
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 both 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 the third grade science standards and will have a strong foundation enabling the students to be successful in fourth grade science.

**Scranton School District
Curriculum Guide**

Year-at-a-glance

Subject: Third Grade Science	Grade Level: Third Grade	Date Completed: 6/15/15
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1st Quarter

Topic	Resources	Academic Standards
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 problem.	District Approved Text/Resources Books	S.3.A.2.1.1 S.3.A.2.1.2 S.3.A.2.1.3
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
Identify appropriate instruments for a specific task.	District Approved Text/Resources Books	S.3.A.2.2.1
Describe the observable physical properties of matter.	District Approved Text/Resources Books	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
Recognize basic energy types and sources and how energy can be changed from one form to another.	District Approved Text/Resources Books	S.3.C.2.1.1 S.3.C.2.1.2 S.3.C.2.1.3
Identify and describe objects as magnetic or nonmagnetic and conductors or insulators of electricity.	District Approved Text/Resources Books	3.2.3.B4

**Scranton School District
Curriculum Guide**

Subject: Third Grade Science	Grade Level: Third	Date Completed: 6/15/15
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2nd Quarter

Topic	Resources	Academic Standards
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
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
Use models to illustrate simple concepts.	District Approved Text/Resources Books	S.3.A.3.2.1
Identify and describe the ways that cause the Earth's surface to be in a state of constant change.	District Approved Text/Resources Books	S.3.D.1.3.1, S.3.D.1.3.2, S.3.D.1.3.3
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
Identify and describe the types of natural resources found on Earth.	District Approved Text/Resources Books	S.3.D.1.2.3

**Scranton School District
Curriculum Guide**

Subject: Third Grade Science	Grade Level: Third	Date Completed: 6/15/15
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3rd Quarter

Topic	Resources	Academic Standards
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
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

**Scranton School District
Curriculum Guide**

Subject: Third Grade Science	Grade Level: Third	Date Completed: 6/15/15
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4th Quarter

Topic	Resources	Academic Standards
Identify and describe the similarities and differences of living things and their life processes.	District Approved Text/Resources Books	S.3.B.1.1.1, S.3.B.1.1.2, S.3.B.1.1.3, S.3.B.1.1.4,
Identify and describe characteristics of plants and 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

**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"> • Fact and opinion 	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 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"> • Generate questions • Make predictions • Identify variables 	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"> • Classify systems • Human made • Naturally made 	District Approved Text/Resource Books *additional resources listed on final page	Teacher observation	Ongoing Unifying Theme
Introduction	S.3.A.2.2.1	<ul style="list-style-type: none"> • Tools (rulers, scales, hand lens, etc.) • Scientific inquiry 	District Approved Text/Resource Books *additional resources listed on final page	Teacher prepared tests, quizzes, etc. Series available assessments. (Optional)	3 days

**Scranton School District
Curriculum Guide**

Physical Science <ul style="list-style-type: none"> • Electricity and Magnets 	3.2.3.B4	<ul style="list-style-type: none"> • Identify and classify conductors and insulators of electricity • Identify and classify objects as magnetic or nonmagnetic 	District Approved Text/Resource Books *additional resources listed on final page	Teacher prepared tests, quizzes, etc. Series available assessments. (Optional)	5 days End of Quarter 1
Physical Science <ul style="list-style-type: none"> • Motion 	S.3.C.3.1.1 S.3.C.3.1.2	<ul style="list-style-type: none"> • Describe object's motion (start/stop, up/down, left/right, faster/slower, spinning) • Describe an object's position (above, below, behind, etc.) 	District Approved Text/Resource Books *additional resources listed on final page	Teacher prepared tests, quizzes, etc. Series available assessments. (Optional)	3 days
Earth Science <ul style="list-style-type: none"> • Rocks, Minerals, Soil 	S.3.D.1.1.1 S.3.D.1.1.2	<ul style="list-style-type: none"> • Recognize composition of rocks (minerals) • Describe composition of soil (made of weathered rock and decomposed organic materials) 	District Approved Text/Resource Books *additional resources listed on final page	Teacher prepared tests, quizzes, etc. Series available assessments. (Optional)	6 days

**Scranton School District
Curriculum Guide**

<p>Earth Science</p> <ul style="list-style-type: none"> • Landforms, Erosion, Weathering 	<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"> • Identify model representations (maps of landforms and dioramas) • Changes of Earth’s surface (wind, water erosion, contraction/expansion of surfaces) • Tear down/buildup of Earth’s surface (erosion, weathering, volcanic activity, earthquakes) • Distinguish between slow and fast changes to Earth’s surface 	<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>
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**Scranton School District
Curriculum Guide**

<p>Earth Science</p> <ul style="list-style-type: none"> Weather, Water Cycle 	<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"> Characteristics of clouds Measuring weather variables (wind speed, temperature, precipitation) Weather instruments (thermometer, weather vane, etc.) Water phases (evaporation, condensation, freezing/melting) 	<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>End of Quarter 2</p>
<p>Earth Science</p> <ul style="list-style-type: none"> Earth and Moon 	<p>S.3.D.3.1.1 S.3.D.3.1.2</p>	<ul style="list-style-type: none"> Earth's rotation Moon phases 	<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>10 days</p>

**Scranton School District
Curriculum Guide**

<p>Life Science</p> <ul style="list-style-type: none"> • Living and Nonliving Things 	<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"> • Compare and contrast living things • Describe basic needs of living things (water, food, light, air, shelter) • Life cycles • Physical characteristics passed to offspring • Parents and offspring have similar characteristics (heredity) 	<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>7-10 days</p> <p>End of Quarter 3</p>
<p>Life Science</p> <ul style="list-style-type: none"> • Plants 	<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"> • Identify functions and basic structures of plants (roots, stems, leaves) • Classify types of plants • Describe basic needs of plants • Identify plant adaptations for survival • Identify necessary survival characteristics 	<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

Life Science <ul style="list-style-type: none">• Animals	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	<ul style="list-style-type: none">• Identify functions and basic structures of animals (skeleton, heart, lungs)• Classify types of animals• Describe basic needs of animals• Identify animal adaptations for survival• Identify necessary survival characteristics	District Approved Text/Resource Books *additional resources listed on final page	Teacher prepared tests, quizzes, etc. Series available assessments. (Optional)	9 days
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**Scranton School District
Curriculum Guide**

Life Science <ul style="list-style-type: none">Ecosystems	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	<ul style="list-style-type: none">Identify living/nonliving components of an ecosystemDescribe interactions between living/nonliving in an ecosystemDescribe what happens to animal habitats when they're changedDescribe environmental changes to ecosystems (fire, flood, etc.)Describe the impact humans have on ecosystems (road construction, pollution, urban development, dam building)	District Approved Text/Resource Books *additional resources listed on final page	Teacher prepared tests, quizzes, etc. Series available assessments. (Optional)	5 days End of Quarter 4
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**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)