



Second Grade

# Science and Social Studies

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# Goals for *Changes*

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In this unit, students expand their understanding of solids, liquids, and gases and how they change. Through their experiences, students are introduced to the following concepts, skills, and attitudes.

## Concepts

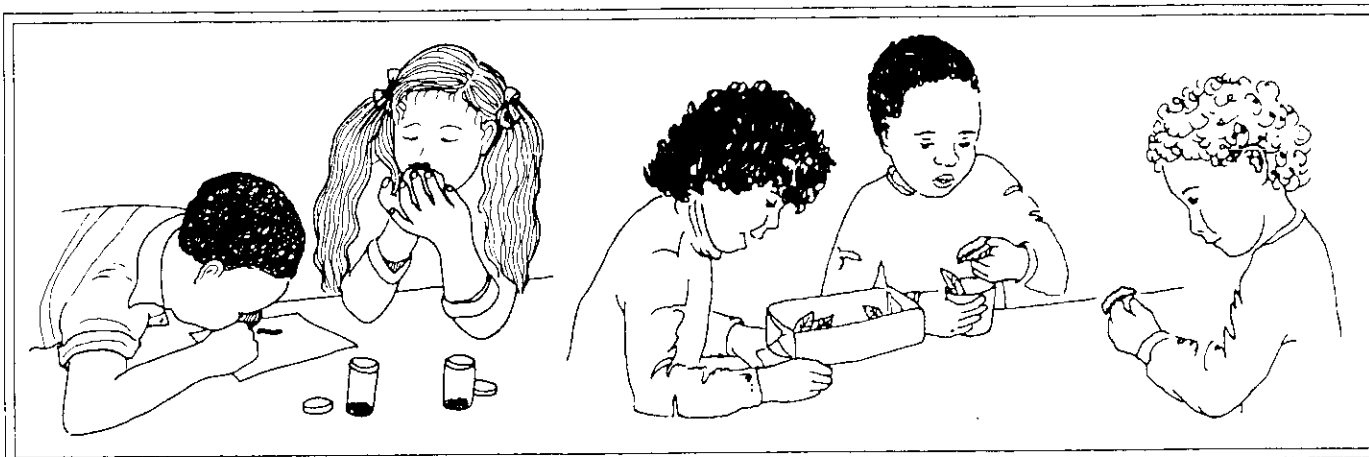
- Changes occur all the time in the world around us.
- Some changes happen quickly, and others take place over a period of time.
- Substances can be classified as solids, liquids, or gases.
- Solids, liquids, and gases can be described by their properties. These properties include color, size, shape, odor, texture, and weight.
- Water can freeze into a solid and then melt into a liquid again.
- Water can evaporate into a gas and then condense into a liquid again.
- Mixtures can be made by combining solids, liquids, or gases, or a combination of these.
- A substance can change in appearance yet remain the same substance.
- Some mixtures can be separated using a sieve, a filter, or the processes of evaporation and chromatography.
- When some solids—such as salt and sugar—are added to water, they dissolve and seem to disappear.
- Some dissolved solids can be recovered as crystals through evaporation.
- When a solid is dissolving in a liquid, the size of the solid particles, the temperature of the liquid, and stirring can affect the speed at which the solid dissolves.
- When two or more substances are mixed, a chemical reaction may occur. Indicators of a chemical reaction can include a change in color, a change in temperature, or the production of a new substance, such as rust or gas.

## Skills

- Observing and describing changes that occur in everyday experiences.
- Observing and describing the properties of solids, liquids, and gases.
- Observing and describing changes that result from mixing substances.
- Observing and describing water as it freezes, melts, evaporates, and condenses.
- Comparing mixtures.
- Separating mixtures with a sieve, a filter, and the processes of evaporation and chromatography.
- Performing tests to investigate a mystery mixture.
- Communicating ideas, observations, and experiences through writing, drawing, discussion, and presentation.
- Predicting, observing, classifying, and recording results in a journal and on record sheets, class charts, and brainstorming lists.
- Designing and testing a recipe in which substances are mixed to create a chemical reaction.

## OVERVIEW

Grades 1-2



The FOSS **Insects Module** provides experiences that heighten students' awareness of the diversity of animal forms. They come to know firsthand the life sequences of a number of insects. In each activity an insect is introduced, and students observe structures and behaviors, discuss their findings, and ask questions. Students observe life cycles of insects and compare the stages of metamorphosis exhibited by each species.

In activity 1, **Mealworms**, each student receives two larval mealworms to care for and observe. A class culture is also maintained. Over 10 weeks students observe the larvae grow, molt, pupate, and turn into beetles (adults), which mate, lay eggs, and die.

In activity 2, **Waxworms**, students observe waxworms progress through their life cycle. They compare the complete metamorphosis of the wax moth to that of the mealworm beetle.

In activity 3, **Milkweed Bugs**, groups of students receive vials of milkweed bug eggs. Each group prepares a habitat for the bugs, providing air, space, food, and water. They observe the changes in structure, pattern, and behavior as the insects mature as a result of simple metamorphosis.

In activity 4, **Silkworms**, and activity 5, **Butterflies**, the class observes silkworm and painted lady larvae grow, pupate, and emerge as adults. They experience the characteristic stages of complete metamorphosis and compare the individual forms and behaviors exhibited by moths and butterflies. With luck students will see mating and egg laying, completing the life cycle.

In activity 6, **Other Insects**, the class sets up appropriate habitats for house crickets, ants, and aquatic insects, and observes the structures and behaviors of these insects in class cultures.

## PURPOSE

FOSS expects students to

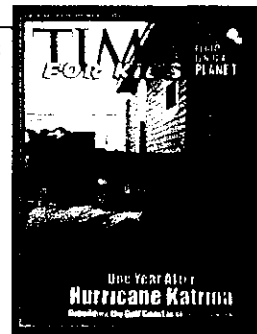
- Develop a curiosity and interest in insects and a respect for them as living things.
- Experience some of the great diversity of forms in the animal kingdom.
- Become familiar with some of the life sequences that different types of insects exhibit (simple and complete metamorphosis).
- Observe the similarities and differences in the larvae, pupae, and adults of insects that go through complete metamorphosis.
- Observe the behaviors of insects at different stages of their life cycle.
- Provide for the needs of insects (air, water, food, and space).
- Acquire the vocabulary associated with insect life.
- Gain early experiences that will contribute to their understanding of several pervasive themes that relate one scientific idea to another: **Structure, Pattern, Change, and Interaction.**

**Social Studies Standards**

- People, Places and Environments

**Skills**

- Reading for Information
- Analyzing a News Story



# TEACHING THE COVER STORY

## RECOVERY EFFORTS IN NEW ORLEANS

### SUMMARY

This week's issue highlights the progress of recovery efforts in New Orleans one year after Hurricane Katrina devastated the Gulf Coast. The storm's impact is still being felt by the many people who were left homeless. For many, recovery efforts and rebuilding have been painfully slow. Still, some schools have reopened, and residents have a sense of hope.

### Dear Teacher,

We appreciate your efforts to include TIME For Kids magazine in your busy curriculum. We are aware that with testing requirements and the push to meet state and federal teaching standards, the demands on teachers continue to grow.

After meeting with teachers--and with your busy schedule and teaching needs in mind--we have revamped our Teacher's Guide and Web resources.

Look for these new features each week:

- The TIME For Kids publishing schedule, to let you know when to expect your issues.
- A vocabulary activity that can be used with the Power Words in the issue.
- Resources available online will be noted on page 5. Graphic organizers, worksheets and other Web resources will help you integrate the week's issue.

Ongoing features include:

- Page 1 of the Teacher's Guide will continue to provide background and resources to teach the week's cover story.

- Page 2 offers resources, background facts and activities for other stories and features.
- TFK Power Words, challenging words found in the issue and their definitions, can also be found on page 2.
- Activity sheets to support and assess student comprehension are found on pages 3 and 4.

Be sure to visit our teacher website at [timeforkids.com/teachers](http://timeforkids.com/teachers), where you will find worksheets, lesson plans, graphic organizers, the TFK Homework Helper site and much more.

And don't forget to sign up to receive our online Teacher Newsletter at [timeforkids.com/teachers](http://timeforkids.com/teachers).

As always, we appreciate hearing from you! Send us an e-mail at

[teachersguides@timeforkids.com](mailto:teachersguides@timeforkids.com).

Best wishes for a productive school year.

Jackie Wlodarczak  
Editor, Teacher's Guides

## NONFICTION LITERACY STRATEGIES

### BEFORE READING

#### Build Background

- Locate New Orleans, Louisiana, on a map. Tell students that Hurricane Katrina hit this city on August 29, 2005, and the city is still recovering.
- Ask: What effect can hurricanes have on people, places and things?

### START A DISCUSSION

#### Critical Thinking

- Why are many kids happy to go back to school in New Orleans? Would you feel the same way?
- What problems do many people in New Orleans face?
- Do you think the government should do more to help the people of New Orleans? If so, how?

### BUILD COMPREHENSION

#### Cause and Effect

- Have students underline some of the effects of Katrina.

#### Read for Details

- Have students reread the cover story and find and underline the answers to the following questions:  
1. Have all the people who used to live in New Orleans before the storm returned? 2. Do storms often hit New Orleans? 3. Have most of the schools in New Orleans reopened?

### ASSESS COMPREHENSION

Go to [timeforkids.com/teachers](http://timeforkids.com/teachers) Assess student comprehension of the issue with our weekly online quiz.

### TFK PUBLISHING SCHEDULE

27	28	29	30	31	FRI	SAT	SEPTEMBER
					1	2	
					8	9	
					15	16	
					22	23	
					29	30	

☒ current issue date

☐ past/future issue dates

### NEED TO REACH US?

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STORYPATH®

Grades 1-3

Community  
Studies

# Families *in Their* Neighborhoods



Teacher's Handbook

# ABOUT STORYPATH

## THE STORYPATH STRATEGY

Storypath offers both a structure for organizing the social studies curriculum and an instructional strategy for teaching. The structure is a familiar one: the story. The strategy is grounded in a belief that children learn best when they are active participants in their own learning, and places students' own efforts to understand at the center of the educational enterprise. Together, the structure and the teaching strategy ensure that students feel strongly motivated and have meaningful and memorable learning experiences.

Originally developed in Scotland during the 1960s, Storypath draws support from decades of experience with teachers and students. The approach has its roots in these beliefs about children and learning:

- The world is complex and presents many layers of information. Children know a good deal about how the world works and have a reservoir of knowledge that is often untapped in the classroom.
- When children build on that knowledge through activities such as questioning and researching, new understandings are acquired. Because children construct their own knowledge and understanding of their world, their learning is more meaningful and memorable.
- Problem solving is a natural and powerful human endeavor. When children are engaged in problem-solving, they take ownership for their learning.
- The story form integrates content and skills from many disciplines and provides a context for children to gain a deeper, more complex understanding of major concepts.

## AN INQUIRY APPROACH

Questioning, by both teacher and students, is a key component of Storypath. Through the story structure and the discourse it creates, the teacher guides students in their search for meaning and understanding as they acquire new knowledge and skills. Your questions, and the discussions they engender, cause students to:

- ask their own questions and think critically about what they know;
- use their prior knowledge to make sense of new information;
- connect personally to important social studies concepts.

The story structure and inquiry guided by unit goals provide the framework for students to integrate skills and complex content through problems they encounter. As they do so, their understanding of important concepts is extended and key connections are made.

## THE STORY STRUCTURE

For thousands of years, stories have helped us create order and make connections between events. Storypath's narrative structure helps students understand concepts that they often find difficult to comprehend in the traditional social studies curriculum.

Each Storypath unit centers on a unique and engaging story that provides a concrete context for understanding the social science content. This story may be based on actual historical events, as developed in *Struggle for Independence*. Or the story might instead be based on typical community or business structures, as developed in *Families in Their Neighborhoods* or in *Understanding the Marketplace*. From all of these structures, students develop a meaningful context for developing understanding of the topic.

### Typical structure of a Storypath unit

#### CREATING THE SETTING

Students create the setting by completing a frieze or mural of the place.

#### CREATING THE CHARACTERS

Students create characters for the story whose roles they will play during subsequent episodes.

#### BUILDING CONTEXT

Students are involved in activities such as reading and writing to stimulate them to think more deeply about the people and the place they have created.

#### CRITICAL INCIDENTS

Characters confront problems typical of those faced by people of that time and place.

#### CONCLUDING EVENT

Students plan and participate in an activity that brings closure to the story.

# Syllasearch

August 23, 2007 Professional Development:  
Riverview Second Grade Teachers & Special Ed.

Syllasearch is adapted from a computer program developed by:  
*Beck, Roth, & McKeown, 1985*

## What is Syllasearch?

Syllasearch is an instructional strategy designed to support students' development of multisyllabic word decoding.

## Reading Instruction

- It is very important that decoding instruction align with stage of the student's reading development.



Key: Instruction  
Student need

## Orthographic Stage of Reading

- This is the stage of reading when students BEGIN to attend to syllables and morphemes.
- The Orthographic Stage typically begins near the middle of 1<sup>st</sup> grade.

## Why is this important?

- Cognitive studies have shown that when skillful readers encounter multisyllabic words they depend on their ability to group the orthographic patterns into syllables.
- A firm sense of orthographic knowledge is essential for automaticity when decoding multisyllabic words.

Let's demonstrate our orthographic knowledge of the English language.

### List A

- sopmill
- rehilling
- pamshob
- weetcun
- paitnay

### List B

- nhippitv
- vcalw
- oealiu
- bmrt
- gthdomvz