





Britannica Materials for Grade 3 Science

The following *Britannica Online School Edition* materials support Florida's 3rd Grade Sunshine State Standards for Science. Orange County Public Schools can access these resources online at www.school.eb.com or via the links from the Britannica Web's Best Sites.

There are resources here for both students and teachers. Teacher resources, which are more advanced, are indicated by a  and resources that students can use are indicated by a . All resources can be accessed from school or from home.

BIG IDEA 1: The Practice of Science

1. Processes of Science

Sunshine State Standards: SC.3.N.1.1, SC.3.N.1.2, SC.3.N.1.3, SC.3.N.1.5, SC.3.N.1.6, SC.3.N.1.7

 **Article:** www.school.eb.com/elementary/article?articleId=353748

This article discusses science and the scientific method.

 **Article:** www.school.eb.com/all/comptons/article-207735

This article explains that effects have causes which is an important part of the scientific method.

 **Link:** <http://www.sciencenetlinks.com/lessons.cfm?Grade=3-5&BenchmarkID=1&DocID=0>

Students gain experience asking questions, conducting an inquiry, and recording information.

BIG IDEA 3: The Role of Theories, Laws, Hypotheses, and Models

2. Science

Sunshine State Standards: SC.3.N.3.1, SC.3.N.3.2, SC.3.N.3.3

 **Article:** www.school.eb.com/elementary/article?articleId=353748

This article discusses science and the scientific method.



Science, *continued*



Link: <http://www.sciencenetlinks.com/lessons.cfm?DocID=245>

Students build a model of the respiratory system to understand how scientists use models.

BIG IDEA 5: Earth In Space and Time

3. The Earth



Sunshine State Standards: SC.3.E.5.1, SC.3.E.5.2, SC.3.E.5.3, SC.3.E.5.4, SC.3.E.5.5



Article: www.school.eb.com/elementary/article?articleId=353824

This article discusses the Sun, its place in space, and how it supplies most of Earth's energy.



Video (2 minutes): www.school.eb.com/art-82761

The Sun is a star, but it looks bigger and brighter than the others because it is the closest.



Article: www.school.eb.com/elementary/article?articleId=400109

This article explains that gravity is a pulling force that works across space.



Article: www.school.eb.com/elementary/article?articleId=353808

Students learn about stars, what they are, where they come from, and how they are classified.



Activity/Video: http://ksnn.larc.nasa.gov/k2/s_whatGravity.html

Gravity and how it works are explained in this video with accompanying activity.



Image: www.school.eb.com/art-66620

A combination of three images taken by the Hubble Space Telescope show the center of a star cluster.



Link: <http://starchild.gsfc.nasa.gov/docs/StarChild/StarChild.html>

This educational resource about our solar system contains illustrated text with video and audio, presented in two levels.



Reading



Diagram



Online Resource



Activity



Video



BIG IDEA 6: Earth Structures

4. The Sun



Sunshine State Standards: SC.3.E.6.1



Article: www.school.eb.com/elementary/article?articleId=433607

This article explains that solar energy is light, heat, and other forms of energy given off by the Sun.



Video (2 minutes): www.school.eb.com/art-100532

Differences in the amount of solar radiation available to the poles and the Equator drive atmospheric processes.



Article: www.school.eb.com/elementary/article?articleId=353824

Learn about the Sun, its place in space and how it supplies most of Earth's energy.



Link: www.eia.doe.gov/kids/energyfacts/sources/renewable/solar.html

This web site offers information about the Sun and solar energy.



Image: www.school.eb.com/art-96161

A monk in Tibet uses a solar-powered cook stove.

BIG IDEA 8: Properties of Matter

5. Matter



Sunshine State Standards: SC.3.P.8.1, SC.3.P.8.2, SC.3.P.8.3



Image: www.school.eb.com/art-89364

The three most familiar states of matter are solid, liquid, and gas.



Activity: www.school.eb.com/lm/games/GS_4_7/GS_4_7.htm

Match a substance with its most common form: solid, liquid, or gas.



Article: www.school.eb.com/elementary/article?articleId=353112

Evaporation and condensation are two processes through which matter changes from one state to another.



Matter, *continued*

 **Article:** www.school.eb.com/elementary/article?articleId=353444

This article describes the states and properties of matter.

 **Activity/Video:** http://ksnn.larc.nasa.gov/k2/s_statesMatter.html

Students learn about the three states of matter.

BIG IDEA 9: Changes in Matter

6. Matter

Sunshine State Standards: SC.3.P.9.1

 **Article:** www.school.eb.com/elementary/article?articleId=353444

Anything which takes up space is called matter.

 **Image:** www.school.eb.com/art-102975

The physical states of water are determined by the structure of its molecules, which in turn is affected by temperature.

 **Image:** www.school.eb.com/art-107583

The water cycle is shown in a diagram.

 **Link:** <http://ga.water.usgs.gov/edu/>

This web site offers information about a variety of water topics.

 **Image:** www.school.eb.com/art-88425

Steam rises from boiling water.

 **Image:** www.school.eb.com/art-89364

The three most familiar states of matter are solid, liquid, and gas.

 **Article:** www.school.eb.com/elementary/article?articleId=390625

Water is the most important liquid for life on Earth.



Reading



Diagram



Online Resource



Activity




Video




BIG IDEA 10: Forms of Energy


7. Energy


Sunshine State Standards: SC.3.P.10.1, SC.3.P.10.2, SC.3.P.10.3, SC.3.P.10.4

 **Article:** www.school.eb.com/elementary/article?articleId=353100
This article discusses energy and its various forms including electricity.

 **Link:** <http://www.eia.doe.gov/kids/energyfacts/science/formsofenergy.html>
This web site includes information on energy including forms of energy, sources of energy, and energy conservation.

 **Article:** www.school.eb.com/elementary/article?articleId=353386
Light is a form of energy.


 **Article:** www.school.eb.com/elementary/article?articleId=390822
Optics is the study of light, how it is created, and how it travels.


 **Link:** www.opticalres.com/kidoptx_f.html
Students will find a variety of topics about light and optics on this web site.


BIG IDEA 11: Energy Transfers and Transformations


8. Force & Motion

Sunshine State Standards: SC.3.P.11.1, SC.3.P.11.2

 **Article:** www.school.eb.com/elementary/article?articleId=353386
This article explains light as a form of energy.

 **Article:** www.school.eb.com/elementary/article?articleId=390761
Heat is a form of energy that moves from one object to another as a result of a difference in temperature.

 **Activity:** www.school.eb.com/lm/games/GS_1_10/GS_1_10.htm
Determine whether a source of light is natural or artificial.

 **Activity:** www.school.eb.com/lm/animations/oheat00001d4/product.html
Heat is energy that is transferred from one object to another as a result of differences in temperature.

BIG IDEA 14: Organization and Development of Living Organisms

9. Living Organisms Sunshine State Standards: SC.3.L.14.1, SC.3.L.14.2

 **Article - Plants:** www.school.eb.com/elementary/article?articleId=353639

This article discusses the importance and types of plants and includes a diagram of a plant growing from seed.

 **Link:** http://ksnn.larc.nasa.gov/k2/s_whatPlants.html

Students can observe what plants need to grow.

 **Video (15 minutes):** www.school.eb.com/elementary/art-94823

Experience the world of plants as the essential foundation of life on Earth.

 **Video (3 minutes):** www.school.eb.com/art-68469

Learn why stems grow in the direction of a light source while roots grow downward.

BIG IDEA 15: Diversity and Evolution of Living Organisms

10. Diversity of Living Things Sunshine State Standards: SC.3.P.15.1, SC.3.P.15.2

 **Link:** www.perspective.com/nature

Students explore biodiversity and biological classification.

 **Activity:** www.school.eb.com/lm/games/GS_1_2/GS_1_2.htm

Students determine which animals are mammals.

 **Article:** www.school.eb.com/elementary/article?articleId=352756

This article discusses animals found throughout the world from freezing polar zones to hot deserts.

 **Activity:** www.school.eb.com/lm/games/GS_2_4/GS_2_4.htm

Match the animal with its social habits of living alone or in groups.

 **Video (3 minutes):** www.school.eb.com/art-83541

Carl Linnaeus brought order to the study of biology when he created the classification system still in use today.



Reading



Diagram



Online Resource



Activity



Video



Diversity of Living Things, *continued*

 **Link:** <http://www.backyardnature.net/fpdefine.htm>

Students learn what makes a plant a flowering plant with links to photos and information on the most common types.

 **Article:** www.school.eb.com/elementary/article?articleId=353639

Hundreds of thousands of different species, or kinds, of plants grow on Earth.

BIG IDEA 17: Interdependence

11. Basic Needs, the Environment and Habitats



Sunshine State Standards: SC.3.L.17.1, SC.3.L.17.2

 **Video (1 minute):** www.school.eb.com/elementary/art-84683

Some plants and animals are dependent on each other to survive.

 **Article:** www.school.eb.com/elementary/article?articleId=399589

The cycle of weather changes is divided into four parts called seasons.

 **Video (1 minute):** www.school.eb.com/elementary/art-83788/

To survive plants must be able to adapt to seasonal and environmental changes.

 **Video (1 minute):** www.school.eb.com/elementary/art-68242

Some animals prepare for winter by stocking up on food, while others plan to sleep through the cold months.

 **Article:** www.school.eb.com/elementary/article?articleId=353245

Hibernation is a way some animals deal with the harshness of winter.

 **Article:** www.school.eb.com/elementary/article?articleId=353624

Green plants use the Sun's energy to manufacture food with a process called photosynthesis.

 **Video (3 minutes):** www.school.eb.com/elementary/art-83774/

Photosynthesis is vital to both plants and animals.



Reading



Diagram



Online Resource



Activity



Video

6/15/09



For Students



For Teachers

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