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Science Companion

www.sciencecompanion.com
The Teacher Lesson Manual engages and guides teachers to implement hands-on science lessons with their students. Lesson by lesson, students develop strong process skills and in-depth understanding of specific concepts.

The book brings teachers up to speed for the science content through “Teacher Background Information” and in-context lesson notes. Teachers can feel comfortable with leading the class—whether they have a long history of teaching science or not.

Each Teacher Lesson Manual focuses on a set of Big Ideas for a science topic. Each lesson focuses on a Big Idea. Groups of lessons (called clusters) develop a Big Idea through a series of different experiences and discussions.

Lessons Follow a Consistent Sequence

**Engage** – In this section of a lesson, the teacher introduces the topic. The goal is to briefly generate interest, activate prior knowledge, or link the day’s activities to what has come before.

**Explore** – This is often (but not always) a hands-on exploration conducted in small groups. Students record their work in their Science Notebooks. Collaboration with peers is encouraged. Key materials are provided in the ExploraGear kit.

**Reflect and Discuss** – In this important section, the teacher and students discuss what they observed, share ideas and data, and reflect on the day’s activities. This portion of the lesson brings the class back to the Big Idea.

You’ll find that while the lesson format is very consistent, students explore science content and the process of “doing science” in a large variety of ways.

You’ll also find that students **LOVE the mix of active, hands-on, minds-on science.**
Introduction to the Science Skill Builders

Overview

Beginning with kindergarten, the Science Companion curriculum presents scientific processes and skills that develop as children grow and learn. Skills are introduced in an age-appropriate manner during specific grades, but once introduced they continue to evolve. For example, in early grades observation skills are a primary focus, and these skills are emphasized for the duration of the child’s school experience. Other skills, such as designing and recording experiments, become a central focus in later grades.

Science process skills are embedded throughout the Science Companion curriculum in all modules. In addition to the day to day use and development of skills within the core lessons, each Science Companion module includes Skill Building Activities applicable to explorations within the module. These activities were chosen to support children when prerequisite skills are needed to complete specific science tasks, or to provide extra experience in particular processes.

The Science Skill Builders book is a compilation of the science Skill Building Activities found throughout the Levels 1-6 Science Companion modules. Lessons focus upon the following core science process skills:

• Doing Science
• Using Tools in Science
• Scientific Testing
• Observation Skills
• Analysis and Conclusions

This book enables teachers to have a central location for activities to introduce or reinforce skills as needed. Then as students apply the skills in the context of their other science lessons, they bridge the gap between process skill development and application of those processes within the framework of science.
Recommended Levels for Science Skill Builders

The following table can serve as a guideline for the level of student activities you may expect to find in each lesson.

<table>
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<tr>
<th>Doing Science</th>
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<td>Lesson 0 (Levels 1-3)</td>
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<td>Making Scientific Drawings</td>
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In some cases you may find your students need an introduction or review from another level. For example, the lesson “Measuring Small Things” may be helpful for any age, even though it was aimed at younger children. Likewise, even first and second graders can benefit from portions of the “Reading Science Books” lesson.

The Lessons at a Glance section on pages 14-19 gives a lesson-by-lesson overview.
Observing and Describing

Overview
Children practice making accurate and detailed descriptions before and after observing a familiar object. In doing so, they discover the importance of careful observation and detailed description in science.

Key Notes
- Consider conducting this activity several times over the course of the year to help children develop their observation and description skills. When you repeat the activity, modify the exploration by using materials that emphasize different senses. For example, to highlight hearing, you might have children observe and describe a bouncing ball instead of an apple. An observation of popping popcorn invites the use of all five senses.
- You can teach this skill builder any time you feel your class needs additional practice with observation and description.

A QUICK LOOK

Big Idea
Observation is a powerful tool for learning about something. Detailed and accurate descriptions of your observations help you communicate them to others.

Recommended Levels: 1-6

Process Skills
- Comparing and contrasting
- Describing
- Observing
Standards and Benchmarks

By making detailed observations of an apple, the children develop Physical Science Standard B (Properties of Objects and Materials): “Objects have many observable properties, including size, weight, shape, [and] color …”

They also are exposed to Nature of Science Benchmark 1B (Science as Inquiry): “Describing things as accurately as possible is important in science because it enables people to compare their observations with those of others,” and Physical Setting Benchmark 4D (Structure of Matter): “Objects can be described in terms of their properties. Some properties, such as hardness and flexibility, depend upon what material the object is made of, and some properties, such as size and shape, do not.”

Lesson Goals

1. Learn how to conduct a multi-sensory observation.
2. Compare what is known about something before and after careful observation.
3. Describe observations with accurate and detailed language.
4. Appreciate that observing and describing observations are important science skills.

Assessment Options

Consider using the Observing and Describing checklist or assessment chart to assess the children’s observational skills and their ability to communicate detailed, accurate descriptions. There will be opportunities to revisit the criteria on this assessment as children work through their science activities.

You might also consider having the children assess themselves using the Observing and Describing self-assessment.
Materials

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<th>Item</th>
<th>Quantity</th>
<th>Notes</th>
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<td><strong>ExploraGear</strong></td>
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<tr>
<td>Magnifying lenses</td>
<td>2 or more per group</td>
<td>To observe the apples.</td>
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<td><strong>Classroom Supplies</strong></td>
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<td>Apples (same kind, similar in appearance)</td>
<td>1 per group</td>
<td>To observe and describe.</td>
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<tr>
<td>Chart paper</td>
<td>2 sheets</td>
<td>One each for the pre- and post-observation list of descriptors.</td>
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<td>Colored pencils (optional)</td>
<td>1 set per group</td>
<td>To make observational drawings.</td>
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<tr>
<td>Paper, blank</td>
<td>1 sheet per group</td>
<td>To record observations.</td>
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<tr>
<td>Paper, white (optional)</td>
<td>1 sheet per child</td>
<td>To make observational drawings.</td>
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<tr>
<td>Pencils</td>
<td>1 or more per group</td>
<td>To record observations.</td>
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<tr>
<td>Trays</td>
<td>1 per group</td>
<td>To distribute and store materials.</td>
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<td><strong>Curriculum Items</strong></td>
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<tr>
<td>Checklist: Observing and Describing (optional)</td>
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<tr>
<td>Self-Assessment: Observing and Describing (optional)</td>
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<td>Assessment Chart: Observing and Describing (optional)</td>
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**Preparation**

- Purchase enough apples for each group to have one. Buy apples of the same type that are similar in size and appearance.

- Prepare a tray with the following items for each group:
  - Apple (cut in half just before distributing)
  - Magnifying lenses
  - Sheet of blank paper to record observations
  - Pencils

- Collect two sheets of chart paper.
  - Use one sheet in the introductory discussion to record what children have noticed about apples prior to the observation activity.
  - Use the other sheet during the sharing session to record what children noticed about apples during the observation activity. Leave room at the top of the second sheet for the title. Below that, create and label five rows, one for each sense: sight, hearing, touch, smell, and taste.

- (Optional) To assess each child’s progress in observing and describing, copy the Checklist: Observing and Describing for each child. If you would like the children to assess their own skills, copy Self-Assessment: Observing and Describing for each child.
Vocabulary

describe  To use words to tell about something, such as an observation.

observe  To use your senses to pay close attention to something and notice many details about it.

Teaching the Lesson

Engage

Introductory Discussion

1. Quickly establish children’s familiarity with apples by asking the class the following questions. Don’t dwell on specific answers; the goal of this questioning is to establish that they have had numerous opportunities to observe this very familiar object.
   - Have they ever seen an apple? If so, how often?
   - About how many apples do they estimate they’ve seen in the last week, year, or in their whole lives?
   - Would they say they’ve had a chance to notice quite a bit about apples? (Hopefully, most will say yes.)

2. Without showing the children any apples right now, ask them what they have noticed about apples. Make a list of their responses on a sheet of chart paper. Call on everyone who has something to add, so that the list reflects everything the children have noticed about apples to date.

3. Tell the children that now they will have a chance to carefully observe an apple and see if they notice any additional details about it.
   - Challenge them to try to find as many details as they can, including things they never noticed before.
   - Encourage them to describe what they observe with accurate and detailed descriptors.
Explore

Observing an Apple

1. Ask the class what they think “observe” means and what they think a person needs to do to make good observations. As they share their responses, elicit and emphasize the following points:
   
   • Observation involves attention to detail (sometimes tools, such as magnifying lenses, can help).

   • Observation reflects what is actually there, not what the observer expects or hopes might be there.

   • Observation involves gathering information from multiple senses—not only sight.

   • Observation should involve considering an object from different perspectives (for example, from the top, bottom, and side; and on the inside and outside).

   **SAFETY NOTE:** Be sure to point out that it is not always safe to use all of your senses to observe an object. For example, you wouldn’t want to use touch to observe poison ivy, or smell or taste to observe cleaning fluids that could have chemicals that are dangerous to inhale or eat.

2. Divide the class into small groups and give each small group the tray with the materials you prepared. Cut the apples in half so children can observe both the inside and outside of the apple.

3. Talk about the importance of using accurate and detailed language when describing observations. Use prompts such as the following to emphasize this point:
   
   • Which gives more information: “big” or “enormous,” or “red” or “bright red”?

   • What are some different ways to describe the same characteristic, such as “scratchy” and “rough,” or “damp” and “moist”?

4. Appoint, or have each group choose, one or two children to record the group’s observations.

5. Give the children two or three minutes to silently observe their group’s apple using the following guidelines. Model what you expect by doing the silent observation too.
   
   • They can look at, touch, or smell the apple.

   • They should not taste the apples or pick them up, since that would interfere with the observations of other group members.
6. End the silent observation period and have the children share what they noticed about the apple with the other children in their group. The recorders for each group should write down the observations on their group’s observation sheet. (*Children’s descriptions may include single words, such as “red” or “shiny,” or short phrases or sentences, such as “has tiny brown dots on the outside,” or “slimy on the inside.”)*

7. Give the groups time to make and record additional observations. Circulate and cut off small pieces of each group’s apple so that children can taste it as part of their observation.

**Management Note:** As you circulate, prompt children to investigate everything about the apple, including its shape and form, color, texture, size and weight, smell, and taste. Assist groups that need help working cooperatively, managing the recording, or staying on task.

8. (Optional) Drawing is another important and powerful way to represent observations. Consider having each child do an observational drawing of one of the apple halves they observed. (See the Art Extension on page 208 for more details.)

**Reflect and Discuss**

**Sharing**

**Teacher Note:** Emphasize that all shared information must actually have been observed. Have each group bring their apple to the sharing session to show particularly interesting observations to the class.

1. Show children the other sheet of chart paper you prepared to record and organize each group’s observations. Do the following:
   - Label the top with the name of the type of apple that was observed (for example, “Red Delicious Apples”).
   - Go over each sense with the children, explaining that, with their help, you will record their observations and descriptions in the appropriate row on the table, according to which sense they used to make the observation.

2. Appoint, or have each group choose, one or two members (not the recorders) to share their observations with the class.

3. As children report, write their observations on the chart paper. Ask children to help decide in which row to record each observation. Remind them to only share observations that haven’t already been shared by another group. (They may need help keeping track of what’s been shared, but this is a good listening exercise.)
**Management Note:** Have each group share one or two observations from their list, then rotate to the next group, repeating until all unique observations have been shared. Otherwise, the last group may have very few new observations to add.

**Teacher Note:** You may need to qualify some of the observations that are specific to a particular apple as you record them. For example, if a group describes a particular bruise on their apple, you could write, “Some apples have bruises that feel mushy and soft and look brownish-red.”

4. Once all the groups have shared their observations, invite children to add any other observations they might not have noticed before. Hold up a few of the apples and ask the class to focus on the senses in the rows that have the fewest descriptors.

**Synthesizing**

1. Hang the observation chart next to the list of descriptors the class generated during the introductory discussion. Ask children to compare the two. During the discussion, guide them with the following questions:
   - How much more were they able to notice and learn about the object through careful observation? Why do they think observation is so important in science?
   - Were one or two senses used much more than the others in either list? Why would this be? Would it be different for a different object? Encourage the children to use multiple senses (whenever safe) in making observations in the future.

2. Depending on your class’ proficiency in describing observations, you might want to spend additional time talking about and generating descriptive language. As suggested in the examples above (Explore, #3), you could focus on:
   - Using language to convey details
   - Being accurate when describing things
   - Finding multiple words with similar or identical meanings

3. (Optional) To emphasize the power of detailed observations and descriptions, play the following game:
   - Place all of the apples where children can see them.
   - Read the observations from one group’s observation sheet.
   - Ask the children to guess which apple is the one the group observed.
4. (Optional) Have each student complete the Observing and Describing self-assessment to assess their skill in making accurate and detailed observations and descriptions at this time. Consider having students re-assess themselves in other lessons as they develop their observation and description skills.

Extending the Lesson

Further Science Exploration

Using Comparison to Enhance Observation

Comparing one object to a second object can enhance one’s observation of the first object. You could try the following with your whole class, or with small groups. You can use apples or substitute other objects, such as leaves, books, or shells.

1. Show one apple, and have the children observe and share details they notice about it. Record these observations on a chart or list.

2. Show a different apple, and have the children tell you any differences they notice between the two apples.

3. Take away the second apple and ask the children whether they notice any new details about the first apple. Add any new observations to the chart or list in a second color, to highlight new details.

4. Talk to the children about why they think this method might help people make more observations. Encourage them to try this technique with other objects, and whenever they are making observations.

Mathematics Extension

Encourage children to quantify some of their observations by weighing their apples, or measuring them along one or more dimensions (for example, height or circumference).

Language Arts Extensions

- Direct the children to write a detailed description of their apple. This could accompany an observational drawing of the apple, and both could be included in a class display or class book about observation and description. (See the Art Extension for more suggestions about observational drawings.)

- Children can incorporate some of the language they used to describe their observations into a story, poem, or song about an apple.
Art Extension

Have children make a detailed, observational drawing of the apple. Encourage them to incorporate as many of the details they observed as possible into their drawings. Convey to them that drawing is another important and powerful way (besides words) to show what they have observed. Emphasize that observational drawings are accurate representations of what has actually been observed; they do not include embellished or imagined details, as other drawings legitimately might. Children’s observational drawings can be compiled into a class display or class book about observation and description. (See the first language arts extension for a related suggestion.)

Teacher Notes: Encourage interested children to try drawing the apple from different angles (for example, top view, side view, or cross-section). It is interesting to display drawings of multiple views of the same apple together.

Colored pencils often inspire and enable children to incorporate the most detail and accuracy into their drawings, although using other media, such as crayons or markers, is certainly acceptable.
Science Companion supplies a variety of tools to assess children “in-the-act” of doing science, as well as evaluate their understanding and proficiency as they finish clusters of lessons.

**In the Teacher Lesson Manual:**

Big Ideas and lesson goals are clearly outlined on each lesson’s Quick Look pages.

Assessment Options in each lesson suggest where pre-assessment and formative assessment can occur in the context of a lesson.

**In the Assessment Book:**

**Rubrics** are supplied to score understanding of science content. The criteria in each rubric are derived from a module’s Big Ideas and lesson goals.

**Opportunities Overviews** show where each criteria can be evaluated during pre-assessment, formative assessment and summative assessment.

**Checklists and Self-Assessments** list criteria that are related to science process skills.

**Performance Tasks** are used for summative assessment to evaluate students’ understanding of Big Ideas and lesson goals. The Assessment Book supplies evaluation guidelines and blank masters for each Performance Task.

**Quick Checks**—another summative assessment tool—employ a multiple-choice format.

**The Science Notebook Teacher Guide:**

A final assessment tool is the Science Notebook Teacher Guide. This teacher edition of the Student Science Notebook is annotated to help teachers know what to expect in from children in their Student Science Notebooks.
Checklist: Observing and Describing
Teacher Assessment

Determine whether the following skills are evident as the student makes observations and descriptions. You might assign one point for each criterion that the student demonstrates. You can add specific observations or comments in the space below each criterion.

Criteria:

_______ A. Observations, descriptions and drawings are accurate; they reflect actual properties or events.

_______ B. Observations, descriptions, and drawings incorporate details.

_______ C. Uses multiple perspectives and senses when making observations.
Self-Assessment: Observing and Describing

Think about your observations, descriptions and scientific drawings. Answer the following questions.

1. Do you make careful observations?
   - Always
   - Sometimes
   - Seldom

2. How much detail do you include in your observations, drawings or descriptions?
   - A lot of detail
   - Some detail
   - Very little detail
   Give some examples of when you included details in your observations:

3. Do you use more than one sense when you make observations?
   - Always
   - Sometimes
   - Seldom
   Give some examples of when you used different senses in your observations:
Assessment Chart: Observing and Describing

Consider the children’s abilities to make and communicate observations, and determine whether the following elements are reflected.

**Teacher Note:** Some children are acute observers, but have difficulty communicating what they have observed. Offer multiple avenues for description, including drawings as well as verbal or written descriptions.

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<th>Children’s Names</th>
<th>Assessment Criteria:</th>
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<td></td>
<td>A. Observations and descriptions are accurate; they reflect actual characteristics or events.</td>
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<td>B. Observations and descriptions are detailed.</td>
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<td>C. Uses multiple senses and perspectives when making observations.</td>
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ExploraGear® Items

The ExploraGear® provides all of the hard-to-find, hands-on materials needed to effectively implement a Science Companion module. This kit of non-consumable and consumable items is your go-to place for the tools needed to teach inquiry science. The authors of Science Companion carefully developed the curriculum so that the ExploraGear® items are not overwhelming and unfamiliar, but filled with the most essential, high quality items needed to engage students in a rich, interactive, inquiry science experience.
Science Companion uses the “I Wonder” Circle to help students reflect on how they (and other scientists!) do science.

“I Wonder” Circle®
Doing Science

I Wonder: notice, ask questions, state problems
I Think: consider, gather information, predict
I Try: experiment, model, test ideas, repeat
I Observe: watch, examine, measure
I Record: record data, organize, describe, classify, graph, draw
I Discover: look for patterns, interpret, reflect, conclude, communicate discoveries
For the Teacher

Teaching and Assessment

- Teacher Lesson Manual
- Assessment Book
- Student Notebook Teacher Guide

Great Classroom Support

Reference Materials
- Teacher Reference Materials
- Lesson O

Teacher Masters

Visual Aids
- Transparencies and Posters
- I Wonder Circle® Poster in English & Spanish

What’s in Science Companion?

- I Wonder Circle
- Posters
- Visual Aids
- Transparencies
- Teacher Masters
- Reference Materials
- Student Notebooks

www.sciencecompanion.com
I Discover...

What’s in Science Companion?

For the Student:

- Student Science Notebook
  - English & Spanish

- ExploraGear® Kit

- Student Reference Book
  - (Levels 4-6)

- Trade Books
  - (Levels K-3)

Curriculum now available in print and digital!
Collecting and Examining Life
From collecting animal tracks to dissecting flowers, children deepen their understanding of what makes something alive as well as exploring the similarities and differences among living things.

Rainbows, Color, and Light
Through experiments with prisms, mirrors, bubbles, water, sunlight, and flashlights, children bring rainbow effects into their classroom and onto the playground. They also mix colors to observe that colored light produces different results than mixing pigmented paints, dough, or water.

Solids, Liquids, and Gases
While deciding what makes a solid a solid, watching water disappear from an open cup, or comparing various liquids, children find the value in asking questions and probing the world around them for meaningful answers.

Life Cycles
From watching a pea sprout to feeding apples to butterflies, children closely study four organisms, including humans, to observe the remarkable growth and change that living things experience during their life spans.

Early Science Explorations
From making a collage of the leaves and seeds they find to constructing a lever from rocks and wood, children are introduced to the wonders of science and scientific exploration. Contains 7 studies in one book: Growing and Changing; Class Pet; Collections from Nature; Constructions; Dirt, Sand and Water; Sky and Weather; and My Body.

Weather
One day students learn to use a thermometer to record temperature, another day they measure rainfall or investigate the nature of ice. Throughout the year, students use their senses as well as scientific tools to discover that weather is a dynamic part of nature.

Magnets
From testing what sort of everyday objects are attracted to magnets to comparing the strength of different magnets, children deepen their observation skills while learning about the nature of magnets.

Rocks
One day children examine fossils, another day they might test minerals. As children collect, examine, describe, and experiment with rocks, minerals and fossils, they hone their observation skills and begin to unravel the puzzle of what rocks are and how they are formed.

Soils
From closely observing soil components and their properties to discovering the importance of earthworms, children use their senses of sight, smell, and touch to explore the wonders of soil.
Habitats
From going on a nature walk to dissecting owl pellets, children are asked to think about how organisms (plants, animals, fungi, and microscopic living things) survive in the places they live, and how they interact with other living things.

Physical Science
Electrical Circuits
Whether exploring static charges, figuring out how to get a light bulb to light, or testing the conductivity of everyday objects, students experience firsthand the excitement of electricity and scientific discovery.

Life Science
Nature’s Recyclers
By watching composting worms create soil, to modeling the nutrient cycle, students have the opportunity to investigate the organisms that carry out the process of decomposition and recycle nutrients in an ecosystem.

Earth Science
Earth’s Changing Surface
From building river models that explore erosion and deposition to touring the school grounds looking for evidence of the earth’s changing surface, students use hands-on investigations to discover the dynamic nature of the earth’s surface.

Life Science
Human Body in Motion
By modeling how muscles move bones, testing reflexes, and measuring the effects of exercise on breathing and heart rate, students begin to appreciate the interactions between body parts and recognize the importance of protecting them by making healthy choices.

Physical Science
Force and Motion
By demonstrating and explaining ways that forces cause actions and reactions, as well as gaining a deeper understanding of basic forces such as friction and gravity, students discover the many ways that forces affect the motion of objects around them.

Science Skill Builders
With 21 lessons spanning the breadth and depth of science skills, students develop a core understanding of using tools in science, scientific testing, observation skills, and the importance of analysis and conclusions.

Physical Science
Light
Whether watching light “bend” a pencil in water or building a periscope, the combination of hands-on, multi-sensory learning enables children to understand what light is, how it behaves, and why it makes sight possible.

Earth Science
Our Solar System
One day children chart the moon’s cycles, another day they might make a scale model of our solar system. By observing the world around them, they address questions such as “Why are there seasons?” and “Why does the moon appear to change shape?”

Earth Science
Watery Earth
Whether following a drop of water through the water cycle, measuring their own water usage, or exploring how filters clean dirty water, students are encouraged to use what they learn to have a positive impact on water resources.

Physical Science
Matter
With challenges like exploring what they can learn about an unknown substance called “Whatzit,” students experience the excitement of scientific discovery and gain an appreciation of the scientific method used by professional scientists.

Physical Science
Energy
Whether testing the efficiency of light bulbs, exploring heat conduction, or designing an imaginary invention demonstrating the transfer of energy, students discover that energy is at the root of all change occurring in the world around them.

Technology
Design Projects
The design project series was developed to support compatible modules by allowing students to design and/or build animal homes, tools, machines, and designs of their own creation. Taking between 4-6 sessions, the projects strengthen skills and ideas about choosing materials, using tools, working with the limitations of materials, solving problems, and overall project design.
## Unique Features...

<table>
<thead>
<tr>
<th>Program Features</th>
<th>FOSS</th>
<th>Science Companion</th>
<th>STC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepares students to do inquiry-based science</td>
<td>✓</td>
<td>Lesson O introduces students to the scientific method through the “I Wonder” Circle</td>
<td></td>
</tr>
<tr>
<td>Hardback, colorful, content-rich student reference materials for upper elementary students</td>
<td>✓</td>
<td>Student Reference Books</td>
<td></td>
</tr>
<tr>
<td>Bound student science notebooks to foster student literacy and reading skills</td>
<td>✓</td>
<td>The original Student Science Notebooks</td>
<td></td>
</tr>
<tr>
<td>Parallels in instructional design to <em>Everyday Mathematics</em>®</td>
<td>✓</td>
<td>Developed by the creators of <em>Everyday Mathematics</em>®</td>
<td></td>
</tr>
<tr>
<td>Variety of assessment strategies</td>
<td>✓</td>
<td>Teacher-friendly formative and summative assessment strategies</td>
<td>✓</td>
</tr>
<tr>
<td>A variety of pilot options to fit the interests and needs of districts</td>
<td>✓</td>
<td>Several no-cost pilot options, including an innovative online pilot program</td>
<td></td>
</tr>
<tr>
<td>Correlations to local and state science standards</td>
<td>✓</td>
<td>Correlated to state standards with customized local standard correlations available upon request</td>
<td></td>
</tr>
<tr>
<td>Teacher must gather minimal teacher supplied items</td>
<td>✓</td>
<td>ExploraGear and Supplemental Classroom Supplies available</td>
<td>✓</td>
</tr>
<tr>
<td>Early Childhood activity-based modules available</td>
<td>✓ (K Only)</td>
<td>Modules developed specifically for PreK-K available</td>
<td></td>
</tr>
<tr>
<td>Unique content offered to meet standards</td>
<td>✓</td>
<td>Light and Rainbows, Color, and Light modules available</td>
<td></td>
</tr>
<tr>
<td>Children develop science habits of mind in addition to content knowledge</td>
<td>✓</td>
<td>“I Wonder” Circle integrates modules as tool for student reflection</td>
<td></td>
</tr>
<tr>
<td>Engaging activities nourish children’s curiosity</td>
<td>✓</td>
<td>Engaging, hands-on activities focused on Big Ideas</td>
<td>✓</td>
</tr>
<tr>
<td>Supports teachers in reaching Big Ideas</td>
<td>✓</td>
<td>Reflective Discussions help children integrate their experience and build science knowledge</td>
<td></td>
</tr>
<tr>
<td>Full curriculum available digitally</td>
<td>✓</td>
<td>Hyperlinked teacher materials (iTLM’s) &amp; digital student materials build affordable access</td>
<td></td>
</tr>
</tbody>
</table>

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A New Way to Pilot...

An Innovative Free Online Pilot Program!

We know that both time and financial resources are limited for school districts these days.

So, we are delighted to introduce an exciting new digital opportunity for you to try Science Companion materials at no cost, at a scale that is easily manageable. And it’s high tech, too!

Come to our Online Pilot Website and find:

• Sample lessons from eight of our modules.
• Conversation and support from content and teaching experts.
• Free digital teacher materials and student resources.
• Directions on how to order ‘lending library’ for kit materials.
• A pilot that will give you a rich taste of inquiry science but requires no more than a handful of classroom sessions.

“I think this is an awesome resource for doing science.”

Field Test Teacher

There are a limited number of online pilots available, so contact us now to find out how you can explore Science Companion at your pace, for free.

(And, of course, we have traditional pilots available too. Just ask!)

Science Companion®

www.sciencecompanion.com

888-352-0660

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Succeed with Science Companion

Inquiry-based learning in science is exciting, effective, and evocative. It also can be challenging. We can help you take the mystery out of inquiry!

Philosophy
A half-day session introducing the methodology, pedagogy, and best practices of Science Companion.

Implementation
Building from specific modules your district is using, a hands-on exploration of how to best implement Science Companion in your classrooms.

Assessment and Science
Formative and summative assessment can work together to strengthen teaching and test scores!

Coming from Everyday Math
Science Companion was developed by the same researchers who developed Everyday Mathematics, and many of the same pedagogical tools are used. Making the jump to Science Companion is easy!

Train the Trainers
Build a community of Science Companion experts in your district or intermediate unit.

It’s in the Bag!
Fully customizable workshops to meet your needs. Contact us to learn how we can best help you!

Designed by the University of Chicago’s Center for Elementary Math & Science Education.

Participants
Teachers and administrators in districts using Science Companion.

Length
Mix and Match to your needs to build a half day or full day session.

Continuing Education
CEU’s available, please ask us about we can work with you to arrange credits.

Cost
Ask your rep for more information!

The spirit of inquiry. An invitation to curiosity. The tools for success.