

## Science Shorts Overview

*Science Shorts* have been field tested in both special needs and regular education classes in grades four through twelve with positive results. *Science Shorts* have also been used in social studies and English classes as enrichment activities.

*Science Shorts* was born out of teacher frustration. All students deserve a chance to have meaningful science experiences. Also, science time, like the time available for all subjects, is limited. In order to provide meaningful experiences in the time allotted, *Science Shorts* were created. The needs of teachers and students are met using the following criteria:

1. A curriculum is needed that is presented simply without talking down to students.
2. Lessons need to link science concepts to real life situations.
3. There is a need for reinforcement and enrichment activities that promote the retention of basic science vocabulary terms.
4. Information provided needs to instill an appreciation of and respect for nature.
5. Students need to be given knowledge that will provide them with a fuller and safer life.

The *Science Shorts* are separated into two books: *Animal Life* and *General Science*. Each *Science Shorts* book has fifty lessons.

The topics in *Science Shorts: Animals* depict a representative view of life on earth. Mammals, reptiles, amphibians, birds, fish, insects and some of their predecessors are all introduced. The intent of *Science Shorts: Animals* is to provide students with the opportunity to draw conclusions regarding the similarity between people and all other life. Feeding habits, raising of young, habitats and the emotions of wild things are some of the concepts that will help to provide students with a better understanding of the creatures that share this planet with Man.

*Science Shorts: General Science* provides an introduction to physical science. Weather, disease, inventions and all other topics are intended to offer a broad based understanding of the cause and effect of life on earth and in our environment. Also, an underlying attempt is made to instill a social conscience toward the fragility of the balance of nature.

Each *Science Short* story is accompanied by four activities:

1. Vocab Corner (use of vocabulary words in a puzzle, riddle or poem)
2. Just for Fun (a word puzzle)

3. In Your Words (a crossword puzzle or word blocks) or Crack the Code (an ABC picture code or a hidden message)
4. A Science Stretch (an activity that requires students to go beyond the given information)

## Objectives

- Students will gain general scientific knowledge.
- Students will discover enjoyable aspects of science.
- Students will use creative thinking skills to create riddles, poems and puzzles.
- Students will use critical thinking skills to complete word puzzles.
- Students will extrapolate beyond the given.
- Students will gain an appreciation of ways in which science is part of the world around us.
- Students will gain an appreciation of ways in which science is part of the working world.

## Teaching Suggestions

1. *Science Shorts* can be used as an independent curriculum or as a supplement to existing science units.
2. The *Science Shorts* lessons can be used in any order. However, each vocabulary word is selected as a vocabulary word only once--at the first occurrence. So, if the *Science Shorts* are used out of order, a word might be encountered one day without being identified as a vocabulary word. Then, the following day, it could be included as a vocabulary word. The only exception to this is when a single word has two distinctly separate meanings. When this is the case, the word might be listed as a vocabulary word twice--once with each of the two meanings.
3. An overall continuity can be maintained by having students keep a class notebook that contains the lessons, a required vocabulary section, magazine and newspaper clippings, pictures related to the topics and student illustrations.
4. Class presentations of notebook projects are recommended as a means of involving students at a higher level.

5. Open notebook tests are suggested. The ability of students to memorize this information is not important. The ability of students to be able to find pieces of information when needed is important.
6. *Science Shorts* can be used to teach and reinforce topics such as geology, space, weather, reproduction, paleontology, disease, anatomy, ecology, archeology, health, nutrition, technology, medicine, endangered species, pollution and rain forest depletion.
7. Scientific terms are repeated and reinforced throughout the texts. Giving each student his/her own copy of the glossary will help students as they address new/repeated scientific terms.
8. It is suggested that each student have a copy of the Table of Contents in order to aid in the organization and location of his/her *Science Shorts* lessons.
9. Most of the *Science Stretch* solutions provided in the Answer Key are not intended to be the only correct answers. Rather, they are intended to offer one possible answer.