

AAAS Science Benchmarks

Grades 3-5

| | Pre/Post Assessment | Making a Sundial | Measuring the Earth's Tilt | How Angle Spreads Sunlight | Making a Homemade | Sunspot Flip Book Journal | Sunspot Numbers | Interplanetary Pool Games |
|---------------------------------------|---------------------|------------------|----------------------------|----------------------------|-------------------|---------------------------|-----------------|---------------------------|
| The Nature of Science | | | | | | | | |
| <i>1A: The Scientific World View</i> | | X | X | X | | | | |
| <i>1B: Scientific Inquiry</i> | | X | X | X | X | X | X | X |
| The Nature of Mathematics | | | | | | | | |
| <i>2A: Patterns and Relationships</i> | | X | X | | | | X | X |
| <i>2C: Mathematical Inquiry</i> | | X | X | | | | X | X |
| The Nature of Technology | | | | | | | | |
| <i>3A: Technology and Science</i> | | X | X | X | X | X | X | X |
| <i>3C: Issues in Technology</i> | | X | | | | | | |
| The Physical Setting | | | | | | | | |
| <i>4A: The Universe</i> | | X | X | X | X | | | |
| <i>4B: The Earth</i> | | X | X | X | | | | |
| <i>4D: Structure of Matter</i> | | | | | | | | X |
| <i>4E: Energy Transformations</i> | | | | X | | | | X |
| <i>4F: Motion</i> | | X | X | X | | | | |

NRC National Science Education Standards

Grades K-4

| | Pre/Post Assessment | Making a Sundial | Measuring the Earth's Tilt | How Angle Spreads Sunlight | Making a Homemade Sunspot Viewer | Sunspot Flip Book Journal | Sunspot Numbers | Interplanetary Pool Games |
|--|---------------------|------------------|----------------------------|----------------------------|----------------------------------|---------------------------|-----------------|---------------------------|
| Content Standard A: Science as Inquiry | | | | | | | | |
| <i>Abilities to do Scientific Inquiry</i> | X | X | X | X | X | X | X | X |
| <i>Understanding about Scientific Inquiry</i> | X | X | X | | | | | |
| Content Standard B: Physical Science | | | | | | | | |
| <i>Properties of Objects and Materials</i> | | | | | X | X | | X |
| <i>Position and Motion of Objects</i> | X | X | X | X | | | | X |
| <i>Light, Heat, Electricity, and Magnetism</i> | | | X | X | | | | |
| Content Standard D: Earth and Space Science | | | | | | | | |
| <i>Objects in the Sky</i> | X | X | X | X | | | | X |
| <i>Changes in the Earth and Sky</i> | X | X | X | X | X | | | X |
| Content Standard E: Science and Technology | | | | | | | | |
| <i>Understandings about Science and Technology</i> | X | X | X | X | X | X | X | X |
| Content Standard G: History and Nature of Science | | | | | | | | |
| <i>Science as a human endeavor</i> | | | | | X | X | X | |

NCTM Principles and Standards for School Mathematics
Grades 3-5

| | Pre/Post Assessment | Making a Sundial | Measuring the Earth's Tilt | How Angle Spreads Sunlight | Making a Homemade Sunspot Viewer | Sunspot Flip Book Journal | Sunspot Numbers | Interplanetary Pool Games |
|-------------------------------|---------------------|------------------|----------------------------|----------------------------|----------------------------------|---------------------------|-----------------|---------------------------|
| Algebra | X | X | | | | | X | X |
| Geometry | X | X | | | | | | |
| Measurement | X | X | X | X | X | | | |
| Problem Solving | | | | | X | | | |
| Data Analysis and Probability | X | X | | | | | X | X |
| Reasoning and Proof | | | | | X | | X | |
| Connections | X | X | | | | | | |