

Ohio State Science Academic Content Standards

GRADE: 2

<i>Standard</i>	<i>Benchmark</i>	<i>Grade Level Indicator</i>
Earth and Space Science	A – Observe constant and changing patterns on objects in the day and night sky.	<p>1. Recognize that there are more stars in the sky than anyone can easily count.</p> <p>2. Observe and describe how the Sun, moon and stars all appear to move slowly across the sky</p> <p>3. Observe and describe how the moon appears a little different every day but looks nearly the same again about every four weeks.</p>
Physical Sciences	B – Recognize that light, sound, and object move in different ways.	3. Explore with flashlights and shadows that light travels in a straight line until it strikes an object.
Scientific Inquiry	A – Ask a testable question.	<p>1. Ask “how can I/we” questions</p> <p>2. Ask “how do you know” questions (not “why” questions) in appropriate situations and attempt to give reasonable answers when others ask questions.</p> <p>3. Explore and pursue student-generated “how” questions.</p>
Scientific Ways of Knowing	C – Recognize that diverse groups of people contribute to our understanding of the natural world.	<p>2. Explain why scientists review and ask questions about the results of other scientists’ work.</p> <p>4. Demonstrate that in science it is helpful to work with a team and share findings with others.</p>

GRADE: 3

<i>Standard</i>	<i>Benchmark</i>	<i>Grade Level Indicator</i>
Science and Technology	A – Describe how technology affects human life.	<p>1. Describe how technology can extend human abilities (e.g., to move things and to extend senses).</p> <p>2. Describe ways using technology can have helpful and/or harmful results</p> <p>3. Investigate ways that the results of technology may affect the individual, family and community.</p>
Scientific Inquiry	A – Use appropriate instruments safely to observe, measure and collect data when conducting a scientific investigation.	1. Select the appropriate tools and use relevant safety procedures to measure and record length and weight in metric and English units.
	B – Organize and evaluate observations, measurements and other data to formulate inferences and conclusions	<p>2. Discuss observations and measurements made by other people.</p> <p>3. Read and interpret simple tables and graphs produced by self/others.</p> <p>5. Record and organize observations (e.g., journals, charts and tables).</p>

Scientific Ways of Knowing	A – Distinguish between fact and opinion and explain how ideas and conclusions change as new knowledge is gained.	1. Differentiate fact from opinion and explain that scientists do not rely on claims or conclusions unless they are backed by observations that can be confirmed.
	D – Explain that men and women or diverse countries and cultures participate in careers in all fields of science.	3. Explore through stories how men and women have contributed to the development of science. 4. Identify various careers in science. 5. Discuss how both men and women find science rewarding as a career and in their everyday lives.

GRADE: 4

<i>Standard</i>	<i>Benchmark</i>	<i>Grade Level Indicator</i>
Science and Technology	B – Describe and illustrate the design process.	3. Describe, illustrate and evaluate the design process used to solve a problem.
Scientific Inquiry	A – Use appropriate instruments safely to observe, measure and collect data when conducting a scientific investigation.	1. Select the appropriate tools and use relevant safety procedures to measure and record length, weight, volume, temperature and area in metric and English units.
	B – Organize and evaluate observations, measurements and other data to formulate inferences and conclusions	2. Analyze a series of events and/or simple daily or seasonal cycles, describe the patterns and infer the next likely occurrence.
	C – Develop, design and safely conduct scientific investigations and communicate the results.	3. Develop, design and conduct safe, simple investigations or experiments to answer questions.
Scientific Ways of Knowing	A – Distinguish between fact and opinion and explain how ideas and conclusions change as new knowledge is gained.	1. Summarize how conclusions and ideas change as new knowledge is gained.
	C – Explain the importance of keeping records of observations and investigations that are accurate and understandable.	2. Record the results and data from an investigation and make a reasonable explanation. 4. Explain why keeping records of observations and investigations is important.