# **Summary of Test Development Process\***

| Year 1  | Year 2  | Year 3   | Year 4  |
|---|---|--|---|
| Planning<br>Activities  | Item<br>Development   | Field<br>Testing   | "Live"<br>Assessment  |
| Review TEKS curriculum to identify TEKS to be assessed  Develop preliminary test objectives  Draft item development guidelines  Develop prototype items  Develop preliminary test blueprint  Meet with committees of Texas educators to finalize TEKS to be assessed, test objectives, item development guidelines, and prototype items | Write items  Review/revise items internally  Have all items critically reviewed by recognized university-level experts in the content area  Meet with committees of Texas educators to review/revise items  Prepare items for field testing | Field-test items  Meet with committees of Texas educators to review the field-test data  Finalize the test blueprint  Construct the first "live" test  Meet with panel of recognized university-level experts in the content area to critically review the content of the test | Administer test  Use data from live administration to set passing standards |

<sup>\*</sup> Test development process for End-of-Course assessments will include coordination with the Texas Higher Education Coordinating Board to develop, as appropriate, special purpose questions that measure college readiness.

### TEST DEVELOPMENT PROCESS

Texas educators—classroom teachers, curriculum specialists, administrators, and education service center staff—play a vital role in all phases of the test development process. Thousands of Texas educators have served on one or more of the educator committees involved in the development of the Texas assessment program. These committees represent the state geographically, ethnically, by gender, and by type and size of school district. The procedures described below outline the process used to develop a framework for the tests and provide for the ongoing development of test items.

- Committees of Texas educators review the state-mandated curriculum to develop appropriate assessment objectives for a specific grade and/or subject test. For each subject area, educators provide advice on an assessment model or structure that aligns with good classroom instruction.
- 2) Educator committees work with the Texas Education Agency (TEA) both to prepare draft test objectives and to determine how these objectives would best be assessed. These preliminary recommendations are reviewed by teachers, curriculum specialists, assessment specialists, and administrators.
- A draft of the objectives and student expectations to be assessed is refined based on input from Texas educators. TEA begins statewide opportunity-to-learn studies.
- 4) Prototype test items are written to measure each objective and, when necessary, are piloted by Texas students from volunteer classrooms.
- 5) Educator committees assist in developing guidelines for assessing each objective. These guidelines outline the eligible test content and test-item formats and include sample items.
- 6) With educator input, a preliminary test blueprint is developed that sets the length of the test and the number of test items measuring each objective.
- \*Professional item writers, many of whom are former or current Texas teachers, develop items based on the objectives and the item guidelines.
- 8) \*TEA curriculum and assessment specialists review and revise the proposed test items.
- \*Item review committees composed of Texas educators review the revised items to judge the appropriateness of item content and difficulty and to eliminate potential bias.
- 10) \*Items are revised again based on input from Texas educator committee meetings and are field-tested with large representative samples of Texas students.

- 11) \*Field-test data are analyzed for reliability, validity, and possible bias.
- \*Data-review committees composed of Texas educators are trained in statistical analysis of field-test data and review each item and its associated data. The committees determine whether items are appropriate for inclusion in the bank of items from which test forms are built.
- 13) A final blueprint that establishes the length of the test and the number of test items measuring each objective is developed.
- \*All field-test items and data are entered into a computerized item bank. Tests are built from the item bank and are designed to be equivalent in difficulty from one administration to the next.
- \*Content validation panels composed of university-level experts in each of the fields of English language arts (ELA), mathematics, science, and social studies review each high school-level test for accuracy because of the advanced level of content being assessed.
- \*Tests are administered to Texas students; and results are reported at the student, campus, district, regional, and state levels for state-mandated assessments.
- 17) \*Stringent quality control measures are applied to all stages of printing, scanning, scoring, and reporting for both paper and online assessments.
- 18) In accordance with state law, the Texas assessment program will release tests to the public.
- 19) In accordance with state law, the State Board of Education uses impact data and statewide opportunity-to-learn studies, along with additional information, to set a passing standard for new state assessments.
- \*A technical digest is developed annually to provide verified technical information about the tests to schools and the public.

Further information about the Texas assessment program is available on the TEA website (www.tea.state.tx.us/student.assessment).

<sup>\*</sup>These steps are repeated annually to ensure that tests of the highest quality are developed.

## Development Schedule for End-of-Course Assessments

| Content Area          | SBOE Adoption  | School Year  | First Live   | First Live  |
|-----------------------|----------------|--------------|--------------|-------------|
| and Related           | of             | Revised TEKS | Test without | Test with   |
| EOC Assessments       | Revised TEKS   | Implemented  | Revisions    | Revisions   |
| Mathematics           | February 2005* | 2006–2007    |              |             |
| Algebra I             |                |              | Spring 2005  | Spring 2008 |
| Geometry              |                |              | N/A          | Spring 2008 |
| Algebra II            |                |              | N/A          | Spring 2011 |
| English Language Arts | May 2008       | 2009–2010    |              |             |
| English I             |                |              | N/A          | Spring 2011 |
| English II            |                |              | N/A          | Spring 2012 |
| English III           |                |              | N/A          | Spring 2013 |
| Science               | November 2008  | 2010–2011    |              |             |
| Biology               |                |              | Spring 2008  | Spring 2012 |
| Chemistry             |                |              | Spring 2009  | Spring 2012 |
| Physics               |                |              | Spring 2010  | Spring 2012 |
| Social Studies        | November 2009  | 2011-2012    |              |             |
| U.S. History          |                |              | Spring 2009  | Spring 2013 |
| World Geography       |                |              | Spring 2010  | Spring 2013 |
| World History         |                |              | Spring 2012  | Spring 2013 |

<sup>\*</sup>Revisions made to secondary mathematics TEKS before the college readiness standards were developed.

## End-of-Course (EOC) Assessments With and Without Readiness Measures

| EOC Assessments without a Readiness | EOC Assessments with a "Readiness for | EOC Assessments with a "College |
|-------------------------------------|---------------------------------------|---------------------------------|
| Measure*                            | Advanced Courses" Measure             | Readiness" Measure              |
| English I                           | English II → English III              | English III                     |
| Geometry                            | Algebra I → Algebra II                | Algebra II                      |
| World Geography                     |                                       |                                 |
| World History                       |                                       |                                 |
| U.S. History                        |                                       |                                 |
| Biology                             |                                       |                                 |
| Chemistry                           |                                       |                                 |
| Physics                             |                                       |                                 |

<sup>\*</sup>Some EOC assessments, such as English I, have no direct link to advanced courses, i.e., those that are typically taken by students in 11<sup>th</sup> and 12<sup>th</sup> grade. Other EOC assessments, such as Geometry, World History, and Biology, have no content correlation to other EOC assessments.

EOC Implementation Schedule (2011-2012 Start - Revised February 11, 2008 - Subject to Change)

| EOC Tests Currently  | Year Operationa                                 | I   |  |   | 9th Graders Eligible for EOC for XL   |   |   |  |
|--|---|---|--|---|---|---|---|--|
| Under Development and Year They Become Operational                                 | 2007-08<br>Alg. I<br>Geom.<br>Bio.              | 2008-09<br>Alg. I<br>Geom.<br>Bio.<br>Chem.<br>US Hist. | 2009-10<br>Alg. I<br>Geom.<br>Bio.<br>Chem.<br>US Hist.<br>Phys.<br>World Geo. | 2010-11<br>Alg. I<br>Geom.<br>Bio.<br>Chem.<br>US Hist.<br>Phys.<br>World Geo.<br>Eng. I<br>Alg. II | Alg. I<br>Geom.<br>Bio.<br>Chem.<br>US Hist.<br>Phys.<br>World Geo.<br>Eng. I<br>Alg. II<br>Eng. II | 2012-13 Alg. I Geom. Bio. Chem. US Hist. Phys. World Geo. Eng. I Alg. II Eng. II World Hist. Eng. III | 2013-14 Alg. I Geom. Bio. Chem. US Hist. Phys. World Geo. Eng. I Alg. II Eng. II World Hist. Eng. III |  |
| EOC Field-test Schedule *One time only **Follow-on English Field-test schedule TBD | 2007-08<br>*Chem.<br>*US Hist.                  | 2008-09<br>*Phys.<br>*World Geo.                        | 2009-10<br>**Eng. I<br>*Alg. II  | 2010-11<br>**Eng. II<br>*World Hist.  | <u>2011-12</u><br>**Eng. III  | <u>2012-13</u><br>TBD   | <u>2013-14</u><br>TBD   |  |
| Current TAKS Stand Alone<br>Field-Test Schedule<br>***Last time given              | TAKS-Gr9<br>TAKS-Gr10<br>TAKS-Gr11              | No TAKS<br>FT   | ***TAKS-Gr9<br>***TAKS-Gr10<br>TAKS-Gr11                                       | No TAKS<br>FT   | ***TAKS-Gr11  | No TAKS<br>FT   |   |  |
| TAKS at HS Phase-out<br>Test Schedule  | Grades  | 2008-09<br>9-TAKS<br>10-TAKS<br>11-TAKS<br>12-TAKS      | 2009-10<br>9-TAKS<br>10-TAKS<br>11-TAKS<br>12-TAKS                             | 2010-11<br>9-TAKS<br>10-TAKS<br>11-TAKS<br>12-TAKS  | 2011-12<br>9-EOC<br>10-TAKS<br>11-TAKS<br>12-TAKS   | 2012-13<br>9-EOC<br>10-EOC<br>11-TAKS<br>*12-TAKS   | 2013-14<br>9-EOC<br>10-EOC<br>11-EOC<br>*12-TAKS  |  |
|  | *Out of school testers and 12th grade retesters |   |  |   |   |   |   |  |
| TAKS at HS Phase-out<br>Development Schedule                                       | 2007-08<br>9-TAKS dev<br>10-TAKS dev            | 2008-09<br>9-TAKS last dev<br>10-TAKS dev               | 2009-10<br>9-TAKS last FT<br>10-TAKS last dev                                  | 2010-11<br>9-TAKS last live<br>10-TAKS last FT  | 2011-12<br>10-TAKS last live  | <u>2012-13</u>  | 2013-14   |  |

|   | 11-TAKS dev   | 11-TAKS dev  | 11-TAKS dev  | 11-TAKS last dev  | 11-TAKS last FT   | 11-TAKS last live pri                  | mary           |
|---|---|--|--|---|---|--|----------------|
| Initial EOC Content<br>Development Schedule   | 2007-08<br>Phys. dev<br>World Geo. dev<br>Eng. I proto<br>Alg. II proto | 2008-09<br>Eng. I dev<br>Alg. II dev<br>Eng. II proto<br>World Hist. proto | 2009-10<br>Eng. II dev<br>World Hist. dev<br>Eng. III proto                  | <u>2010-11</u><br>Eng. III dev                                  | 2011-12<br>Ongoing item development                       | 2012-13<br>for all exams               | <u>2013-14</u> |
| Anticipated TEKS<br>Refinement/Revision<br>Schedule   | 2007-08  TEKS Refinements Adopted Elem. Rdg. Secondary ELA, Reading     | 2008-09  TEKS Refinements Adopted Science                                  | 2009-10  TEKS Refinements Adopted Social Studies                             | 2010-11   | 2011-12   | 2012-13                                | 2013-14        |
| TEKS Refinements Operational in Classrooms Elementary Math <sup>1</sup> Secondary Math <sup>1</sup> |   |  | TEKS Refinements Operational in Classrooms Elem. Rdg. Secondary ELA, Reading | TEKS Refinements Operational in Classrooms Science              | TEKS Refinements Operational in Classrooms Social Studies |  |                |
| Elementary and secondary Math TEKS were adopted in 2005 and operational in                          | Eligible for Testing<br>Secondary Math                                  | Eligible for Testing<br>Elementary Math                                    |  | Eligible for Testing<br>Elem. Rdg.<br>Secondary ELA,<br>Reading | Eligible for Testing<br>Science                           | Eligible for Testing<br>Social Studies |                |

#### Other Considerations

classrooms starting in 2006-07

- 1. For the existing EOC exams, standard setting and other test development activities may need to be revisited as the current voluntary EOC exams are transitioned to a high-stakes, mandatory assessment.
- 2. Current EOC exams are being delivered online, however district technology infra-structure would most likely preclude having mandatory, high-stakes exams delivered in an online only administration. Therefore print versions of the exams will need to be provided.
- 3. EOC assessment requirements for Special Education students will need to be determined to ensure that exams meet Federal regulations.
- 4. EOC assessment requirements for English Language Learners (ELL) will need to be determined to ensure that exams meet Federal regulations.
- 5. New exams would require one-time, census field-test prior to first operational administration as per schedule above. During that year of transition students will take TAKS and participate in EOC field-testing.
- 6. Field-testing requirements for exams with open-ended items would need to be determined.