

Science • Grades 3-5



Updated to
Ohio's Revised
2010 Science
Content
Statements!

Teacher's Guide

FOCUScurriculum

Curriculum materials for your content standards

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33 Milford Drive, Suite 1
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(330) 656-9008
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Teacher's Guide

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**At Last—
the Books You
Need to Meet
Ohio’s Revised 2010
Content Statements
for Science—
At Three Different
Reading Levels!**

Focus on Ohio Standards provides you with a new, simplified, and effective choice for teaching science. Your students will no longer spend time deciphering text that has little, if any direct link to Ohio’s Revised 2010 Content Statements. They will explore in depth, the concepts that are relevant and required of Ohio learners at a pace and level that meets their individual needs.

Your Lesson Plans Will Match Ohio’s Revised 2010 Content Statements for Science

- Guessing and searching for relevant text, hoping that it covers a standard, is a time consuming process that can now be eliminated.
- Every title of *Focus on Ohio Standards* is written to Ohio’s 2010 Revised Content Statements for Science.
- That means your lesson plans directly reflect the content standards your students are required to learn.

Three Reading Levels for Each Title Provides Differentiated and Value-Added Instruction

- Many science texts are often difficult for students to read. Thus they retain very little because the text is above their reading level. In contrast, some learners are not challenged by the material and become disconnected from what they read. *Focus on Ohio Standards* provides an opportunity for all levels of learners to be engaged in nonfiction text.

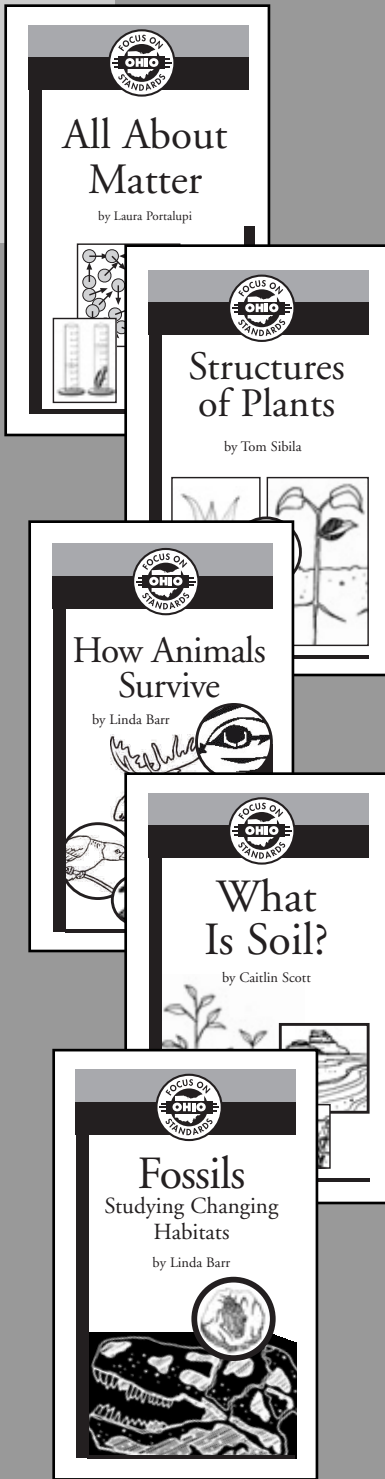
When Instruction Is Focused, Assessment Is Also Focused

- When you teach with *Focus on Ohio Standards*, you will know exactly which Content Statements have been mastered and which need further instruction. Two forms of assessment are provided to assist you.
- **Check Understanding** assessments evaluate your students' comprehension of each *Focus on Ohio Standards* book. You will find multiple choice, short-answer, and extended response questions that assess literal and interpretive comprehension of each book's content. These assessments are written in the same format as the Ohio Achievement Assessment for Science. They are designed to be used after completing each book.
- **Pretests and Posttests** are provided at each grade level and are written in the same format as the Ohio Achievement Assessment for Science. These assessments evaluate your students' ability to synthesize and apply the content and concepts identified in Ohio's Revised 2010 Content Statements. In addition, students will obtain valuable practice in answering 2-point and 4-point questions similar to those they will encounter on the Ohio Achievement Assessment.
- **Student Assessment Records** are also provided to make it easy to record and monitor student progress. These recording documents are a handy tool to use when tracking Response to Intervention (RTI) progress.

Covers Ohio's English Language Arts Content Standards as Well

- *Focus on Ohio Standards* covers important nonfiction reading skills and strategies required by Ohio's Common Core English Language Arts Standards.
- Each title includes four reproducible activities that introduce and reinforce nonfiction reading skills and strategies.

NONFICTION TEXT FEATURES



Shown here are just a few of the 22 science titles. Go to www.focuscurriculum.com to see all the titles.

CHAPTER 2

Thermal Energy Transfer

Heat moves, or **transfers**, from a warmer object to one that is cooler. For example, if you are outside on a cold day, your body heat is transferred to the colder air. There are three main types of heat transfer—conduction, convection, and radiation.

Conduction

Conduction is the movement of heat through solid objects. Think about a metal frying pan with a metal handle. If you are grilling a cheese sandwich, what happens to the metal handle? The handle should get hot after a while. This is because the heat from the stove heats the bottom of the frying pan and then is transferred up the sides of the pan and into the handle.

transfers: moves from one place to another

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Why does heat move like this? Think about the tiny particles in the pan. As the bottom of the pan heats up, they move faster. They bump into other particles in the sides of the pan, so that they start to move faster, too. Finally this bumping moves all the way into the handle.

What would happen if you put a metal lid on the pan? It would eventually heat up, too.

— Recall —

How does conduction cause heat to transfer from a stove to the handle of a frying pan?

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Students are encouraged to interpret graphic information to build critical thinking skills.

CHAPTER 3

Moons

Rotation of the Planets

The planets orbit, or revolve, around the sun in a nearly circular pattern. All of the planets, except Uranus, also move through space spinning like a top. They rotate around an imaginary **axis**.

Venus, Earth, and most other planets rotate like a top.

Uranus, on the other hand, spins on its side. It rotates like a rolling ball.

Uranus rotates like a rolling ball.

axis: a real or imaginary line about which something turns

12

Moons are other object in the solar system. They orbit around some planets. Earth has one moon that orbits around it. It is about one-fourth the size of Earth.

While Earth is orbiting the sun, the moon is orbiting Earth. It takes about one month for the moon to orbit Earth.

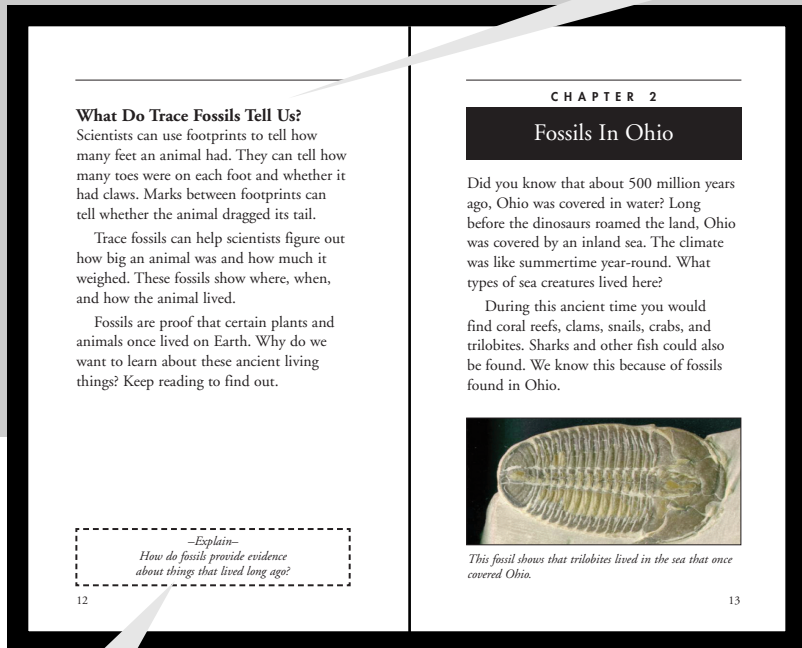
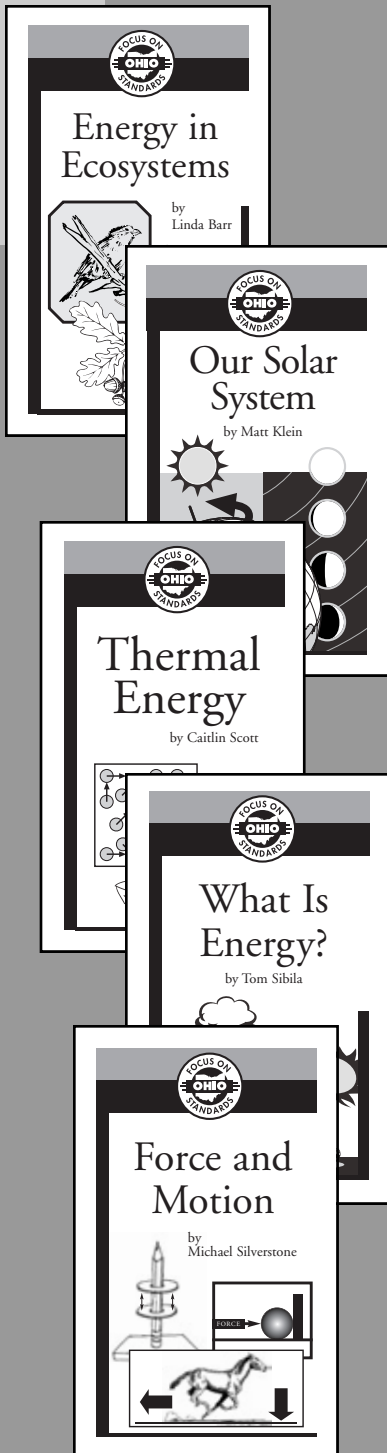
The moon orbits Earth about once a month.

13

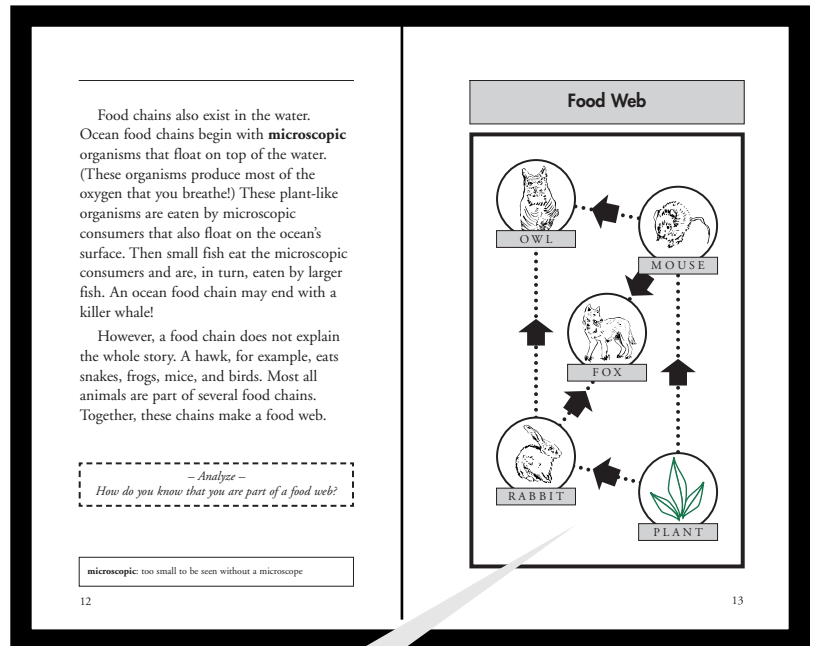
Key vocabulary is highlighted and defined on the page.

NONFICTION TEXT FEATURES

Heads and subheads guide students in predicting and organizing the text.



Active reading prompts reinforce key concepts from Ohio's Content Statements.



Illustrations and diagrams aid students' comprehension and build visual literacy skills.

OHIO'S 2010 SCIENCE CONTENT STATEMENTS MET

GRADE 3		
Earth and Space Science		
Title	Topic	Content Statements
Renewable and Non-renewable Resources	Earth's Resources	Earth's resources can be used for energy. Some of Earth's resources are limited.
What Is Soil?	Earth's Resources	Earth's nonliving resources have specific properties.
Life Science		
Comparing Life Cycles of Animals	Behavior, Growth and Change	Offspring resemble their parents and each other. Plants and animals have life cycles that are part of their adaptations for survival in their natural environments.
Comparing Life Cycles of Plants	Behavior, Growth and Change	Offspring resemble their parents and each other. Plants and animals have life cycles that are part of their adaptations for survival in their natural environments.
How Animals Survive	Behavior, Growth and Change	Offspring resemble their parents and each other. Individuals of the same kind differ in their traits and sometimes the differences give individuals an advantage in surviving and reproducing.
How Plants Survive	Behavior, Growth and Change	Offspring resemble their parents and each other. Individuals of the same kind differ in their traits and sometimes the differences give individuals an advantage in surviving and reproducing.
Structures of Plants	Behavior, Growth and Change	Offspring resemble their parents and each other. Individuals of the same kind differ in their traits and sometimes the differences give individuals an advantage in surviving and reproducing.
Physical Science		
All About Matter	Matter and Forms of Energy	All objects in the natural world are composed of matter. Matter exists in different states, each of which has different properties.
What Is Energy?	Matter and Forms of Energy	Heat, electricity, light, sound and magnetism are forms of energy.

OHIO'S 2010 SCIENCE CONTENT STATEMENTS MET

GRADE 4		
Earth and Space Science		
Title	Topic	Content Statements
Slow Earth-Changing Processes	Earth's Surface	The surface of Earth changes due to weathering. Earth's surface has specific characteristics and landforms that can be identified. The surface of Earth changes due to erosion and deposition.
Slow Earth-Changing Processes	Earth's Surface	The surface of Earth changes due to weathering. Earth's surface has specific characteristics and landforms that can be identified. The surface of Earth changes due to erosion and deposition.
Life Science		
Fossils: Studying Changing Habitats	Earth's Living History	Fossils can be compared to present day organisms according to their similarities and differences. • Changes in an organism's environment are sometimes beneficial to its survival and sometimes harmful.
What Happens When Ecosystems Change?	Earth's Living History	Changes in an organism's environment are sometimes beneficial to its survival and sometimes harmful.
Physical Science		
Physical Changes in Matter	Electricity, Heat, and Mater	The total amount of matter is conserved when it undergoes a change. Heat results when substances burn, when certain kinds of materials rub against each other, and when electricity flows through wires.
Chemical Changes in Matter	Electricity, Heat, and Mater	The total amount of matter is conserved when it undergoes a change. Heat results when substances burn, when certain kinds of materials rub against each other, and when electricity flows through wires.
Electrical Energy	Electricity, Heat, and Mater	Heat results when substances burn, when certain kinds of materials rub against each other, and when electricity flows through wires.
Thermal Energy	Electricity, Heat, and Mater	Heat results when substances burn, when certain kinds of materials rub against each other, and when electricity flows through wires.

OHIO'S 2010 SCIENCE CONTENT STATEMENTS MET

GRADE 5		
Earth and Space Science		
Title	Topic	Content Statements
Our Solar System	Cycles and Patterns in the Solar System	The solar system includes the sun and all celestial bodies that orbit the sun. Each planet in the solar system has unique characteristics.
Life Science		
Energy in Ecosystems	Interconnections within Ecosystems	Organisms perform a variety of roles in an ecosystem. All of the processes that take place within organisms require energy.
Physical Science		
Light Is Energy	Light, Sound and Motion	Light and sound are forms of energy that behave in predictable ways.
Sound Is Energy	Light, Sound and Motion	Light and sound are forms of energy that behave in predictable ways.
Force and Motion	Light, Sound and Motion	The amount of change in movement of an object is based on the weight of the object and the amount of force exerted.



ASSESSMENTS

On-going and Cumulative Assessments Track Each Student's Progress



When you teach with *Focus on Ohio Standards*, you will know exactly which Content Statements have been mastered and which need further instruction. Two forms of assessment are provided to assist you.

Check Understanding assessments evaluate your students' comprehension of each *Focus on Ohio Standards* book. You will find multiple choice, short-answer, and extended response questions that assess literal and interpretive comprehension of each book's content. These assessments are written in the same format as the Ohio Achievement Assessment for Science. They are designed to be used after completing each book.

Pretests and Posttests Pretests for each grade level provide a test experience for students and allow you to better determine how ready your students are for instruction. A summative posttest for each grade level allows you to measure overall progress before your students take the Ohio Achievement Assessment in Science.

Student Assessment Records are also provided to make it easy to record and monitor student progress. These recording documents are a handy tool to use when tracking Response to Intervention (RTI) progress.

COMMON CORE ENGLISH LANGUAGE ARTS ACTIVITIES

Focus on
Ohio Standards
Also Integrates
Ohio's Common
Core English
Language Arts
Standards

Focus on Ohio Standards provides practice in important nonfiction reading skills and strategies required by Ohio's Common Core English Language Arts Standards. Each title is accompanied by four reproducible activities that teach and apply comprehension and vocabulary skills and strategies. You will cover science content AND teach nonfiction reading skills at the same time. Here are just some of the skill activities you'll find:

Analyze Graphic Information

TRY THE SKILL

Graphic information is another way to communicate ideas. Reading graphics can also help you understand and remember what you read.

A diagram is one kind of graphic. It's a clear way to show food chains, food webs, and energy pyramids. You have seen several examples in this book.

Food Web

Energy Pyramid

Energy in Ecosystems OI

Informational Text: Integration of Knowledge and Ideas, 7

Four different English Language arts activities accompany each book.

- Identify Main Ideas and Supporting Details
- Identify Cause and Effect
- Make Inferences from Relevant Information
- Draw Conclusions
- Compare and Contrast
- Classify and Categorize
- Summarize
- Distinguish Fact from Opinion
- Use Context Clues
- Prefixes, Suffixes, and Roots
- Synonyms and Antonyms
- Interpret Graphic Information
- Locate Information Using Table of Contents, Index, and Glossary

COMMON CORE ENGLISH LANGUAGE ARTS ACTIVITIES

Skills and strategies are explained and modeled for students.

Then students apply the skills and strategies using information from the book.

Cause and Effect

TRY THE SKILL

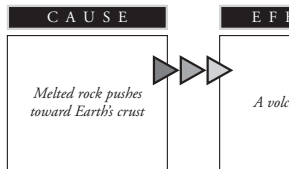
Causes and effects are related. To find an effect, you ask, "What happened?" To find a cause, you ask, "Why did that happen?" Read this passage from the book:

Volcanoes also happen along subduction zones, where one plate moves under another. Look at the diagram on the next page. One plate is moving under another. When this happens, heat is generated. The heat melts some of the rock. If the melted rock is pushed toward the crust, a volcano forms.

Read this passage. Then complete this graphic.

On mountains, snow piles up in layers. There might be ice or even pockets of air between the layers, due to melting and freezing snow. The larger the spaces between the layers, the more likely gravity will make the snow slide.

This graphic explains what happened.



Fast Earth-Changing Processes AL

Make Inferences

TRY THE SKILL

An inference is not stated direct in the text. Instead, it is a logical conclusion you can draw based on facts stated in the text.

Here is a selection from *Thermal Energy*. The graphic organizer shows one inference you might make, as well as the facts that support this inference.

Two kettles are on a stove. One is small. It holds just one cup of water. The other is large and holds four cups of water. Which will take more energy to boil?

The big kettle will take more energy. In fact, it will take about four times more energy, because for every one particle of matter in the little kettle there are four particles in the big kettle.

Inference

Larger amounts of liquid take more energy to boil.

Facts

- The large kettle holds four cups of water.
- The big kettle will take more energy to boil.
- The large kettle will take about four times more energy. For every one particle of matter in the little kettle there are four particles in the big kettle.

Read this passage from *Thermal Energy*.

Here's the tricky question. Which has more thermal energy, a cup of tea or a glacier? Think about the number of particles in the cup of tea, compared to the number in an enormous glacier. The motion of the particles in both the tea and the glacier generate heat.

The particles in the glacier move much more slowly, but there are a lot more particles in the glacier. So, the glacier actually has more thermal energy.

Inference

Facts

Compare and Contrast

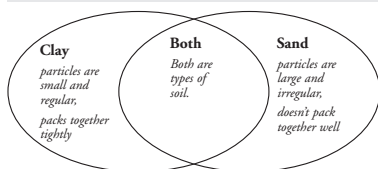
Comparing and contrasting can help you understand what you read.

- Comparing tells how things are alike.
- Contrasting tells how things are different.

Read these paragraphs from *What Is Soil?* Then, read the Venn diagram that compares and contrasts.

The small particles in clay have a regular shape. They can pack together tightly. It is hard for water and air to get through. Once water is in clay, the clay holds it inside.

Sand is also soil. The particles in sand are large. They have an irregular shape. Sand doesn't pack together well. It has a lot of air in it. Water moves through sand quickly.

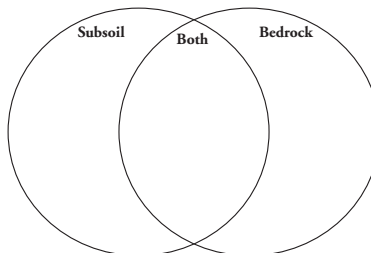


What Is Soil? BL

Read these paragraphs from *Thermal Energy*. Then, read the Venn diagram that compares and contrasts. Then complete the Venn diagram.

The subsoil is beneath the topsoil. This layer has a lot of clay and iron in it. Subsoil is a lighter color than topsoil. It is also harder. Plants don't grow well in this layer.

Bedrock is the bottom layer. Bedrock is mainly rock. The rock might be broken up by weathering. It might also be a large, flat layer of rock. It is very hard. Plant roots don't grow easily in this layer.



Informational Text: Integration of Knowledge and Ideas, 8

Graphic organizers are used to help students organize and synthesize information.

Students are provided many opportunities to reread the text for a variety of purposes.

ACCOMMODATING STUDENTS' NEEDS

Differentiated and Value-Added Instruction

The aim of differentiated and value-added instruction is to maximize each student's growth by meeting each student where he or she is and helping the student to progress. In practice, differentiation involves offering several different learning experiences in response to each student's varied needs. Using *Focus on Ohio Standards*, classroom teachers are able to differentiate with leveled text experiences. The text is differentiated by reading ability; therefore, students are engaged with text at their individual reading level. By offering three levels of text for every title, *Focus on Ohio Standards* provides students with the ability to easily move up or down a level based on current mastery.

Below Level

Below level titles are written approximately one reading level below the intended grade level. The books cover the main ideas and important details suggested by Ohio's Content Statements. Sentences are shorter and easier to read. The concept load is lighter, yet **all important content vocabulary is taught**. A great start for struggling readers as well as ESL and special needs students.

On Level

These versions are written at grade level. The books cover the important Content Statements and provide more details and information related to the main ideas. Sentences are more complex and vocabulary is appropriate to the grade level.

Above Level

Above level books are written approximately one reading level above the intended grade level. The books delve deeper into the content expanding on the main ideas and supporting details. There is more text on each page with richer vocabulary for value-added instruction to help your highest achievers show growth.

ACCOMMODATING STUDENTS' NEEDS

Response to Intervention (RTI)

Response to Intervention aims to prevent unnecessary assignment to special education. With RTI, low-performing children are offered individualized academic intervention. The classroom teacher must provide tier one interventions that are integrally connected to the core programs of the regular classroom.

Focus on Ohio Standards provide core content material that can be used as part of the Response to Intervention Model. The Content Statements are isolated and clearly labeled for each title. When students need more than the traditional text, *Focus on Ohio Standards* books serve as a means of intervention by providing direct reinforcement of specific Ohio standards.

ELL Instruction

The *Focus on Ohio Standards* books address the needs of English Language Learners by providing differentiated reading levels. In addition, students are able to write translations and additional definitions in their personal text. When the research-based strategies are used, language learning is strengthened as they gain background knowledge in science. The content embedded instruction provides opportunities for students to negotiate meaning, use gestures, read facial expressions, hear changes in intonation, and make references to the text while working with classmates.

Home Connection

Focus on Ohio Standards provides an invaluable library for classrooms—and also for homes. A *Focus on Ohio Standards* home library is an inexpensive way to involve parents with the content required of Ohio students. It is easy to partner with parents to help their children increase their content area knowledge.

Each title of *Focus on Ohio Standards* also includes a list of Web sites correlated to the content. These Web sites are great for student stations or independent work in the classroom. They are also a beneficial way to provide a link between school and home. By sending home the list of sites to explore, families can discover and learn together.

TIPS FOR BUILDING YOUR NONFICTION LIBRARY

Consider the Following Suggestions Prior to Making the Books

While it does take some time to create the library, it is well worth the effort. Your instruction will be focused on Ohio's content standards—and you will save a considerable amount of money. Even with the cost of paper, ink, and aide time to compile, the books are less expensive than any other available option.

- Prepare in advance for the process of assembling the books.
- Decide how many books of each title will be needed.
- Decide how many of each level will be needed.
- Determine if the titles will be stored in a central library in the school, or if each teacher will want her or his own classroom set.
- Determine if each student will keep each book to create a home library.
- Decide if you want to create the library at one time, or over the course of the year.
- If you wish to create the books at one time:
 - teams of teachers can be assigned titles so that they can mass produce books to share with colleagues.
 - parents or aides can be easily trained on the assembly process and can make the books for the classrooms.
 - utilize high school honor students needing community project hours to create the books.
- Before printing, be sure your printer functions are set correctly including printing in landscape (horizontal) format.
- A heavy duty stapler (3/8" staples) is required to bind the books together.
- To make the cover more durable and color coded, by subject or grade level, you may want to use heavier paper. (Do not color code by reading level. It is beneficial to have all levels the same color to protect the self-esteem and comfort of all students.)

HOW TO MAKE A STUDENT'S BOOK

- To make one student book, or a two-sided master copy that can be photocopied, you will print on both sides of seven sheets of 8.5" x 11" paper.
- Do a test printout of one book first to familiarize yourself with the procedure.
- Follow these instructions carefully.

First

Since you will be printing on both sides of the sheets of paper, select a good quality white paper. We recommend using at least a 22 lb sheet.

Second

Be sure you have the correct page setup settings for your computer and printer. You will print these pages in landscape format.

Third

Open the PDF of the book you want to print. Select print from your file menu. In your printer's dialogue box enter pages 5–18 to print. Then select EVEN pages only. It is important to print only the EVEN pages first. Click "Print" to print the even pages. (**Important note:** The first page that prints will be blank. DO NOT discard this page. It will be needed to print the cover in the next step.)

Fourth

When the even pages have printed, flip the stack of pages over to print the odd pages. Place the stack back in your printer. Select print from the file menu again. In your printer's dialogue box, enter pages 5–18 to print. Then select ODD pages. Click "Print" to print the odd pages.

Fifth

You now have a complete book. Check to be sure the pages are in the correct order with the book's cover as the top page. Then fold the stack of paper in half.

Sixth

Use an extended-length stapler to staple the pages together. Place the cover facing up and staple two staples in the spine of the book.

Please note:

Printers vary in how they output pages. Do a test printing with one book and adjust the procedure as necessary.

If you want to make a one-sided master copy, print ALL pages 5–18 at once. Then select "one-sided to two-sided" on the copy machine.

NONFICTION READING STRATEGIES

Use These Research-Based Strategies to Ensure Success

Whole Group Instruction

Distribute the books according to your students' reading abilities. If you are not sure of the reading level, it is best to start with the lower level book. Children do not need to know who has Below Level, On Level, or Above Level books. Note that there is a small circle on the back cover with a BL, OL, or AL to indicate reading level.

For large group instruction the text in each book will not be read aloud unless the students are paired with a partner reading the same text. Allow for independent silent reading opportunities. Sharing is encouraged following the assigned section or chapter. The major content will be the same in each book, regardless of the level of the book.

Small Group Instruction

Focus on Ohio Standards makes small group instruction practical and uncomplicated. The leveled text is very helpful. Content teachers can pull small groups of learners together to reinforce content standards. Language arts teachers can use *Focus on Ohio Standards* to teach Ohio's English Language Arts Standard with text that is relevant to the content standards.

Some struggling readers may still experience difficulty with the Below Level texts, especially because important content vocabulary has not been omitted. Do not be discouraged. Even with initial struggles, at-risk readers benefit from *Focus on Ohio Standards*. The books are designed to be visually simple and appealing and are not filled with unnecessary text. By using the vocabulary and nonfiction reading strategies that follow in this Teachers Guide, all readers can successfully comprehend the content.

NONFICTION READING STRATEGIES

Build a Knowledge Base

The information and instruction given to students before they read is known as *front loading*. What you do before and during reading can matter more than what you do after reading.

Focus on Ohio Standards provides you with many key vocabulary terms students will encounter. Print the words on index cards prior to the reading assignment to “front load” the vocabulary. Use the words in real-world sentences and questions. Then have students explain what the words mean.

Next, look at the table of contents, headings, and subheadings and discuss what might occur in the text students are about to read. Use graphic organizers such as KWL charts to tap prior knowledge. Talk about what they know, what they want to know, and then follow up with what they have learned.

Knee-to-Knee Sharing

Knee-to-Knee Sharing is an effective strategy to implement with large groups or small groups. Children retain content when they are given the opportunity to talk about what they have read. By practicing communicating with a partner while facing each other sitting knee-to-knee, the sharing is brief but powerful.

Take a minute from reading to break and share what has been learned. Ask pairs of students to take turns for a 30 second sharing of one of the following:

- Share one fact that they learned.
- Share one interesting word.
- Share a vocabulary word.
- Summarize the page, or short chapter.

Model the appropriate way to share, with proper eye contact and the knee-to-knee position. Remind students that their sharing must be original. They cannot share the same fact. If their partner used the fact or word that they were planning to share, allow them to look back at text to find an original piece of information to share. Have students take turns sharing first. Use a clock and insist that the sharing remain brief. Some students like to have a sticky-note, a sheet of paper, slate board, or dry-erase board to make notes as they read to help with this activity.

NONFICTION READING STRATEGIES

Reciprocal Teaching

Reciprocal teaching refers to an instructional activity that takes place as dialogue between teachers and students regarding segments of text. The dialogue is structured by the use of four strategies: predicting, summarizing, questioning, and clarifying. The teacher and students take turns assuming the role of teacher in leading this dialogue. The *Focus on Ohio Standards* books are a perfect length to use with reciprocal strategies. All four comprehension strategies should be modeled and used with the *Focus on Ohio Standards* books at each reading.

Predicting

- Prior to reading the text, encourage students to skim through the books looking at graphics, headings, and boldfaced vocabulary in order to discuss what the text is likely to be about. Guide incorrect predictions back to the graphics, headings, or vocabulary words. It is essential to get a knowledge base correlated to upcoming content.

Summarizing

- Summarizing text helps students learn to pull the main ideas from the paragraphs or chapters. Sometimes more than one page must be covered in the Below Level books to form a complete idea. Strategies such as “Key Words,” “Significant Point,” and “Hide and Speak” (explained in the next few pages) all help to practice summarizing.

Questioning

- After reading a book, students practice generating questions. Questions can be based on personal inquiry, something they are curious about, or based on general knowledge recall. The activity Quiz Maker, is an easy activity that promotes questioning. Students who can construct questions are able to deconstruct questions on standardized tests. It is important for you to model questioning by thinking aloud. Instruct children to use sticky-notes in the margins and note questions as they read.

Clarifying

- Making sense of a difficult word or passage is known as *clarifying*. Rereading, reading on, and using inferential clues all help students clarify information. To help students who are reluctant to share a personal need to clarify, it helps to ask them to clarify for a younger friend. “If a second grader read this page of the book, what might they need help in understanding?” This allows children to openly discuss, risk-free, the areas that may be misunderstood.

NONFICTION READING STRATEGIES

Vocabulary Wall

Use the words found in the *Focus on Ohio Standards* books as word wall words. Keep them posted as the students work through the books. In addition to the words found in vocabulary boxes at the bottom of each page and in the glossary in each book, note key words for which students needed clarification as they read to add to the word wall.

Hide and Speak

Using the *Focus on Ohio Standards* books and index cards, have students read a section that is approximately the size of the index card. Cover the text with the index card and then share what that text was about without looking back at the text. This activity works best with partners matched to the same reading level. The index cards also serve as a slide for lower level or distractible readers. If index cards are not available, students can cover the text with their hand.

Personal Reaction

Ask students to decide on a stopping point as they read a *Focus on Ohio Standards* book. Instruct students to read silently to their stopping point and share a personal reaction to the text. There is no incorrect response. This is a self-to-text sharing. A personal connection to the nonfiction text increases content retention and understanding.

Quiz Maker

This activity can be directed to the class as a whole with independent writing or partner writing. Using the *Focus on Ohio Standards* books, have students read a passage or read to a decided stopping point. After reading the selected text, instruct students to work alone or with a partner to create two questions about the topic. This activity can be geared towards “stumping the teacher.” The questions can also be used for group games such as Jeopardy® or team tally games. The questions can be saved as test review, or you can select ten of the questions and generate a quiz that has been created by the students. All submitted questions must include an answer and a page number indicating where the answer can be found.

NONFICTION READING STRATEGIES

Significant Points

Using the *Focus on Ohio Standards* books, have students independently read and mark pages or paragraphs that they feel have made a strong point. Use strips of sticky-notes to mark significant points or to extend from the paper's edge to mark significant points in each chapter. These can be points of main events, interest, or confusion. Share all significant points before moving on to the next reading assignment.

Key Words

Have students read a short chunk of text and stop. They then select one word (or two words) that they feel is the most important on that page. Have students jot the word(s) down on a sticky-note. At the end of the chapter, have each student compile the sticky-notes to create a summary based on the key words.

Highlighter Tape

Highlighter tape can be used to highlight significant points or key words. Highlighter tape dispenses like any transparent tape and comes in a variety of colors. It can be peeled off and reused. Students like the tape because it adds a splash of color to their text. Instructions for gentle hands will help ensure that the tape strips may be reused for multiple lessons.

NONFICTION READING STRATEGIES

Sticky-Note Coding

Have each student use sticky-notes which have been cut into strips. Instruct students to stop reading after each paragraph and indicate their personal reaction and level of understanding on a sticky-note. Have students use the following codes:

√ "I already knew this."

* "New information."

! "Wow—interesting!"

? "I don't understand."

As the students code their own individual understanding, circulate around the room and make notes for grouping and lesson planning using student coding as comprehension data. You may also give time at the end of each section for all question mark sections to be discussed.

Chart paper can be posted with the codes: √, *, !, or ? at the top of four separate sheets. All four codes could be available on large charts at the end of the lesson for students to contribute their findings, or just one or two code charts can be generated at one time. If you are asking for question mark selections to be shared, the poster with ? "I don't understand." should be up front in the classroom.

Invite students to write any words that were unclear. If another student had that same area marked, keep a tally beside each recorded selection. You will know immediately if you have to reteach a lesson or provide direct instruction based on the number of students represented on the chart. Providing immediate clarity and allowing group sharing and discussions will strengthen the lesson content.

Bibliography of Research

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