

180 DAYS™

Lessons and Activities

Science for Prekindergarten

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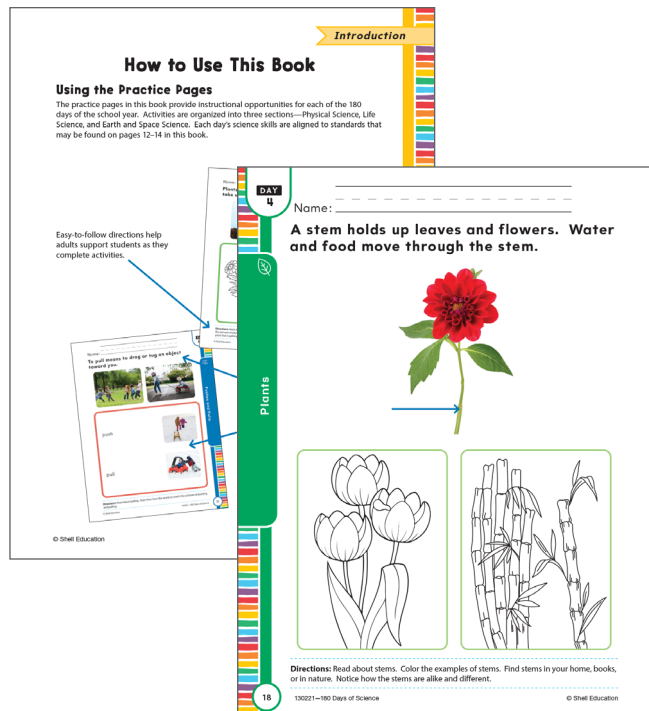
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180 Days of SCIENCE

for Prekindergarten

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |



pull



Earth & Space
Life
Physical

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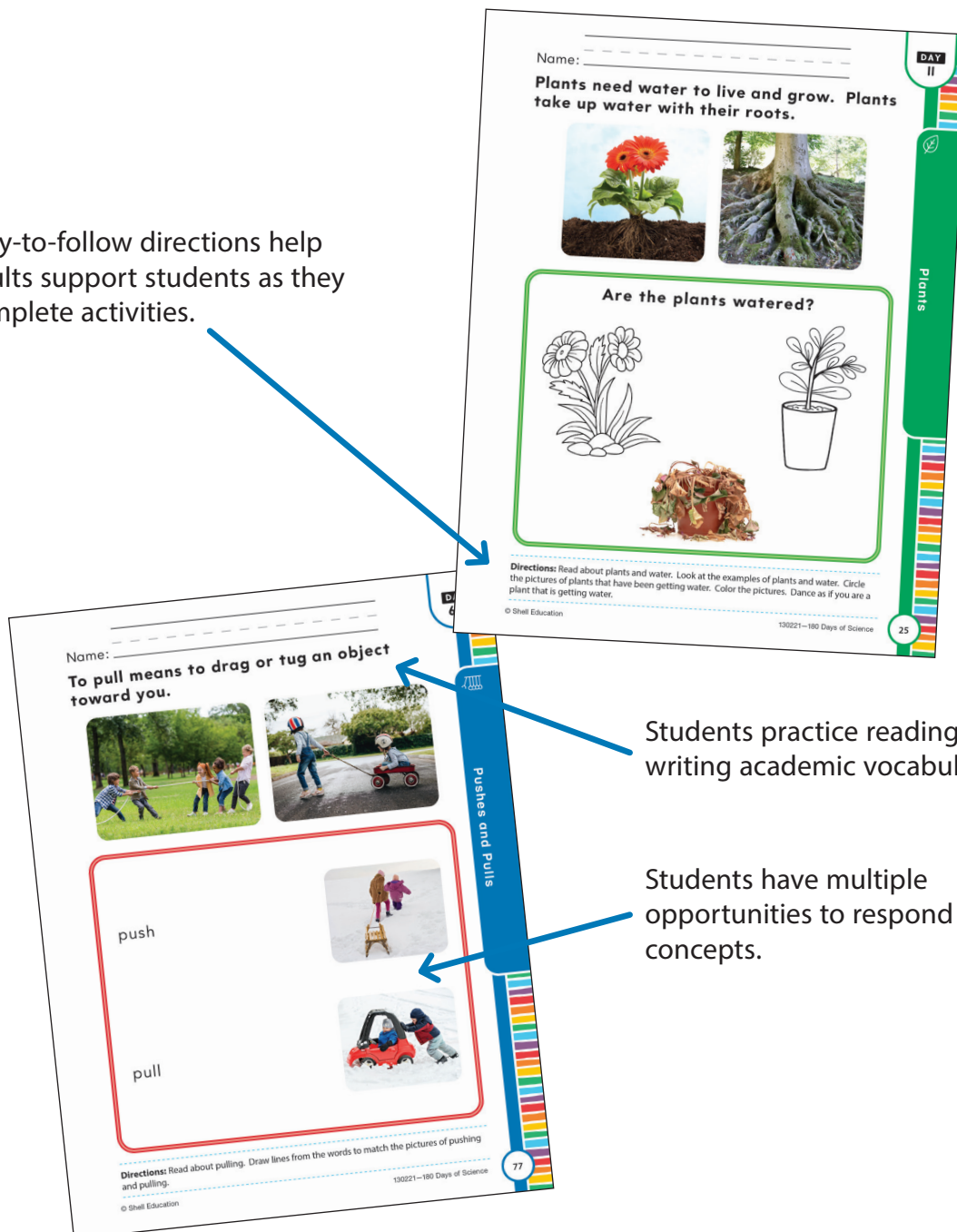
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How to Use This Book

Using the Practice Pages

The practice pages in this book provide instructional opportunities for each of the 180 days of the school year. Activities are organized into three sections—Physical Science, Life Science, and Earth and Space Science. Each day's science skills are aligned to standards that may be found on pages 12–14 in this book.

Easy-to-follow directions help adults support students as they complete activities.



Students practice reading and writing academic vocabulary.

Students have multiple opportunities to respond to new concepts.

Standards Correlations

Shell Education is committed to producing educational materials that are research and standards based. To support this effort, this resource is correlated to the academic standards of all 50 states, the District of Columbia, the Department of Defense Dependent Schools, and the Canadian provinces. A correlation is also provided for key professional educational organizations.

To print a customized correlation report for your state, please visit our website at www.tcmpub.com/administrators/correlations and follow the online directions. If you require assistance in printing correlation reports, please contact the Customer Service Department at 1-800-858-7339.

NGSS Standards and State Themes

The activities in this book are aligned to the following Next Generation Science Standards (NGSS):

| | Science Topic | NGSS and State Standards |
|--------------|-----------------------|---|
| Life Science | Plants | All organisms have external parts. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. Plants need water and light to grow. |
| | Animals | All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water, and air. All animals need food in order to live and grow. They obtain their food from plants or from other animals. Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. |
| | Traits | Develop a model to describe the fact that some young plants and animals are similar to, but not exactly like, their parents. |
| | Living and Nonliving | Plants and animals have basic needs and depend on the living and nonliving things around them for survival. Differentiate between living and nonliving things based upon whether they have basic needs and produce offspring. Sort plants and animals into groups based on physical characteristics such as color, size, body covering, or leaf shape. Identify basic parts of plants and animals. |
| | Life Cycle of a Plant | Observe changes that are part of a simple life cycle of a plant: seed, seedling, plant, flower, and fruit. |

Standards Correlations (cont.)

| | Science Topic | NGSS and State Standards |
|-------------------------|--------------------------------------|---|
| Physical Science | Pushes and Pulls | <p>Plan and conduct an investigation to compare the effects of different strengths or directions of pushes and pulls on the motion of an object.</p> <p>Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull. Pushes and pulls can have different strengths and directions. Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.</p> |
| | Interactions | When objects touch or collide, they push on one another and can change motion. |
| | Energy and Forces | <p>A bigger push or pull makes things speed up or slow down more quickly.</p> <p>A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions.</p> |
| | Sunlight's Effect on Earth | <p>Make observations to determine the effect of sunlight on Earth's surface.</p> <p>Sunlight warms Earth's surface.</p> |
| | Reducing Warming Effect of Sunlight | Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area. |
| Earth and Space Science | Weather and Climate | <p>Weather is the combination of sunlight, wind, snow, or rain, and temperature in a particular region at a particular time. People measure these conditions to describe and record the weather and to notice patterns over time.</p> <p>Use and share observations of local weather conditions to describe patterns over time.</p> |
| | Changing Environments | <p>Plants and animals can change their environment.</p> <p>Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.</p> <p>Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things.</p> |
| | Needs of Plants, Animals, and People | Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. |

Standards Correlations (cont.)

| | Science Topic | NGSS and State Standards |
|-------------------------|-----------------------|---|
| Earth and Space Science | Weather Forecasting | <p>Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.</p> <p>Some kinds of severe weather are more likely than others in a given region. Weather scientists forecast severe weather so that the communities can prepare for and respond to these events.</p> |
| | Reducing Human Impact | <p>Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.</p> <p>Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do.</p> <p>Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things.</p> <p>Asking questions, making observations, and gathering information are helpful in thinking about problems.</p> <p>Designs can be conveyed through sketches, drawings, or physical models. These representations are useful in communicating ideas for a problem's solutions to other people.</p> |

WIDA Standards

In this book, the following English language development standards are met:

- Standard 1: English language learners communicate for social and instructional purposes within the school setting.
- Standard 4: English language learners communicate information, ideas and concepts necessary for academic success in the content area of science.

Name: _____

A seed is the part of a plant that can grow a new plant.



Time to Draw

A large, empty rectangular box with a thick yellow border, designed for a child to draw their own seeds.

Directions: Read about seeds. Find seeds in your home, in books, or in nature. Notice how the seeds are alike and different. Draw different kinds of seeds you find.

Name: _____

A seedling is a young plant grown from a seed.



Time to Draw

I see seedlings.

Directions: Read about seedlings. Find seedlings in your home, in books, or in nature. Notice how the seedlings are alike and different. Draw the seedlings you see. Act out growing from a seed to a seedling.

Name: _____

The roots of plants take in water.



seed



seedling



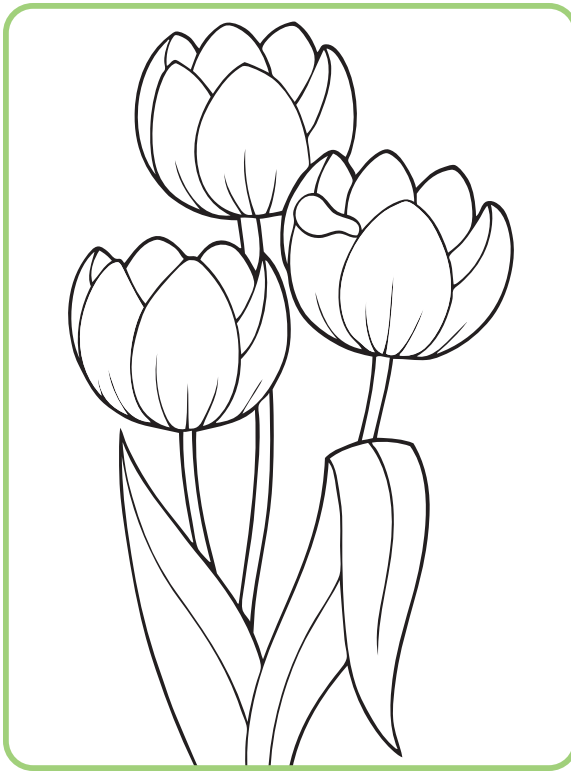
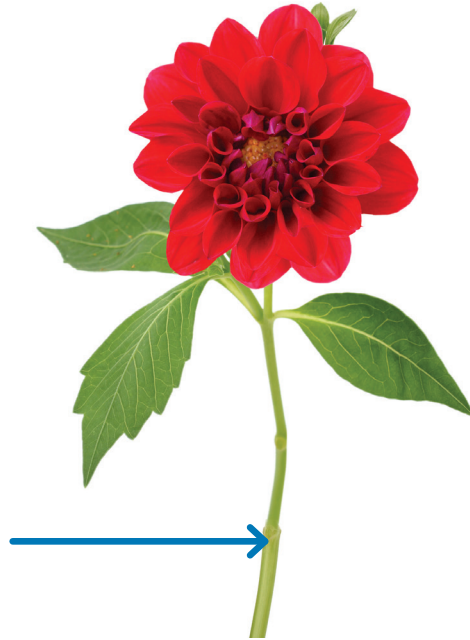
root



Directions: Read about roots. Look at the pictures of a seed, seedling, and root. Draw lines from the words to the matching pictures.

Name: _____

A stem holds up leaves and flowers. Water and food move through the stem.



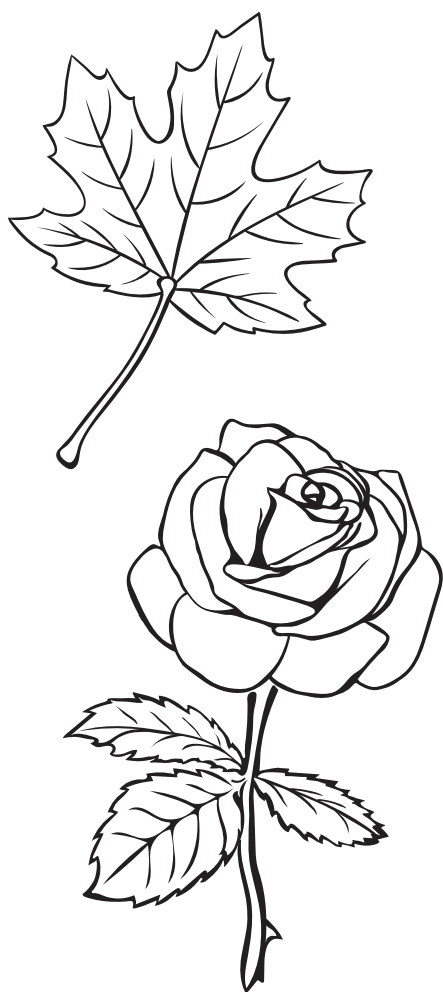
Directions: Read about stems. Color the examples of stems. Find stems in your home, books, or in nature. Notice how the stems are alike and different.

Name: _____

Leaves soak up sunlight. Plants need sunlight to live.



Time to Draw



Directions: Read about leaves. Color the examples of leaves. Draw a different type of leaf.



Plants