



Sunshine State - Lighting Best Practices
BUREAU OF SCHOOL IMPROVEMENT
Florida Department of Education

SCIENCE RESOURCES FOR TEACHERS

SUNSHINE STATE STANDARDS/FCAT RESOURCES

Florida Department of Education: FCAT Sample Test Books and Answer Key Books

<http://fcat.fldoe.org/fcatsmpl.asp>

Sample Test Books are designed to help students become familiar with FCAT by providing helpful hints and offering practice answering questions in different formats.

Florida Department of Education: FCAT Science

<http://fcat.fldoe.org/pdf/rubresci.pdf>

General scoring rubric for short-response and extended-response questions-Grades 5, 8, & 11

Florida Department of Education: Test Item Specifications

<http://fcat.fldoe.org/fcatis01.asp>

Publications describe the test items and performance tasks found in the FCAT Science assessments. Appendix B: Science Content Assessed by FCAT, Item Formats and Assessment Schedule by Benchmark.

Florida Department of Education: What Every Teacher Should Know About FCAT

<http://fcat.fldoe.org/pdf/fcatguid.pdf>

Document provides suggestions for teachers on how to prepare students for FCAT.

Florida Department of Education: Sunshine State Standards for Science

<http://www.fldoe.org/bii/curriculum/sss/>

FCAT Explorer and Science Content for FOCUS

<http://www.fcatexplorer.com/>

Explorer provides comprehensive practice for the FCAT science benchmarks tested in grades 5, 8, and 11, and FOCUS includes mini-assessments for benchmarks tested on the FCAT for grades 5, 8, and 11.

Sunshine Connections: Curricula: Science

<http://www.sunshineconnections.org/Curricula/Pages/Science.aspx>

The Science section provides documents pertaining to science resources and vocabulary.

Broward: FCAT Elementary Science Dailies

http://www.broward.k12.fl.us/ci/cs/blueprint/downloads/FCAT/Fcat_sci.pdf

Broward: Soaring Into FCAT Science

<http://www.broward.k12.fl.us/learnresource/soaring.htm>

Science curriculum maps designed by Broward Schools for Grades K-5

DISTRICT RESOURCES

Brevard: Best Practices for Integrated Science, High School

<http://www.angelfire.com/scifi2/eghsscience/Integrated%20Science%202%202003.pdf>

Provides best practices to help teachers determine how to construct and implement a successful Integrated Science curriculum, instructional strategies, and suggested assessment models; includes sample curricula, labs, and activities that are benchmarked.

Brevard: Elementary Science: <http://elementarypgms.brevard.k12.fl.us/science.htm>

Leon: Parallel Alternative Strategies for Students (PASS) – Science

<http://www.pass.leon.k12.fl.us/Book%20Subject%20Areas/Science.aspx>

PASS books are for secondary students with various learning needs, and are online, supplemental textbooks that correlate with the Sunshine State Standards

Miami/Dade Public Schools: Curriculum and Instruction – Science

<http://science.dadeschools.net/default.html>

The elementary and secondary science pacing guides provide strategies, activities and vocabulary aligned to the science benchmarks.

TEACHING RESOURCES

Just Science Now! Exploring Science Through Inquiry

<http://www.justsciencenow.com/>

Provides effective questioning techniques and sample lesson plans that implement inquiry

Franklin Institute: Resources for Science Learning, Educational Hotlists

<http://sln.fi.edu/tfi/hotlists/hotlists.html>

The Franklin Institute's Educational Hotlists are organized lists of resources on the Internet that science educators, as well as science enthusiasts, may find useful.

Learningscience.org

<http://www.learningscience.org/index.htm>

National Institutes of Health: Curriculum Supplements

<http://science.education.nih.gov/customers.nsf/Supplements>

Curriculum Supplements are interactive teaching units that combine science research discoveries with instructional materials. Each supplement is a teacher's guide to two weeks of lessons on science and human health (elementary, middle and high school)

National Science Digital Library: Resources for K-12 Teachers

http://nsdl.org/resources_for/k12_teachers/

National Science Foundation: Funding

<http://www.nsf.gov/funding/aboutfunding.jsp>

NCREL: Critical Issue: Providing Hands-On, Minds-On, and Authentic Learning Experiences in Science

<http://www.ncrel.org/sdrs/areas/issues/content/contareas/science/sc500.htm>

NCREL: Perspectives of Hands-On Science Teaching

<http://www.ncrel.org/sdrs/areas/issues/content/contareas/science/eric/eric-toc.htm>

SEDL: Afterschool Training Toolkit – Science

http://www.sedl.org/afterschool/toolkits/about_toolkits.html?tab=science

Problem-solving activities that engage students and extend science learning, sample lessons and illustrative videos are provided for afterschool programs.

University of Akron: Best Research-based Teaching Practices

<http://agpa.uakron.edu/p16/best-teaching-practices.php>

LESSON PLANS

Beacon Lesson Plan Library-Science

<http://www.beaconlearningcenter.com/lessons/SC.asp>

Each lesson plan is based on a numbered Sunshine State Standard.

STEPS: The Lesson Architect

<http://www.ibinder.uwf.edu/steps/>

Tool to integrate Florida standards into lesson plans

Miami Dade Science Resource Guide

Grades K-2: <http://science.dadeschools.net/resourceGuides/resourceGuidek-2.htm>

Grades 3-5: <http://science.dadeschools.net/resourceGuides/resourceGuide3-5.htm>

Grades 6-8: <http://science.dadeschools.net/resourceGuides/resourceGuide6-8.htm>

Grades 9-12: <http://science.dadeschools.net/resourceGuides/resourceGuide9-12.htm>

Documents provide benchmark and strand related lessons, and other science teaching information.

Florida Department of Education: Environmental Education

http://www.fldoe.org/bii/curriculum/environmental_ed/

American Institute of Biological Sciences: Lesson Directory

<http://www.actionbioscience.org/lessondirectory.html>

Middle school, high school

Awesome Library: Science Lesson Plans

<http://www.awesomelibrary.org/Classroom/Science/Science.html>

CIESE: K-12 Education Curriculum

<http://www.ciese.org/currichome.html>

On-line science ideas – Real Time Data Projects, Collaborative Projects, and Partner Projects

ERIC: The Educator’s Reference Desk: Science Lesson Plans

<http://www.eduref.org/cgi-bin/lessons.cgi/Science>

Federal Resources for Educational Excellence (FREE): Science

http://www.free.ed.gov/subjects.cfm?subject_id=41

Frank Potter's Science Gems

<http://www.sciencegems.com/>

Great Explorations in Math and Science (GEMS): GEMS Correlations with Florida Sunshine State Standards

<http://www.lhsgems.org/FLcorrelations.html>

McREL: Science Lesson Plans

<http://www.mcrel.org/lesson-plans/science/index.asp>

National Science Foundation: Classroom Resources

<http://www.nsf.gov/news/classroom/>

Topics include biology, chemistry, earth & environment, and physics

New York Times: Daily Lesson Plan - Science

<http://www.nytimes.com/learning/teachers/lessons/science.html>

NPR: Science Friday Kids' Connection (Middle School)

<http://www.sciencefriday.com/>

Ohio Resource Center: Science Lesson Plans

<http://www.ohiorc.org/for/science/>

Lesson plans with links to worksheets by topic or grade level

Science NetLinks Lesson Plans

<http://www.sciencenetlinks.com/>

Many lesson plans and tools, by grade level

PROFESSIONAL DEVELOPMENT

Annenberg Media: Science

<http://www.learner.org/resources/browse.html?discipline=6&grade=0&imageField2.x=11&imageField2.y=12>

Video workshops for teachers (free)

FCR-STEM: PD for Teachers and Principals

http://www.fcrstem.org/Research_Centers/FCR-STEM/Specialized_Initiatives/PDTeachersPrincipals.aspx

Florida State University: Magnet Lab – For Teachers

<http://www.magnet.fsu.edu/education/teachers/>

PAEC On-line Professional Development – Teacher-to-Teacher:

Science & CSI – Weaving Science & Math Into Lessons That Teach Kids To Think

<http://www.paec.org/teacher2teacher/scienceandcsi.html>

Got the "H.O.T.S." for Inquiry?

<http://www.paec.org/teacher2teacher/overview29.html>

ASSESSMENT

Miami Museum of Science & Planetarium: Forms of Alternative Assessment

<http://www.miamisci.org/ph/lpdefine.html>

National Science Education Standards: Chapter 5 – Assessments in Science Education

http://www.nap.edu/openbook.php?record_id=4962

National Science Teachers Association: Elementary, Intermediate, High School Assessment

<http://science.nsta.org/enewsletter/2003-02/elementary.htm>

<http://science.nsta.org/enewsletter/2003-02/intermediate2.htm>

http://science.nsta.org/enewsletter/2003-02/high_school.htm

NCREL: Critical Issue: Multiple Dimensions of Assessment That Support Student Progress in Science and Mathematics

<http://www.ncrel.org/sdrs/areas/issues/content/cntareas/science/sc700.htm>

NWREL: Assessment Strategies to Inform Science and Mathematics Instruction: It's Just Good Teaching

<http://www.nwrel.org/msec/images/resources/justgood/06.97.pdf>

PALS: Performance Assessment Links in Science

<http://pals.sri.com/>

Saskatchewan, Canada: Assessment Ideas for the Elementary Science Classroom

<http://www.sasked.gov.sk.ca/docs/elemsci/ideass.html>

SERVE: How to Assess Student Performance in Science

<http://www.serve.org/Curriculum/Science/>

Going beyond multiple-choice tests and using classroom assessments to enhance learning

Texas: Science TEKS Toolkit, Assessment Methods

<http://www.utdanacenter.org/sciencetoolkit/assessment/methods.php>

DIVERSE STUDENTS

California Science Project: Essential Elements of Effective Science Instruction for English Learners

http://csmf.ucop.edu/csp/downloads/essential_elements.pdf

Inclusion in Science Education for Students with Disabilities

<http://www.as.wvu.edu/~scidis/sitemap.html>

NCREL: Critical Issue: Ensuring Equity and Excellence in Science

<http://www.ncrel.org/sdrs/areas/issues/content/cntareas/science/sc200.htm>

NWREL: It's Just Good Teaching Series

<http://www.nwrel.org/free/jgt.asp>

Science Education for Students with Disabilities

<http://www.sesd.info/resources.htm>

Teacher resources

FAMILY INVOLVEMENT

Broward: Family Science – Grades 3, 4 and 5

http://www.broward.k12.fl.us/learnresource/pdf/soaring/Family%20Science%20Grades%203-5/Family_Science_Grade_3.pdf

http://www.broward.k12.fl.us/learnresource/pdf/soaring/Family%20Science%20Grades%203-5/Family_Science_Grade_4.pdf

http://www.broward.k12.fl.us/learnresource/pdf/soaring/Family%20Science%20Grades%203-5/Family_Science_Grade_5.pdf

Family Science is a hands-on, activity-based program that links the home and school to maximize science learning; encourages parents, teachers, and children to work together; and involves parents and children in conducting experiments and carrying out investigations.

NWREL: Engaging Families in Mathematics and Science Education; It's Just Good Teaching

<http://www.nwrel.org/msec/images/resources/justgood/06.98b.pdf>

TryScience: The Parent Page

http://www.tryscience.org/parents/se_2.html

U.S. DOE: Helping Your Child Learn Science (Elementary)

<http://www.ed.gov/parents/academic/help/science/index.html>

FLORIDA

Florida Department of Education: Office of Mathematics and Science

<http://www.fldoestem.org/center13.aspx>

The Office is charged with defining research-based Florida education policy and programs to increase student knowledge and performance in the content areas of mathematics and science.

FCR-STEM: Florida Center for Research in Science, Technology, Engineering and Mathematics

<http://www.fcrstem.org/center11.aspx>

FCR-STEM is working to improve K-12 teaching and learning in science, mathematics and technology to prepare students for higher education and careers.

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