Quick Guides
A PUBLICATION OF THE SOUTHWEST EDUCATIONAL DEVELOPMENT LABORATORY

Student Expectations

Both Texas and Louisiana used the *National Science Education Standards* and Project 2061's *Benchmarks for Science Literacy* and *Science for All Americans* to develop comprehensive plans for K-12 science education. Due to these common origins, student expectations are very similar. Both states specify process skills separately from content, yet they clearly intend for both areas to be addressed simultaneously in the classroom throughout the school year. They also advise that science concepts be introduced and mastered in an interdisciplinary format.

While the Texas Educational Knowledge and Skills (TEKS) address science content in a relatively integrated fashion, the Louisiana Grade Level Expectations (GLEs) cluster expectations for each strand: Physical Science (PS), Life Science (LS), Earth and Space Science (ESS), and Science and the Environment (SE). Though Texas integrates all four science content strands at Grade 7, Louisiana focuses almost exclusively on Life Science concepts and the living components of the environment, which includes structures and functions of living things, reproduction and heredity, populations and ecosystems, and adaptations. Fourteen of the GLEs relating to life cycles and genetics are not specifically addressed in Texas at this level. Though Louisiana does not address the other content strands at this time, it should be noted that they focus on Physical Science concepts in Grade 6, and Earth and Space concepts in Grade 8—both in greater detail than in Texas at the corresponding grade levels.

Educators should particularly note that whereas unifying themes are explicitly identified and addressed separately in the TEKS, Louisiana interweaves these concepts throughout their GLEs and Benchmarks.

Assessment

Both Texas and Louisiana assess science with a criterion referenced tool, but in different grades at the middle school level. The Integrated Louisiana Educational Assessment Program (iLEAP) for seventh-graders specifically targets the Grade 7 GLEs, while the Texas Assessment of Knowledge and Skills (TAKS) for eighth-graders is a comprehensive assessment of Grades 6 through 8. The broad Knowledge and Skills (KS) statements noted as TAKS objectives describe what students should know and be able to do for the Middle School Science TAKS.

Though the Texas and Louisiana science standards are similar overall, few of the TEKS student expectations and corresponding TAKS objectives match perfectly with the Louisiana GLEs). For example, TEKS (7.12.B), which expects students to "observe and describe how organisms including producers, consumers, and decomposers live together in an environment and use existing resources," is similar to Louisiana's GLE 24, where students "analyze food webs to determine energy transfer among organisms." However, the TEKS emphasize the interrelationships among organisms while the GLE focus on the transfer of energy in the food webs. A careful review of the Grade 7 side-by-sides will provide more details about the differences of expectations.

Coding in the Side-by-Side Analysis

Due to the degree of specificity of the Louisiana standards, some of the Texas Student Expectations (SE's) are matched to more than one Louisiana GLE. For example:

TEKS 7.12 A. identify components of an ecosystem;	GLE 26. Describe and compare the levels of organization of living things within an ecosystem (LS-M-C3) GLE 27. Identify the various relationships among plants and animals (e.g., mutualistic, parasitic, producer/consumer) (LS-M-C4) GLE 28. Differentiate between ecosystem components of habitat and niche (LS-M-C4) GLE 36. Distinguish the essential roles played by biotic and abiotic components in various ecosystems (SE-M-A1)

The number in parentheses following each GLE statement is a reference to the Louisiana Benchmark statement. For example, SI-M-A5 refers to the Science as Inquiry Standard, Middle School A5 Substandard A, benchmark 5—developing models and predictions using the relationships between data and explanations. Benchmark statements are similar to the Texas Knowledge and Skill statements. More information about the Louisiana Benchmarks is available from the Louisiana State Department of Education: http://www.doe.state.la.us/lde/uploads/2911.pdf.

Louisiana groups Science as Inquiry (SI) expectations at the Middle School level (Grades 5-8) into one strand. These 40 GLEs are generally analogous to the Texas Process Standards. For Grade 7, there are an additional 43 content expectations. Note that the prefixes appearing before the GLE refer to the strand:

- SI = Science As Inquiry
- PS = Physical Science
- LS = Life Science
- ESS = Earth and Space Science
- SE = Science in the Environment

Regarding the codes and content in the middle column on the document:

- Notations regarding TAKS objectives are included in the analysis column.
- Notations are made when concepts are addressed in another grade level in Louisiana.
- *Implied* refers to components of concepts that are understood and addressed in the context of the statement.
- *Similar* means the concept is worded differently.
- *Not specifically addressed* refers to concepts that may be covered, but not necessarily addressed in all classrooms by all teachers.

Southwest Educational Development Laboratory
211 E. 7th Street, Suite 200
Austin, TX 78701-3253
800-476-6861
http://www.sedl.org