 - _____ Gather information
13 - _____ State a conclusion
14 - _____ Ask a question or state the problem
15 - _____ Experiment
16 - _____ Make a hypothesis

Fill in the blank

17 - A hypothesis can be tested by conducting _____.
18 - A hypothesis is an educated guess or a _____ _____.
19 - The information collected during experiments is often called _____.
20 - A _____ is stated after data is analyzed.

THE SCIENTIFIC METHOD - Essay

1 - Compare step one of the scientific method (ask a question or state the problem) with solving a math story problem. _____

_____

_____

_____

_____

2 - Why is it important to gather information by reviewing, reading and researching?

_____

_____

_____

3 - Why is it important to control variables in an experiment? _____

_____

_____

_____

4 - Why is it important to follow the steps of the scientific method in order?

_____

_____

_____

_____

5 - What can be done with data to make it easier to analyze? _____

_____

DIGGING DEEPER

1 - Scientists might not be able to prove that their hypothesis was correct. Why is it important for scientists to be willing to admit that their educated guess was wrong, even after all the work they did?_____

_____

_____

_____

_____

_____

2 - If a hypothesis is a possible explanation or solution, what is a theory and what is a law?

THEORY:_____

_____

LAW: _____

_____

_____