

---

**Third Grade Science**

**Curriculum Guide**

**Scranton School District**

**Scranton, PA.**



# Scranton School District Curriculum Guide

## **Third Grade Science**

### **Prerequisite :**

- Successful completion of K-2 Science Curriculum

Third grade science establishes strong scientific thinking and problem solving skills necessary for further work in science. This course involves working with inquiry based experiences, constructing explanations, and analyzing/ interpreting data and nonfiction information. Topics presented in this course include but are not necessarily limited to matter, energy/sound, electricity/magnets, motion, rocks/minerals/soil, landforms/erosion/weathering, weather/water cycle, earth/moon, living/nonliving, plants, animals, and ecosystems.

At the culmination of this course, the students will have a solid understanding of third grade science standards and will have a good foundation for fourth grade science.

**Scranton School District  
Curriculum Guide**

**Year-at-a-glance**

<b>Subject: The Nature of Science and Life Science</b>	<b>Grade Level: Third</b>	<b>Quarter 3</b>
--	---------------------------	------------------

Topic	Resources	CCSS
Identify the applications of scientific, environmental, or technological knowledge to possible solutions to problems.	District Approved Text/Resources Books	S.3.A.1.1.1
Apply skills necessary to conduct an experiment or design a solution to solve problems.	District Approved Text/Resources Books	S.3.A.2.1.1, S.3.A.2.1.2, S.3.A.2.1.3
Identify appropriate instruments for a specific task.	District Approved Text/Resources Books	S.3.A.2.2.1
Identify and describe the similarities and differences of living things and their life processes.	District Approved Text/Resources Books	S.3.B.1.1.2, S.3.B.1.1.3, S.3.B.1.1.4,
Identify characteristics that are inherited.	District Approved Text/Resources Books	S.3.B.2.2.1, S.3.B.2.2.2
Identify and describe characteristics of plants that help with their survival.	District Approved Text/Resources Books	S.3.B.2.1.1, S.3.B.2.1.2, S.3.B.2.1.3,

**Scranton School District  
Curriculum Guide**

<b>Subject: Life Science and Earth Science</b>	<b>Grade Level: Third</b>	<b>Quarter 3</b>
--	---------------------------	------------------

Topic	Resources	CCSS
Identify and describe characteristics of animals that help with their survival.	District Approved Text/Resources Books	S.3.B.2.1.1, S.3.B.2.1.2, S.3.B.2.1.3,
Identify and describe living and nonliving things in an ecosystem and their interaction.	District Approved Text/Resources Books	S.3.B.3.1.1,S.3.B.3.1.2
Describe changes in natural or human-made systems and the possible effects of those changes on the environment.	District Approved Text/Resources Books	S.3.B.3.2.1, S.3.B.3.2.2 S.3.B.3.2.3
Identify systems as either natural or human-made.	District Approved Text/Resources Books	S.3.A.3.1.1, S.3.A.3.1.2
Describe various materials that make up the Earth.	District Approved Text/Resources Books	S.3.D.1.1.1, S.3.D.1.1.2
Identify and describe the types of Earth's natural resources.	District Approved Text/Resources Books	S.3.D.1.2.3

**Scranton School District  
Curriculum Guide**

<b>Subject: Earth Science and Physical Science</b>	<b>Grade Level: Third</b>	<b>Quarter 4</b>
--	---------------------------	------------------

Topic	Resources	CCSS
Identify basic weather conditions and how they are measured.	District Approved Text/Resources Books	S.3.D.2.1.1, S.3.D.2.1.2, S.3.D.2.1.3
Describe Earth's position and relationship to the sun and moon.	District Approved Text/Resources Books	S.3.D.3.1.1, S.3.D.3.1.2
Use models to illustrate simple concepts.	District Approved Text/Resources Books	S.3.A.3.2.1
Identify and describe objects as magnetic or nonmagnetic and conductors or insulators of electricity.	District Approved Text/Resources Books	3.2.3.B4
Observe and identify changes in an object's motion.	District Approved Text/Resources Books	S.3.C.3.1.1, S.3.C.3.1.2

**Scranton School District  
Curriculum Guide**

General Topic	Academic Standard(s)	Essential Knowledge, Skills & Vocabulary	Resources & Activities	Assessments	Suggested Time
Identify the applications of scientific, environmental, or technological knowledge to possible solutions to problems.	S.3.A.1.1.1	<ul style="list-style-type: none"> <li>● Fact and opinion</li> </ul>	District Approved Text/Resource Books  *additional resources listed on final page	Teacher observation	Ongoing Unifying Theme
Apply skills necessary to conduct an experiment or design a solution to solve a problem.	S.3.A.2.1.1 S.3.A.2.1.2 S.3.A.2.1.3	<ul style="list-style-type: none"> <li>● Generate questions</li> <li>● Make predictions</li> <li>● Identify variables</li> </ul>	District Approved Text/Resource Books  *additional resources listed on final page	Teacher observation	Ongoing Unifying Theme
Identify systems as either natural or human-made.	S.3.A.3.1.1 S.3.A.3.1.2	<ul style="list-style-type: none"> <li>● Classify systems</li> <li>● Human made</li> <li>● Naturally made</li> </ul>	District Approved Text/Resource Books  *additional resources listed on final page	Teacher observation	Ongoing Unifying Theme
Introduction  <ul style="list-style-type: none"> <li>● Identify appropriate instruments for a specific task.</li> </ul>	S.3.A.2.2.1	<ul style="list-style-type: none"> <li>● Tools (rulers, scales, hand lens, etc.)</li> <li>● Scientific inquiry</li> </ul>	District Approved Text/Resources Books	Teachers prepared tests, quizzes, etc.  Series available assessments. (Optional)	5 days

## Scranton School District Curriculum Guide

<p>Life Science</p> <ul style="list-style-type: none"> <li>• Living and Nonliving things</li> </ul>	<p>S.3.B.1.1.2 S.3.B.1.1.3 S.3.B.1.1.4 S.3.B.2.2.1 S.3.B.2.2.2</p>	<ul style="list-style-type: none"> <li>• Compare and contrast living things</li> <li>• Describe basic needs of living things (water, food, light, air, shelter)</li> <li>• Life cycles</li> <li>• Physical characteristics passed to offspring</li> <li>• Parents and offspring have similar characteristics (heredity)</li> </ul>	<p>District Approved Text/Resource Books</p>          <p>*additional resources listed on final page</p>	<p>Teacher prepared tests, quizzes, etc.</p>  <p>Series available assessments. (Optional)</p>	<p>6 days</p>
---	--	--	---	---	---------------

**Scranton School District  
Curriculum Guide**

<p>Life Science</p> <ul style="list-style-type: none"> <li>● Plants</li> </ul>	<p>S.3.B.1.1.1 S.3.B.1.1.2 S.3.B.1.1.3 S.3.B.2.1.1 S.3.B.2.1.2</p>	<ul style="list-style-type: none"> <li>● Identify functions and basic structures of plants (roots, stems, leaves)</li> <li>● Classify types of plants</li> <li>● Describe basic needs of plants</li> <li>● Identify plant adaptations for survival</li> <li>● Identify necessary survival characteristics</li> </ul>	<p>District Approved Text/Resource Books</p>     <p>*additional resources listed on final page</p>	<p>Teacher prepared tests, quizzes, etc.</p>  <p>Series available assessments. (Optional)</p>	<p>6 days</p>
<p>Life Science</p> <ul style="list-style-type: none"> <li>● Animals</li> </ul>	<p>S.3.B.1.1.1 S.3.B.1.1.2 S.3.B.1.1.3 S.3.B.2.1.1 S.3.B.2.1.2</p>	<ul style="list-style-type: none"> <li>● Identify functions and basic structures of animals (skeleton, heart, lungs)</li> <li>● Classify types of animals</li> <li>● Describe basic needs of animals</li> <li>● Identify animal adaptations for survival</li> </ul>	<p>District Approved Text/Resource Books</p>     <p>*additional resources listed on final page</p>	<p>Teacher prepared tests, quizzes, etc.</p>  <p>Series available assessments. (Optional)</p>	<p>6 days</p>



**Scranton School District  
Curriculum Guide**

		<ul style="list-style-type: none"> <li>● Identify necessary survival characteristics</li> </ul>			
<p><b>Life Science</b></p> <ul style="list-style-type: none"> <li>● <b>Ecosystems</b></li> </ul>	<p>S.3.B.3.1.1 S.3.B.3.1.2 S.3.B.3.2.1 S.3.B.3.2.2 S.3.B.3.2.3</p>	<ul style="list-style-type: none"> <li>● Identify living/nonliving components of an ecosystem</li> <li>● Describe interactions between living/nonliving in an ecosystem</li> <li>● Describe what happens to animal’s habitats when they’re changed</li> <li>● Describe environmental changes to ecosystems (fire, flood, etc.)</li> <li>● Describe the impact humans have on ecosystems (road construction, pollution, urban development, dam building)</li> </ul>	<p><b>District Approved Text/Resource Books</b></p>          <p><b>*additional resources listed on final page</b></p>	<p><b>Teacher prepared tests, quizzes, etc.</b></p> <p><b>Series available assessments. (Optional)</b></p>	<p><b>6 days</b></p>

**Scranton School District  
Curriculum Guide**

<p><b>Earth Science</b></p> <ul style="list-style-type: none"> <li>Rocks, Minerals, Soil</li> </ul>	<p>S.3.D.1.1.1 S.3.D.1.1.2</p>	<ul style="list-style-type: none"> <li>Recognize composition of rocks (minerals)</li> <li>Describe composition of soil (made of weathered rock and decomposed organic materials)</li> </ul>	<p>District Approved Text/Resource Books</p> <p>*additional resources listed on final page</p>	<p>Teacher prepared tests, quizzes, etc.</p> <p>Series available assessments. (Optional)</p>	<p>5 days</p>
<p><b>Earth Science</b></p> <ul style="list-style-type: none"> <li>Landforms, Erosion, Weathering</li> </ul>	<p>S.3.A.3.2.1 S.3.D.1.3.1 S.3.D.1.3.2 S.3.D.1.3.3</p>	<ul style="list-style-type: none"> <li>Identify model representations (maps of landforms and dioramas)</li> <li>Changes of Earth's surface (wind, water erosion, contraction/expansion of surfaces)</li> <li>Tear down/build up of Earth's surface (erosion, weathering, volcanic activity, earthquakes)</li> <li>Distinguish between slow and fast</li> </ul>	<p>District Approved Text/Resource Books</p> <p>*additional resources listed on final page</p>	<p>Teacher prepared tests, quizzes, etc.</p> <p>Series available assessments. (Optional)</p>	<p>6 days</p>

**Scranton School District  
Curriculum Guide**

		changes to Earth's surface			
<b>Earth Science</b> <ul style="list-style-type: none"><li>● <b>Conserving Resources</b></li></ul>	<b>S3.D.1.2</b> <b>S3.D.1.2</b> <b>S3.D.1.2.2  </b> <b>S3.D.1.2.3</b>	<ul style="list-style-type: none"><li>● <b>Identify and describe the types of Earth's natural resources.</b></li><li>● <b>Describe why certain resources are renewable and other resources are nonrenewable.</b></li><li>● <b>Identify and describe examples of renewable and nonrenewable resources.</b></li><li>● <b>Describe the ways living things benefit from the uses of water resources.</b></li></ul>	<b>District Approved Text/Resource Books</b>        <b>*additional resources listed on final page</b>	<b>Teacher prepared tests, quizzes, etc.</b>  <b>Series available assessments. (Optional)</b>	<b>5 days</b>

**Scranton School District  
Curriculum Guide**

<p><b>Earth Science</b></p> <ul style="list-style-type: none"> <li>Weather, Water Cycle</li> </ul>	<p>S.3.D.2.1.1 S.3.D.2.1.2 S.3.D.2.1.3 S.3.D.1.2.3 S.3.C.1.1.4</p>	<ul style="list-style-type: none"> <li>Characteristics of clouds</li> <li>Measuring weather variables (wind speed, temperature, precipitation)</li> <li>Weather instruments (thermometer, weather vane, etc.)</li> <li>Water phases (evaporation, condensation, freezing/melting)</li> </ul>	<p>District Approved Text/Resource Books</p> <p>*additional resources listed on final page</p>	<p>Teacher prepared tests, quizzes, etc.</p> <p>Series available assessments. (Optional)</p>	<p>7 days</p>
<p><b>Earth Science</b></p> <ul style="list-style-type: none"> <li>Earth and Moon</li> </ul>	<p>S.3.D.3.1.1 S.3.D.3.1.2</p>	<ul style="list-style-type: none"> <li>Earth's rotation</li> <li>Moon phases</li> </ul>	<p>District Approved Text/Resource Books</p> <p>*additional resources listed on final page</p>	<p>Teacher prepared tests, quizzes, etc.</p> <p>Series available assessments. (Optional)</p>	<p>7 days</p>

**Scranton School District  
Curriculum Guide**

<p><b>Physical Science</b></p> <ul style="list-style-type: none"> <li>• Properties of Matter</li> </ul>	<p>S.3.C.1.1.1 S.3.C.1.1.2 S.3.C.1.1.3 S.3.C.1.1.4 S.3.C.1.1.5</p>	<ul style="list-style-type: none"> <li>• Describe matter by physical properties (weight, mass, shape, size, color, texture, state)</li> <li>• Classify matter by physical properties</li> <li>• Solid/Liquid/gas</li> <li>• Water Phases (evaporation, condensation, freezing/melting)</li> <li>• Changes of matter (heating, cooling, physical weathering)</li> </ul>	<p>District Approved Text/Resource Books</p> <p>*additional resources listed on final page</p>	<p>Teacher prepared tests, quizzes, etc.</p> <p>Series available assessments. (Optional)</p>	<p>7 days</p>
<p><b>Physical Science</b></p> <ul style="list-style-type: none"> <li>• Energy &amp; Sound</li> </ul>	<p>S.3.C.2.1.1 S.3.C.2.1.2 S.3.C.2.1.3</p>	<ul style="list-style-type: none"> <li>• Sources of energy (sun, heat, light, sound)</li> <li>• Transformations of energy (eating food to get energy, creating heat, etc.)</li> <li>• Characteristics of sounds (pitch and loudness)</li> </ul>	<p>District Approved Text/Resource Books</p> <p>*additional resources listed on final page</p>	<p>Teacher prepared tests, quizzes, etc.</p> <p>Series available assessments. (Optional)</p>	<p>7 days</p>

**Scranton School District  
Curriculum Guide**

<p><b>Physical Science</b></p> <ul style="list-style-type: none"> <li>• Electricity and Magnets</li> </ul>	<p><b>S.3.B.4 2.3.</b></p>	<ul style="list-style-type: none"> <li>• Identify and classify conductors and insulators of electricity</li> <li>• Identify and classify objects as magnetic or nonmagnetic</li> </ul>	<p><b>District Approved Text/Resource Books</b></p> <p>*additional resources listed on final page</p>	<p><b>Teacher prepared tests, quizzes, etc.</b></p> <p>Series available assessments. (Optional)</p>	<p><b>6 days</b></p>
<p><b>Physical Science</b></p> <ul style="list-style-type: none"> <li>• Motion</li> </ul>	<p><b>S.3.C.3.1.1 S.3.C.3.1.2</b></p>	<ul style="list-style-type: none"> <li>• Describe object's motion (start/stop, up/down, left/right, faster/slower, spinning)</li> <li>• Describe an object's position (above, below, behind, etc.)</li> </ul>	<p><b>District Approved Text/Resource Books</b></p> <p>*additional resources listed on final page</p>	<p><b>Teacher prepared tests, quizzes, etc.</b></p> <p>Series available assessments. (Optional)</p> <p>End of 4<sup>th</sup> Quarter</p>	<p><b>5 days</b></p>

## Scranton School District Curriculum Guide

### Resources:

<http://www.pdesas.org/default.aspx> (PDE SAS website, standards and resources)

<http://www.nextgenscience.org/resources> (next generation science standards)

<http://www.sciencekids.co.nz/videos/physics.html> (videos, experiments)

<http://www.wonderville.ca/> (experiments, videos, games)

<http://www.watchknowlearn.org> (videos)

<http://www.teachertube.com> (educational videos)

<http://technologyrocksseriously.com> (science and other subjects, videos, worksheets etc)

<http://kids.nationalgeographic.com/> (interactive games, videos etc)

<http://www.lauracandler.com/filecabinet/science.php> (free printables)

<http://www.pplelectric.com/thinkenergy> (Think! Energy, renewable/nonrenewable resources)

<https://mysteryscience.com/> (Hands on NGSS-aligned, hands on activities and lessons)

<https://www.generationgenius.com/> - free trial 30/60 days

<https://www.pdesas.org/standard/view/> (eligible content)

3<sup>rd</sup> Grade Science Curriculum  
 Quick Reference Sheet  
 Harcourt HSP Science Text

<b>Quarter 3</b>						
	<b><u>Category</u></b>	<b><u>Topic</u></b>	<b><u>Chapters</u></b>	<b><u>Suggested Time</u></b>		
1	Introduction	Tools, inquiry	Intro chapter Lessons 1-3	5 days		
2	Life Science	Living things: Living vs. Nonliving, parts of a cell, heredity etc.	Chapter 1 Lessons 1-2	6 days		
3	Life Science	Living things: plants	Chapter 2 Lessons 1-3	6 days		
4	Life Science	Living Things: animals	Chapter 3 Lessons 1-3	6 days		
5	Life Science	Ecosystems	Chapter 4 Lessons 1-4	6 days		
6	Earth Science	Rocks, minerals, soil	Chapter 6 Lessons 1-3	5 days		
7	Earth Science	Landforms, Erosion, Weathering	Chapter 7 Lessons 1-3	6 days		
8	Earth Science	Conserving Resources	Chapter 8 Lesson 1-4	5 days		



3<sup>rd</sup> Grade Science Curriculum  
 Quick Reference Sheet  
 Harcourt HSP Science Text

<b>Quarter 4</b>					
9	Earth Science	Clouds, water, weather	Chapter 9 Lessons 1-3	7 days	
10	Earth Science	Earth and Moon	Chapter 10 Lessons 1-3	7 days	
11	Physical Science	Properties of matter	Chapter 11 Lessons 1-3	7 days	
12	Physical Science	Energy/Sound	Chapter 12 Lessons 1-2 Chapter 14 Lesson 4	7 days	
13	Physical Science	Electricity and Magnets	Chapter 13 Lessons 1-3	6 days	
14	Physical Science	Motion/Object Position	Chapter 15 Lesson 1	5 days	

- Science will be taught ALL of Quarters 3 and 4
- For quick hands-on experiments, use the “Insta Labs” from the text book and Project Based Assignments from the choice board.
- Use inquiry based methods as primary source for instruction, use textbook as a supplemental resource
- Use choice board for ideas to complete hands on experiments
- Social Studies is taught Quarter 1 and Quarter 2 (topics to cover in Social Studies: landforms & natural/renewable/nonrenewable resources)