

**Library-Technology Connections
to the
LA Comprehensive Curriculum**

**Kindergarten
Science**

Preface

One of the roles of the School Library Media Specialist is that of an instructional partner with the classroom teacher through collaborative planning. Together, they provide students with multidimensional learning experiences using classroom, library, and online resources. Research indicates that the strength of the school library is a clear predictor of academic achievement. Schools with stronger school library programs average 10-12% higher test scores. (School Library Impact Studies, <http://www.lrs.org/Impact.asp>)

The purpose of this document is to identify those activities from the *Louisiana Comprehensive Curriculum* that:

1. can be more effectively addressed in a library setting using multiple print and online library resources,
2. require the use of multiple computers for students to be actively involved in the use of technology.

The complete *Louisiana Comprehensive Curriculum*, with time frames, unit descriptions, student understandings, guiding questions, student activities, grade level expectations, teacher resources, and sample assessments, can be accessed on the Louisiana State Department of Education Website at <http://www.doe.state.la.us/lde/ssa/2108.html>.

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INTEGRATING INFORMATIONAL LITERACY SKILLS INTO THE COMPREHENSIVE CURRICULUM

School library media specialists are uniquely qualified to provide strong support and partnership with teachers to increase student achievement. Recent research studies provide strong evidence that their strongest impact on student achievement comes “when they work in partnership with teachers to integrate information literacy skills into the curriculum through well-designed learning activities. One significant indicator of effectiveness is the extent of collaboration among teachers and library media specialists, in planning and teaching curricular lessons or units that integrate information literacy skills.” (*Guidelines for Library Media Programs in Louisiana Schools*, 2004, <http://www.doe.state.la.us/lde/uploads/4212.doc>)

For suggestions and guidelines on collaborative planning and teaching, and integrating information literacy skills into the curriculum, refer to “Chapter 1: Learning Environment” and “Section Two: Information Literacy Guidelines for Student Learning,” in *Guidelines for Library Media Programs in Louisiana Schools*, pages 12-19 and 65-82.

Included below are:

- **This grade level’s Information Literacy Skills from *Guidelines for Library Media Programs in Louisiana Schools***
- **Grade Level Expectations and Identified Activities with Library-Technology Connections from the *Comprehensive Curriculum***
- **Lists of Resources from the *Comprehensive Curriculum* to assist in collection development of the library’s resources**

KINDERGARTEN INFORMATION LITERACY SKILLS

The student ...

DEFINING/FOCUSING

(INFORMATION LITERACY STANDARDS 1 & 5; FOUNDATION SKILLS 1, 2, 3 & 5)

- feels welcome in the school library media center (LMC) and asks for help.
- recognizes the purpose and activities of the LMC (types of materials, circulation procedures, storytelling, etc.).
- demonstrates good library citizenship, including proper use and treatment of print materials and electronic resources (equipment, software). ELA-1-E2; T-5-D; T-1-F; T-3-F
- uses accurate and developmentally appropriate library and technology terms. T-6-B
- listens, looks, and responds to various media. ELA-4-E6
- appreciates various types of literature (nursery rhymes, fairy tales, poetry and factual materials) that reflect global and national experiences. ELA-6-E2
- explores ways of interpreting and dramatizing literature. ELA-4-E6
- brainstorms ideas and information about a topic by recalling previous experiences. ELA-7-E1
- develops awareness of favorite authors and/or illustrators.

SELECTING TOOLS/RESOURCES

(INFORMATION LITERACY STANDARDS 2, 3 & 4; FOUNDATION SKILLS 1, 2 & 3)

- asks for help in locating materials.
- uses alphabetizing to locate easy books. ELA-1-E-1
- chooses and enjoys looking at books independently.
- selects materials and checks out, with assistance.
- learns the conventions of print (left-to-right, top-to-bottom). ELA-1-E2
- develops awareness of magazines for recreational reading. ELA-1-E2
- uses organizational features of printed text, other media and electronic information. ELA-5-E1; T-6-A
- uses information in a variety of media. ELA-5-E1
- uses pictures to gain information. ELA-1-E5
- locates and uses parts of a book (author, title, illustrator, front, back). ELA-5-E1
- uses technology to find answers to basic questions, in shared and guided contexts. ELA-5-E2; T-4-G
- develops a beginning awareness of Internet use policies. T-5-D
- distinguishes between television programs and commercials. ELA-5-E2; T-2-I

EXTRACTING/RECORDING

(INFORMATION LITERACY STANDARDS 1, 2 & 3; FOUNDATION SKILLS 3 & 4)

- recalls information based on print or non-print materials.

- recalls simple facts about what is observed and heard (e.g., field trips, experiments, puppet shows, transparencies, slide shows, audio/video tapes). ELA-4-E6
- participates in teacher-facilitated information gathering, using technology tools. (e-mail, ask an expert, online search tools). T-1-G
- records simple information in picture form. ELA-5-E3; T-3-E

PROCESSING INFORMATION

(INFORMATION LITERACY STANDARDS 2, 3, 5 & 6; FOUNDATION SKILLS 2, 3 & 4)

- identifies story elements (setting, plot, character, theme). ELA-1-E4
- determines cause and effect in picture form. ELA-7-E4
- assesses validity of information, at an introductory level, with teacher guidance. ELA-5-E2; T-4-I

ORGANIZING INFORMATION

(INFORMATION LITERACY STANDARD 3; FOUNDATION SKILLS 3 & 4)

- sorts and classifies pictures. ELA-7-E1
- sequences pictures, tells story in a logical order, and recognizes story patterns. ELA-7-E1; P-3-E
- organizes information as a group. ELA-5-E3; T-3-E

PRODUCING FINDINGS

(INFORMATION LITERACY STANDARDS 3 & 6; FOUNDATION SKILL 4)

- shares information in own words using complete sentences. ELA-4-E1
- draws pictures to present information. ELA-1-E5
- publishes learned information in shared and guided contexts.

EVALUATING EFFORTS

(INFORMATION LITERACY STANDARDS 2 & 6)

- evaluates favorite books read aloud (e.g., class votes, graphing). ELA1-E5; T-3-E
- uses simple graphics to self-evaluate assignment success (e.g., ☺, ☹).
- demonstrates competence as evaluated by the teacher using one or more of the following techniques: observation, anecdotal records, checklists, rubrics, work samples, conferences and journals/learning logs.

NOTE: This document has been designed to assist school library media specialists in the promotion of student achievement by integrating the classroom curriculum and the library media program. While there are few activities in the Kindergarten Comprehensive Curriculum that require the library setting, many topics and skills covered in the activities can be easily extended into the library media program. Collaboration between the library media specialist/computer lab teacher and the classroom teacher will facilitate extensions of these activities to enhance student learning and to meet grade level expectations.

**Kindergarten
Science
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**Kindergarten
Science
Unit 1: Describing Objects**

No identified activities.

Resources

Books

Allen, Constance. (1990). *Ernie Follows His Nose*. Golden Book.
Aliki. (1989). *My Five Senses*. New York: Harper Collins Publishers.
Carson-Dellosa Publishing Company, Inc. (1991). *Hands on Science*.
Full Option Science System Fabric, *Fabric All Around-Activity 1*.
Reasoner, Charles and Hardt, Vicki. (1989). *Alphabite*. Price Stern Sloan.
Reasoner, Charles. (1996). *Color Crunch!* Price Stern Sloan.
The Education Center, Inc. (1994). *Once Upon a Theme, Fall Semester*.

Teacher Resources

<http://www.sedl.org/scimath/pasopartners/pdfs/fivesenses.pdf>
http://www.thesolutionsite.com/lpnew_bin/UI_Metadata/public/5104
http://www.fcsweb.net/teachers/mwilliamson/units/5_senses_unit.htm

**Kindergarten
Science
Unit 2: Sorting and Constructing Patterns**

No identified activities.

Resources

Books

Ehlert, Lois. (1991). *Red Leaf, Yellow Leaf*. Harcourt Brace Jovanovich, Publishers.
Full Option Science System. *Trees. Leaves*. (2000). The Best of the Mailbox Theme Series.

Teacher Resources

<http://www.lessonplanpage.com/ScienceGroupingClassificationSkillsIdeaPK.htm>.

**Kindergarten
Science
Unit 3: Mixtures and Their Properties**

No identified activities.

Resources

Books

Dig In! Hands-On Soil Investigations. (2001). National Science Teachers Association.

Solids, Liquids, and Gases. (1993). Scholastic Science Place, Scholastic.
The Mailbox 1999–2000 Yearbook, pp. 259–261. The Education Center.

Teacher Resources

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

<http://www.nsta.org/scilinks/>

http://www.pbs.org/teachersource/science_tech/k-2_physical.shtm

**Kindergarten
Science
Unit 4: Motion, Speed, and Direction**

No identified activities.

Resources

- Brandley, Franklyn M. and Eleanor K. Vaughan. *Mickey's Magnet*.
- Education Development Center, Inc. (1997). "Balls and Ramps," *Insight*.
- *The Mailbox 1998-1999 Yearbook*: pp. 248 – 254. The Education Center.

**Kindergarten
Science
Unit 5: Living and Nonliving Things**

No identified activities.

Resources

Books

Berger, Melvin. *A Butterfly is Born.*
Berger, Melvin. *An Apple A Day.* Newbridge Big Book
Berger, Melvin. *Seeds Get Around.* Newbridge Big Book
Big Science, Plants We Eat. (1991). Scholastic.
Carson-Dellosa Publishing Company, Inc. (1991). *Hands on Science.*
Jordan, Helene M. *How a Seed Grows.*
Krauss, Ruth. *The Carrot Seed.*
Merrill, Claire and Swan, Susan. *A Seed Is a Promise.*
What's Alive? HarperCollins Publishers, 1995
Project Learning Tree
Project WILD Full Option Science System: *Trees*

**Kindergarten
Science
Unit 6: Food Groups and Nutrition**

No identified activities.

Resources

Books

- Allen, Constance. (1990). *Ernie Follows His Nose*.
- Bastyra, Judy. (1990). *Busy Little Cook*.
- Bell, Louise Price. (1988). *Kitchen Fun*.
- Cousins, Lucy. (1999). *Maisy Makes Gingerbread*.
- Lillegard, Dee. (1994). *Frog's Lunch*.
- McCloskey, Robert. (1975). *Blueberries for Sal*.
- Picturepedia, Dorling Kindersley. (1993). *Food and Farming*.
- Reasoner, Charles & Hardt, Vicki. (1989). *Alphabite*.
- Reasoner, Charles. (1996). *Color Crunch*.
- The Education Center, Inc. (1994). *Once Upon a Theme, Fall Semester*.

Teacher Resources

- <http://www.kidshealth.org/>
- <http://www.nutrition.org/>
- <http://www.nutritionexploration.org/>
- <http://www.thesolutionsite.com/>

**Kindergarten
Science
Unit 7: Life Cycles and Development**

No identified activities.

Resources

Books

- Carson-Dellosa Publishing Company, Inc. (1991). *Hands on Science*.
- Full Option Science System. (1995). *Animals Two by Two*.
- Jordan, Helene J. (1998). *How a Seed Grows*. Scholastic.
- Krauss, Ruth. *The Carrot Seed*. Scholastic.
- *The Mailbox, Kindergarten*. (April/May 2002). The Education Center.
- *The Mailbox 1995-1996 Yearbook*, pp. 248–255. The Education Center.

**Kindergarten
Science
Unit 8: Variations Among Living Things**

No identified activities.

Resources

Books

- Carson-Dellosa Publishing Company, Inc. (1991). *Hands on Science*.
- Full Option Science System. (1995). *Animals Two by Two*.
- *The Mailbox, Kindergarten*. (April/May 2002). The Education Center.
- *The Mailbox 1995-1996 Yearbook*, pp.248–255. The Education Center.

**Kindergarten
Science
Unit 9: Earth and Sky**

Unit 9 Grade-Level Expectations (GLEs)

| GLE # | GLE Text and Benchmarks |
|--------------------------------|---|
| Science as Inquiry | |
| 7. | Express data in a variety of ways by constructing illustrations, graphs, charts, tables, concept maps, and oral and written explanations as appropriate (SI-E-A5) (SI-E-B4) |
| Earth and Space Science | |
| 30. | Distinguish between areas of Earth covered by land and water (ESS-E-A2) |

Sample Activities

Activity 2: Things in the Sky (GLEs: 7, 32)

At small or large group time, **students will participate in reading and discussing a book about the sky.** Student will view pictures of objects that may be seen in the sky at night and during the day (e.g., sun, moon, stars, different types of clouds). Students will participate in placing flannel or magnetic pieces on a board labeled DAY sky and NIGHT sky. Through guided questions, the teacher will lead students to the discussion of clouds that may hide the Sun or Moon during the day or night, respectively. At a table during centers or stations, students construct a chart with two rows (one for day and one for night). Students will look through magazines and cut out pictures of objects that they see in the day and in the night (e.g. sun, moon, car with headlights on, mail carrier on sidewalk, streetlights, children in a park). Students share their charts with other students and place them around the room. The teacher may lead a discussion of similarities and differences, encouraging the students to discuss their charts with each other.

Resources

Books

- Asch, Frank. (2000). *The Sun is My Favorite Star*. Scholastic.
- Carson-Dellosa Publishing Company, Inc. (1991). *Hands on Science*.
- de Paola, Tomie. (1975). *The Cloud Book*. New York: Holiday House.
- James, Felix. (2001). *The Night Sky*. National Geographic.
- Rockwell, Anne. (1999). *Our Stars*. Scholastic.
- Rogers, Paul. *What Will the Weather Be Like Today?* Houghton Mifflin.

Teacher Resources

- <http://www.earlychildhood.com/>
- <http://www.enchantedlearning.com/>
- <http://www.nationalgeographic.com/xpeditions>

**Kindergarten
Science
Unit 10: Changes in Earth and Sky**

Unit 10 Grade-Level Expectations (GLEs)

| GLE # | GLE Text and Benchmarks |
|--------------------------------|--|
| Science as Inquiry | |
| 3. | Predict and anticipate possible outcomes (SI-E-A2) |
| 4. | Use the five senses to describe observations (SI-E-A3) |
| 7. | Express data in a variety of ways by constructing illustrations, graphs, charts, tables, concept maps, and oral and written explanations as appropriate (SI-E-A5) (SI-E-B4) |
| 8. | Use a variety of appropriate formats to describe procedures and to express ideas about demonstrations or experiments (e.g., drawings, journals, reports, presentations, exhibitions, portfolios) (SI-E-A6) |
| Earth and Space Science | |
| 32. | Discuss and differentiate objects seen in the day and/or night sky (e.g., clouds, Sun, stars, Moon) (ESS-E-B1) |

Sample Activities

Activity 2: Moon Phases (GLEs: 3, 4, 7, 8, 32)

Students will participate **in the reading a fiction or non-fiction book about the Moon**. Students may also **look at appropriate websites** showing our Moon and Sun. Students will respond to this information and tell about seeing the Moon in the sky. Responding to teacher questions, students will recall and draw a shape that is a moon phase they have seen on a chart in front of group time. Students will participate in looking at a calendar that has the Moon phases on it. Students will recognize and discuss that moon phases have common shapes that students may recall.

Some students may be ready to name the moon phases. (The full circle is a *full Moon*, the *gibbous Moon* is large with only a sliver missing, the half circle is a *quarter Moon*, and the sliver of a circle is a *crescent Moon*.) The teacher should tell students that the moon phases are a regular cycle that occurs because the Moon moves around Earth every month (28 days).

Students should understand that moon phases are predictable and occur the same way each month. Encourage the students to observe the Moon each night and observe the changing phases of the Moon. Communicate with parents asking their assistance to record nighttime observations and drawings of the moon phases on a calendar.

Resources

Books

- Allen, Marjorie N., and Shelley Rotner. *Changes*. Macmillan/McGraw Hill.
- Arvetis, Chris, and Carole Palmer. (1984). *What Makes Day and Night?* Field Publications.
- Carson-Dellosa Publishing Company, Inc. (1991). *Hands on Science*.
- Chanko, Pamela, and Daniel Moreton. (1998). *Weather*. Scholastic.
- Williams, Rozanne Lanczak. (1994). *The Four Seasons*. Creative Teaching Press.

Teacher Resources

- <http://www.thesolutionsite.com/>