

## Wright City Science Curriculum

### 1st Grade

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| <b>Grade</b>                                                       | 1                                                                                                                                                                  |
| <b>Unit of Study</b>                                               | Earth Systems                                                                                                                                                      |
| <b>Length of Unit</b>                                              | 25 Days                                                                                                                                                            |
| <b>Sample Essential Questions</b>                                  | <b>Sample Corresponding Big Ideas</b>                                                                                                                              |
| What patterns can we observe in the sky during the day and night?  | The Sun, Moon, and stars appear in predictable patterns over time. Scientists make and record observations to describe what they notice in the sky.                |
| How can we use models to show and explain patterns in the sky?     | Models help us represent patterns in nature and communicate ideas about how things work. Engineers design and test models to help explain ideas or solve problems. |
| What patterns can we observe in weather over time?                 | Weather changes over time, but scientists can observe patterns in temperature, clouds, wind, and precipitation to describe different types of weather.             |
| How can we use weather observations and tools to make predictions? | Scientists use tools to collect and record weather data. Looking at weather patterns over time helps us describe and make predictions about future weather.        |

| Missouri Learning Standards                                                                                                                                                                                             |                      |
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| Priority Standards                                                                                                                                                                                                      | Supporting Standards |
| 1.ESS1.A.1: Describe the presence of the sun, moon, and stars in the sky over time.                                                                                                                                     |                      |
| 1.ESS1.A.2: Use observations of the sun, moon, and stars to describe patterns that can be predicted.                                                                                                                    |                      |
| 1.ETS1.A.1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. |                      |

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| 1.ETS1.B.1: Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.                                                          |  |
| 1.ETS1.C.1: Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.                                                                     |  |
| 1.ESS1.A.1: Describe the presence of the sun, moon, and stars in the sky over time.                                                                                                                                     |  |
| 1.ESS1.A.2: Use observations of the sun, moon, and stars to describe patterns that can be predicted.                                                                                                                    |  |
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| Unit 1 Sequence |                                |                                                                              |                                                     |
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| MLS             | Topic(s)                       | Learning Targets                                                             | Academic Vocabulary                                 |
| 1.ESS2.D.1      | Weather Patterns               | I can identify patterns in weather over time.                                | Weather, Pattern, Data, Observe                     |
| 1.ESS2.D.1      | Clouds and Weather             | I can observe and describe clouds and how they relate to weather.            | Cloud, Weather, Observe, Pattern                    |
| 1.ESS2.D.1      | Temperature and Precipitation  | I can observe and record temperature and precipitation to describe weather   | Temperature, Precipitation, Rain, Snow, Thermometer |
| 1.ESS1.A.1      | Sun, Moon and Stars            | I can describe what I see in the sky during the day and night.               | Sun, Moon, Stars, Sky, Day, Night                   |
| 1.ESS1.A.2      | Patterns in the Sky            | I can describe patterns I observe in the Sun, Moon, and stars.               | Pattern, Rise, Set, Sky, Observe                    |
| 1.ETS1.A.1      | Asking Questions and Observing | I can ask questions and make observations to identify a problem I can solve. | Question, Observe, Problem, Solution                |

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| 1.ETS1.B.1 | Designing Models      | I can draw or build a model that helps solve a problem.                     | Model, Design, Shape, Function, Solution |
| 1.ETS1.C.1 | Testing and Improving | I can test two models, compare the results, and explain which works better. | Test, Compare, Data, Improve             |

| MLS                      | Learning Activities                                                                                                                                                                                                                                                                                                                                                                    |  |
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| 1.ESS1.A.1               | <p>Day 1</p> <p>What Is the Sky? Lesson: Look outside or show photos of the sky at different times. Ask students what they notice. Introduce the idea that scientists observe the sky to learn about the world around them. Students draw and label things they might see in the sky. Quick check: "What is something you might see in the sky?"</p> <p>Sky photos, paper, crayons</p> |  |
| 1.ESS1.A.1               | <p>Day 2</p> <p>Observing the Sun Lesson: Show photos of the daytime sky. Discuss the Sun and when we see it. Students draw what they notice in the daytime sky. Talk about how we should never look directly at the Sun. Quick check: "When do we usually see the Sun?"</p> <p>Sun/sky photos, paper, crayons</p>                                                                     |  |
| 1.ESS1.A.1               | <p>Day 3</p> <p>Observing the Moon Lesson: Show photos of the Moon at different times. Discuss how the Moon can look different from one night to another. Students draw a Moon they have seen or remember seeing. Partner talk: "What do you notice about the Moon?"</p> <p>Moon photos, paper, crayons</p>                                                                            |  |
| 1.ESS1.A.1               | <p>Day 4</p> <p>Stars in the Sky Lesson: Show daytime and nighttime sky photos. Discuss when we can see stars and why they are easier to see at night. Students create a nighttime sky drawing. Quick check: "When can we usually see stars?"</p> <p>Night sky photos, dark paper, white crayons</p>                                                                                   |  |
| 1.ESS1.A.1<br>1.ESS1.A.2 | <p>Day 5</p> <p>Sky Watchers Lesson: Take students outside to observe the sky. Give them time to quietly look and notice. Students record what they see through pictures and/or words. Compare observations with classmates. Teacher check: Can students identify things they observed in the sky?</p>                                                                                 |  |

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|                          | Paper, pencils/crayons                                                                                                                                                                                                                                                                                                                 |  |
| 1.ESS1.A.1<br>1.ESS1.A.2 | <p>Day 6</p> <p>Day and Night Lesson: Show pictures of daytime and nighttime. Discuss what changes and what stays the same. Students sort pictures into Day and Night. Quick check: "How can you tell it is daytime?"</p> <p>Day/night pictures, two large pieces of paper</p>                                                         |  |
| 1.ESS1.A.1<br>1.ESS1.A.2 | <p>Day 7</p> <p>What Do We See During the Day? Lesson: Review daytime observations. Students sort or draw things they might see during the day, including the Sun, clouds, birds, and airplanes. Discuss that not everything appears every day. Partner talk: "What might you see in the daytime sky?"</p> <p>Picture cards, paper</p> |  |
| 1.ESS1.A.1<br>1.ESS1.A.2 | <p>Day 8</p> <p>What Do We See at Night? Lesson: Explore nighttime skies. Discuss the Moon and stars. Students create a nighttime sky drawing and explain what they included. Quick check: "What might you see in the nighttime sky?"</p> <p>Dark blue/black paper, crayons</p>                                                        |  |
| 1.ESS1.A.2               | <p>Day 9</p> <p>Sky Patterns Over Time Lesson: Compare sky observations from different days. Discuss things that repeat, such as seeing the Sun during the day or stars at night. Students draw a simple repeating sky pattern. Formative check: Student explains one pattern.</p> <p>Observation drawings, chart paper</p>            |  |
| 1.ESS1.A.2               | <p>Day 10</p> <p>Sun, Moon &amp; Stars Sort Lesson: Students sort pictures of the Sun, Moon, and stars based on when they are commonly observed. Discuss that the Moon can sometimes be visible during the day too. Quick check: Students explain one sorting choice.</p> <p>Sun, Moon, and star picture cards</p>                     |  |
| 1.ESS1.A.1<br>1.ESS2.D.1 | <p>Day 11</p> <p>What Is Weather? Lesson: Look outside and describe today's weather. Introduce weather words such as sunny, cloudy, rainy, snowy, and windy. Students act out different kinds of weather. Quick check: "What kind of weather do we have today?"</p> <p>Weather pictures, chart paper</p>                               |  |
| 1.ESS1.A.1               | Day 12                                                                                                                                                                                                                                                                                                                                 |  |

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| 1.ESS2.D.1               | Clouds in the Sky Lesson: Observe different cloud pictures. Discuss how clouds can look different in the sky. Students create their own cloud pictures and describe what they notice. Quick check: "What do you notice about clouds?"<br><br>Cloud photos, blue paper, cotton balls/crayons                                           |  |
| 1.ESS1.A.1<br>1.ESS2.D.1 | Day 13<br>Make a Cloud in a Jar Lesson: Create a simple cloud-in-a-jar demonstration using warm water and ice. Students observe what happens and discuss how the jar becomes cloudy. Emphasize that this is a model that helps us think about clouds. Quick check: "What did you observe?"<br><br>Clear jar, warm water, ice/ice pack |  |
| 1.ESS1.A.2<br>1.ESS2.D.1 | Day 14<br>Weather Watchers Lesson: Students observe the weather outside and record it using a class weather chart. Discuss how scientists collect information over time. Teacher check: Can students correctly identify today's weather?<br><br>Weather chart, observation sheets                                                     |  |
| 1.ESS1.A.2<br>1.ESS2.D.1 | Day 15<br>Weather Patterns Lesson: Review weather observations collected throughout the week. Students look for patterns: more sunny days, cloudy days, rainy days, etc. Create a class graph. Formative assessment: "What weather pattern do you notice?"<br><br>Weather chart, graph paper                                          |  |
| 1.ESS1.A.1               | Day 16<br>The Sun Gives Us Light Lesson: Discuss how the Sun provides light during the day. Compare a brightly lit area with a dark area. Students identify places where they see light. Quick check: "What is one source of light?"<br><br>Flashlights, classroom objects                                                            |  |
| 1.ESS1.A.1               | Day 17<br>What Is a Shadow? Lesson: Demonstrate how a flashlight and object can make a shadow. Students experiment with different objects and identify the shadow they create. Partner talk: "How did the shadow happen?"<br><br>Flashlights, small objects                                                                           |  |
| 1.ESS1.A.2<br>1.ETS1.A.1 | Day 18                                                                                                                                                                                                                                                                                                                                |  |

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|                          | <p>Shadows Change Lesson: Take students outside with a small object, paper, and pencil. Trace its shadow. Return later and trace it again in the same spot. Compare the shadows. Quick check: “What changed about the shadow?”</p> <p>Small objects, paper, pencils</p>                                                                                                    |  |
| 1.ETS1.B.1               | <p>Day 19</p> <p>Changing the Light Lesson: Students experiment with moving a flashlight closer to and farther from an object. Observe how the shadow changes. Students draw their observations. Teacher check: Can students describe what happened when the light moved?</p> <p>Flashlights, small objects, paper</p>                                                     |  |
| 1.ETS1.B.1<br>1.ETS1.A.1 | <p>Day 20</p> <p>Shadow Puppets Lesson: Students create a simple animal or character on a craft stick. They use a flashlight to create a shadow puppet. Discuss how the light allows us to see the shadow. Quick check: “What do we need to make a shadow?”</p> <p>Paper, craft sticks, crayons, flashlights</p>                                                           |  |
| 1.ESS2.D.1               | <p>Day 21</p> <p>Weather and Our Daily Lives Lesson: Show pictures of clothing and activities for different types of weather. Discuss how weather affects what people wear and do. Students draw one example. Think-pair-share: “How does weather change what we do?”</p> <p>Clothing/activity pictures, paper</p>                                                         |  |
| 1.ESS2.D.1               | <p>Day 22</p> <p>How Can We Measure Weather? Lesson: Introduce simple tools scientists use to observe weather, such as thermometers, rain gauges, and wind socks. Students match tools to what they help us observe. Quick check: “What does this tool help us learn?”</p> <p>Weather tool pictures or real tools</p>                                                      |  |
| 1.ETS1.B.1<br>1.ETS1.A.1 | <p>Day 23</p> <p>Build a Weather Tool Lesson: Students design and build a simple tool that could help someone observe weather. For example, students can create a paper wind sock or simple rain gauge. Discuss what problem their tool helps solve. Teacher check: Can students explain what their tool is designed to do?</p> <p>Paper, cups, string, craft supplies</p> |  |
| 1.ESS1.A.2               | <p>Day 24</p>                                                                                                                                                                                                                                                                                                                                                              |  |

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| 1.ESS1.A.1               | Sky & Weather Review Lesson: Rotate through review stations: Day/Night Sort, Sun/Moon/Stars Sort, Weather Sort, Shadow Investigation, and Sky Observation. Students explain their thinking at each station. Formative assessment: Teacher listens for accurate observations and explanations.<br><br>Sort cards, flashlights, sky/weather pictures, recording sheets                             |  |
| 1.ESS1.A.2<br>1.ESS1.A.1 | Day 25<br>I Am a Sky Scientist! Lesson: Students demonstrate what they learned throughout the unit. Give students a choice: draw a sky pattern, explain day/night, describe weather patterns, or explain how shadows work. Students share their work with a partner or the class. Final check: "What is one thing you learned by observing the sky?"<br><br>Paper, crayons/markers, student work |  |

| Assessments              |                                                                                                                                                                                                                                                                                                                                                      |                 |
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| MLS                      | Description or Location                                                                                                                                                                                                                                                                                                                              | Rubric/Location |
| 1.ESS1.A.2<br>1.ESS1.A.1 | Day 25<br>I Am a Sky Scientist! Lesson: Students demonstrate what they learned throughout the unit. Give students a choice: draw a sky pattern, explain day/night, describe weather patterns, or explain how shadows work. Students share their work with a partner or the class. Final check: "What is one thing you learned by observing the sky?" |                 |
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| Additional Resources                                                                                                                                                                                                                                                                                                                                                                            |  |
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| <ul style="list-style-type: none"> <li>Books: <i>What Will the Weather Be?</i> by Lynda DeWitt, <i>Cloud Dance</i> by Thomas Locker, <i>Oh Say Can You Say What's the Weather Today?</i> by Dr. Seuss.</li> <li>Books: <i>The Sun is My Favorite Star</i> by Frank Asch, <i>Papa, Please Get the Moon for Me</i> by Eric Carle, <i>What Makes Day and Night</i> by Franklyn Branley.</li> </ul> |  |
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