

Iowa and Common Core
Third Grade

Third Grade Mathematics

➤ **Operations & Algebraic Thinking-**

▪ **Multiply and divide within 100. 3.OA.C**

- **3.OA.C.7** Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

➤ **Measurement & Data-**

▪ **Solve problems involving measurement & estimation of intervals of time, liquid volumes, and masses of objects. 3.MD.A**

- **3.MD.A.2** Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).¹ Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.²

▪ **Represent and interpret data. 3.MD.B**

- **3.MD.B.3** Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.
- **3.MD.B.4** Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.

➤ **Geometric measurement: understand concepts of area and relate area to multiplication and to addition.**

- **3.MD.C.5** Recognize area as an attribute of plane figures and understand concepts of area measurement.
- A square with side length 1 unit, called "a unit square," is said to have "one square unit" of area, and can be used to measure area.
- A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.

¹ Excludes compound units such as cm^3 and finding the geometric volume of a container.

² Excludes multiplicative comparison problems (problems involving notions of "times as much"; see Glossary, Table 2).

Mathematics continued...

➤ **Geometry-**

▪ **Reason with shapes and their attributes. 3.G.A**

- **3.G.A.2** Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as $\frac{1}{4}$ of the area of the shape.

Third Grade Science

➤ **Science as Inquiry-**

▪ **S.3-5.SI.1 Identify and generate questions that can be answered through scientific investigations.**

- Students ask questions that they can answer with scientific knowledge combined with their own observations.
- Students recognize that different questions lead to different types of investigations.

▪ **S.3-5.SI.2 Recognize that scientists perform different types of investigations.**

- Types of investigations include describing objects, events, and organisms; classifying them; and doing a fair test (experimenting), depending on the types of questions they want to answer.

▪ **S.3-5.SI.3 Plan and conduct scientific investigations.**

- Students should engage in systematic observation, making accurate measurements, and identifying and controlling variables.
- Students understand the concept of a fair test.
- Students follow appropriate safety procedures when conducting investigations.

▪ **S.3-5.SI.6 Use evidence to develop reasonable explanations.**

- Students' explanations should reflect the evidence they have obtained in their investigations.

▪ **Biological Evolution, Unity & Diversity-**

- **3-LS4-4** Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

▪ **Earth's Systems-**

- **3-ESS2-1** Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.
- **3-ESS2-2** Obtain and combine information to describe climates in different regions of the world.

▪ **Motion & Stability, Forces & Interactions-**

- **3-PS2-1** Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.

Third Grade Social Studies

➤ Behavioral Sciences-

- **SS.3-5.BS.2 Understand the influences on individual and group behavior and group decision-making.**
 - Understand that people involved in a dispute often have different points of view.
 - Understand that communicating different points of view in a dispute can often help people find a satisfactory compromise.
- **SS.3-5.BS.3 Understand how personality and socialization impact the individual.**
 - Understand the rights and responsibilities of the individual in relation to his/her social group.
- **SS.3-5.BS.5 Understand current social issues to determine how the individual formulates opinions and responds to issues.**
 - Understand that the way a person views an issue reflects personal beliefs, experiences, and attitudes.

➤ Economics-

- **SS.3-5.E.5 Understand that advancing technologies impact the global economy.**
 - Understand that technologies have costs and benefits associated with them.

Third Grade English Language Arts

➤ Writing-

- **Text Types and Purposes**
 - **W.3.1.** Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- **Research to Build and Present Knowledge**
 - **W.3.7.** Conduct short research projects that build knowledge about a topic.
 - **W.3.8.** Recall information from experiences or gather information from print and digital sources; take brief notes on sources and sort evidence into provided categories.

➤ Reading

- **Integration of Knowledge & Ideas-**
 - **RI.3.9.** Compare and contrast the most important points and key details presented in two texts on the same topic.

Third Grade 21st Century Skills

➤ **Civic Literacy-**

- **SS.3-5.PSCI.1 Understand the rights and responsibilities of each citizen and demonstrate the value of lifelong civic action.**
 - Understand why civic responsibility is important and know examples of civic responsibility.
 - Understand how people can participate in their government.
 - Understand opportunities for leadership and public service in the student's own classroom, school, community, state, and the nation.
 - Understand the importance of voluntarism as a characteristic of American society.

Lessons with Mathematics Standards

<i>Design & Cook with Solar Ovens</i>	3.MD.C
<i>Energy Mathematics</i>	3.OA.C.7
<i>Flying Bags</i>	3.G.A.2
<i>Fractals & Fractions in Triangles</i>	3.G.A.2
<i>Graphing with Rain Gauges</i>	3.MD.B.3 (also has Science standard)
<i>Math Rocks!</i>	3.MD.B.4
<i>Plants "To Dye For"</i>	3.MD.A.2

Lessons with Science Standards (including Next Generation Standards)

<i>Creative Climates</i>	3-ESS2-2
<i>Edible Aquifer</i>	3-ESS3-1, S.3-5.SI.1, S.3-5.SI.3
<i>Plants Protect Us</i>	S.3-5.SI.2
<i>Power of the Wind</i>	3-PS2-1, S.3-5.SI.3
<i>Student Solutions for Endangered Species</i>	3-LS4-4
<i>To Wiggle or Not to Wiggle</i>	3-LS1-1, S.3-5.SI.3
<i>Water Pollution</i>	S.3-5.SI.3
<i>Graphing with Rain Gauges (Mathematics)</i>	3-ESS2-1
<i>Guilds & Communities, Plants & People (Social Studies)</i>	3-LS2-1

Lessons with Social Studies Standards

<i>Assertion Jar</i>	SS.3-5.BS.2
<i>Conflicting Values</i>	SS.3-5.BS.2
<i>Food Around the World</i>	SS.3-5.BS.5
<i>Guilds & Communities, Plants & People</i>	SS.3-5.BS.2 (also has Science standard)
<i>Rock Sort</i>	SS.3-5.2
<i>The Lorax</i>	SS.3-5.BS.3



Lessons with English Language Arts Standards

<i>Earth Circle of Life</i>	W.3.1
<i>Everybody Needs a Rock</i>	W.3.7, W.3.8
<i>Photo Reflections</i>	W.3.1
<i>Water Cycle Drama</i>	RI.3.9
<i>You Rock!</i>	W.3.1, W.3.7

Lessons with 21st Century Skills Standards

<i>Backward Planning & Action</i>	SS.3-5.PSCI.1
<i>Investigation Bulletin Board</i>	SS.3-5.PSCI.1
<i>Mapping for Ecology</i>	SS.3-5.PSCI.1
<i>Searching for Meaning through Jigsaw Discussions</i>	SS.3-5.PSCI.1
<i>The Giving Trees</i>	SS.3-5.PSCI.1