

CURRICULUM DEVELOPMENT, REVISION, AND EVALUATION PROCESS

Introduction

Connections Education (dba Pearson Online and Blended Learning, or POBL) has substantial resources for curriculum development. The company's team of talented, experienced curriculum and assessment specialists, curriculum project managers, content and copy editors, and multimedia designers work to ensure Connections students are presented content, instructional resources, and activities that prepare them to be active, knowledgeable participants in a global networked society. These individuals apply their deep expertise in online instruction and academic disciplines to the development of curriculum that supports 21st century readiness for every student. Using the Framework for 21st Century Learning¹ process, they work to integrate supportive technologies, inquiry- and problem-based instructional approaches, and higher order thinking skills into all curriculum development efforts.

Connections Education aligns its curriculum to the Common Core State Standards as well as individual state standards, and also reviews and aligns with national standards such as the Next Generation Science Standards (NGSS), National Curriculum Standards for the Social Studies (NCSS), and International Society for Technology in Education (ISTE) wherever possible. Finally, Connections curriculum development is guided by INACOL standards for quality online courses.

Connections curriculum development is guided by these key principles and tenets:

- Curriculum fosters breadth and depth of understanding in the subject area.
- Content is aligned to national and state standards.
- Curriculum is supported by quality, reputable, recently published textbooks and/or proven instructional resources and materials.
- Content and assessments are aligned, accurate, and unbiased.
- Content is current, relevant, and provides real-world applications.
- Content is appropriate for the learner (age, ability, background, reading level, learning style, etc.).
- Instructional design is adaptable and flexible in order to best meet individual needs of Learning Coaches and students.

¹ Partnership for 21st Century Skills' Framework for 21st Century Learning: **WASHINGTON, DC 20001: 2011**



- Instructional design provides students opportunities to improve learning skills using technological tools (e.g., virtual labs, interactive tools, Teachlet® tutorials, business software, and online calculator).
- Navigation is intuitive and age-appropriate.
- Lesson structure is consistent and supports learning sequence of motivation, instructional content, application activities, review of key concepts and assessment.
- Scope of course is appropriate with regard to the amount of content, length of course and lessons, and course requirements.
- Lesson introduction effectively presents lesson objectives, assesses prior knowledge, sets expectations, and motivates.
- Background information prepares students to access new content, skills, and strategies.
- Curriculum includes opportunities for developing problem-solving and critical thinking skills and real-world applications.
- Curriculum includes opportunities for collaboration and independent study.
- Curriculum includes opportunities to develop oral and written communication skills.
- Curriculum incorporates timely and appropriate feedback to students.

Key Systematic Processes

Central to the Connections curriculum design process is the systematic analysis of curriculum offerings. The analysis phase consists of formative, summative, qualitative, and quantitative measures to determine the value and effectiveness of the curriculum offerings. This multi-level evaluation system incorporates regular reviews of student performance, user feedback, assessment performance analysis, and district, state, and national content standards and assessments. Connections curriculum development also emphasizes innovation, effective implementation, evaluation of student learning, and continuous improvement, and the company strives to regularly provide new curriculum options that leverage the interactivity and engagement potential of online resources. Connections always seeks to balance enhancements and additional options with the recognition that students have a wide range of learning styles and needs.

Decisions about improvements and updates to the curriculum are also guided by feedback from a variety of critical stakeholders: teachers and administrators, students and parents, school boards, and outside evaluators such as accrediting organizations and sponsors. This feedback is collected both daily and annually in a variety of ways, including the Connections StarTrack system and Connexus® feedback tools; annually through Parent, Student, and Staff Satisfaction surveys; and throughout the year from professional development and leadership development activities with teachers and school administrators. Comments and input from board members and the results of third-party evaluations also often factor into changes to curriculum.

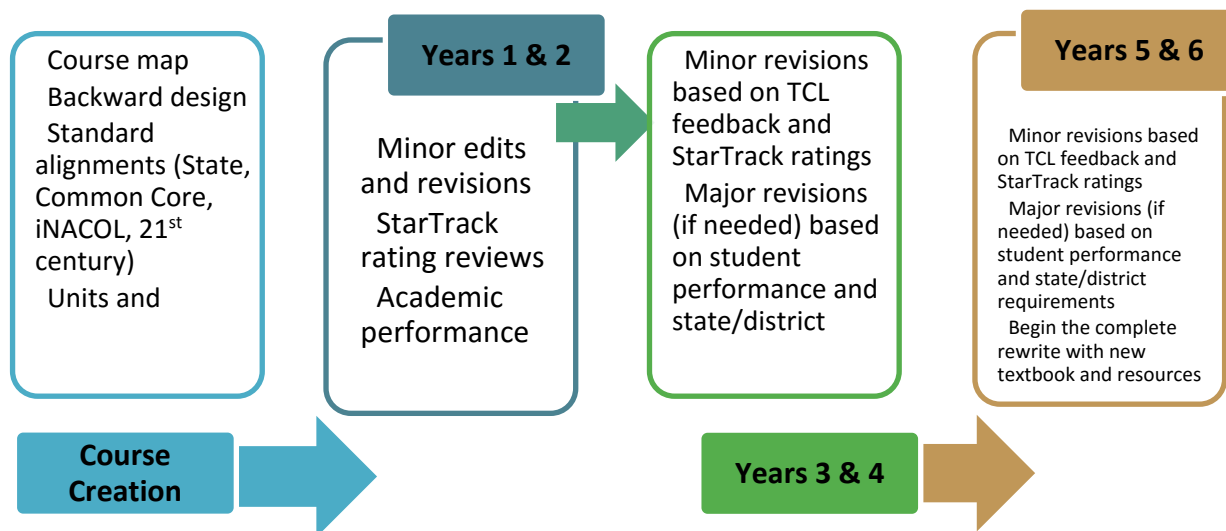
Connections Education understands that clear processes and guidelines that ensure internal consistency, instructional effectiveness, and the appropriate use of intellectual property are essential to the development of quality online courses. Therefore, central to the Connections curriculum development process is a research-based agile development framework designed to support not only quality course development but a feedback loop that ensures continuous improvement. This agile process incorporates the elements of analysis, design, development, implementation, and evaluation.

1. **Analysis:** A thorough analysis of state graduation requirements, school or board requests, and competitive positioning is completed. Feedback on current courses from student academic performance, user feedback, usability reviews, and national and state standards alignments are incorporated into the analysis and this analysis is ongoing through the development process.
2. **Design:** Within the design phase, the curriculum team attends to the set of standards around which the course is written, instructional strategies, content, and visual and technical design of the course. Attention is focused on the course's purpose and audience, as well as the course's organization, instructional approach, and instructional resources. Consideration is also given to the role of technology, the level of student engagement, and student learning styles.
3. **Development:** To provide a blueprint for course development, a map is completed which focuses on standards alignment and the identification of the enduring knowledge present in the course. The development lifecycle incorporates assessment mapping, unit-by-unit course development and revision, content analysis and review, editorial review and revision, and a detailed quality assurance appraisal. Procedures for ensuring internal consistency, bias-free content and assessments, instructional effectiveness, and the appropriate use of intellectual property are implemented throughout the development phase.
4. **Implementation:** Although user testing is implemented incrementally, each school year brings the full implementation of newly developed courses. Before full release, demonstrations of new content and structure is conducted, feedback is gathered and suggestions are implemented. When courses are completed, they are presented to students, teachers, and Learning Coaches within Connexus®, and effective implementation is supported by updated and ongoing training for all.
5. **Evaluation:** The intent of the evaluation phase is to determine the level of student success, and the impact of the course design on student performance. Evaluation occurs throughout the delivery of the course and includes student performance, internal lesson and assessment analysis, and feedback from students, Learning Coaches, and teachers. Essential user feedback is gained through WebMail messages, the StarTrack system, the Connexus® feedback tool, and our annual Parent Satisfaction survey.

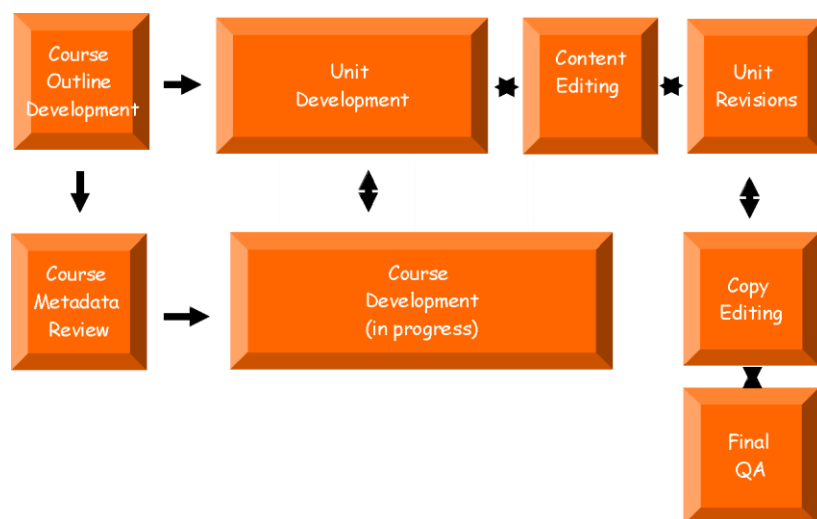
Connections' six-year Course Development and Revision Model includes a continuous evaluation and analysis of data which results in recommendations for course revisions and/or replacements every six years. During this six-year course cycle, daily, yearly, and mid-way revisions are included. In an effort to assess course effectiveness frequently and in multiple ways, and to use these findings as basis for



improvement, Connections continues to implement a multi-level evaluation system that incorporates regular reviews of student performance results, user feedback, assessment performance analysis, and national, state, and district content standards and course requirements.



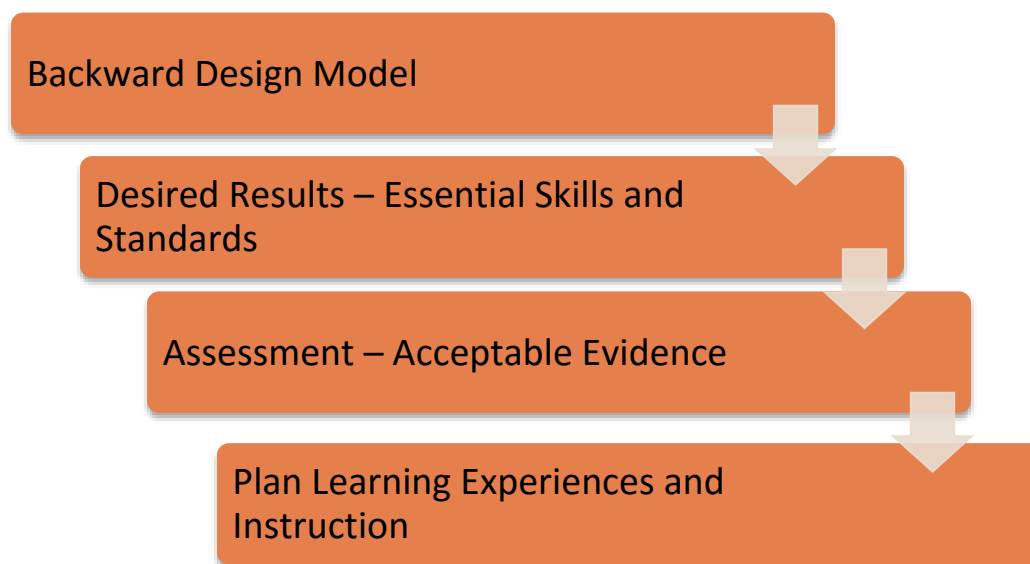
For each course created, Connections follows a systematic development, review, editing, and quality assurance process. The graphic below represents a typical course development cycle. For existing courses, alignments to state and National Standards are performed. If a new course is developed, state and National Standards are used to inform the initial course outline process to ensure the course is appropriately aligned.



Course writers and content editors receive online training on instructional sequence, effective online learning strategies, assessment accuracy, development and revision, and the processes illustrated above. During the development phase, editors use a content editing checklist to provide feedback and direction to writers. This checklist is designed to ensure that all lesson and assessment content and visuals are unbiased and represent cultural and global diversity.

All feedback and subsequent course revisions are vetted by in-house editing specialists and curriculum development specialists and managers. Assessment specialists on the curriculum development team analyze level of cognitive rigor, assessment reliability, validity, and absence of bias.

Course development follows a Backwards Design Model. This begins with the standards alignment and the identification of the “big ideas” or enduring knowledge present in the standards. Identification and development of assessment frameworks follow to ensure that key concepts are measured in appropriate, un-biased, and varied ways. Moving “backwards” from the assessments is the development of instructional components (i.e., units, lessons, activities, and multimedia) that will ultimately lead the students to demonstrate their learning. A graphic of this model is represented below.



Each course that is developed has a consistent design, structure, instructional sequence, and variety of assessments that measure student learning. Resources, which include texts and vetted assessment items from leading publishers, are chosen to align to standards and to provide students with a variety of learning experiences. Online interactive media and instructional tools may be developed to support key concepts and provide students with multiple opportunities to practice their learning. Additionally, third party resources and simulations may be included in course content to provide students with a variety of ways to access key concepts and support varied learning modalities.



To enable collaboration among teachers who are teaching the same courses, the Connections Education facilitates the Teacher Collaboration Program. This partnership enables teachers across schools to share successes, challenges, and suggestions with each other. Teacher Course Liaisons are lead teachers in Connections schools who facilitate regular communication with fellow teachers as well as with members of the Instructional Support team to provide support, guidance, instructional resources, and differentiation strategies which positively impact student achievement. The Teacher Course Liaison becomes the system-wide expert regarding the content, pedagogy, and implementation of Connections courses and he/she becomes the voice of his/her colleagues. In addition to collaborating with colleagues from the same courses or grade levels, the Teacher Course Liaison also:

- Participates in Teacher Course Liaison training and monthly professional learning sessions
- Serves as the facilitator for an assigned course area (e.g. 3rd grade, Algebra, etc.) throughout the academic school year
- Solicits the sharing of instructional resources, instructional strategies, and tips from other Connections teachers
- Communicates any course errors directly to the Curriculum and Instructional Support teams via an issue ticketing, IssueAware (IA), system and encourages teachers on the course level IAs to do the same.
- Provides feedback through the StarTrack Rating system.

Additionally, teachers may apply to become Teacher Curriculum Reviewers (TCRs) and work with the Curriculum Development team throughout the process. Although their role may vary depending upon the content, TCRs typically review course maps, evaluate assessment alignment and rigor, and develop

and/or evaluate supporting teacher resources. Working with the Curriculum Development team enables teachers to actively participate in the build process and give valuable insight into the creation of resources and implementation of course content.

Curriculum and course evaluation follows the iNACOL - Course Evaluation and Management standard: “Course provider uses multiple ways of assessing course effectiveness.” The following performance indicators are used to evaluate course effectiveness. Based on multiple data points, curriculum is revised, enhanced, or replicated to impact student performance.

- Student Performance Results – Formative and Summative
 - LEAP (Longitudinal Evaluation of Academic Progress) proprietary pre, mid, and post assessments
 - Scantron pre, mid, and post assessments
 - MAP (Measures of Academic Progress assessments)
 - Course Assessments
 - Exit Exams/State testing
 - AP Results
- Course/Lesson Performance
 - User Feedback – Students, Teachers, Learning Coaches
 - (Issue Aware tickets, Star Track Ratings, Feedback from Teacher Course Liaisons)
- Assessment Analysis Reports
- Course Review
 - Standards Alignments
 - Graduation Requirements
 - State and District Requirements
- StarTrack Lesson Rating Summary Reporting

The Star Track Lesson Rating and Feedback system is explained below.

Lesson Ratings and Feedback

In the bottom right-hand corner of every lesson is a rating tool called the StarTrack Rating system, which allows any user in Connexus® to share feedback at any time. By selecting the number of desired stars and sharing comments in this system, user feedback is delivered to the Curriculum team, who uses it to revise and enhance the quality of our lessons.

Below the lesson viewer are five stars ☆☆☆☆☆. When any permissioned user (e.g. student, employee, Learning Coach, teacher, etc.) hovers over and selects the intended number of stars, the stars light up ★★★★★ to represent the following ratings: Excellent (5), Above Average (4), Average (3), Below Average (2), and Poor (1).

By selecting the comment bubble 💬 next to the stars, users can provide comments, to elaborate on their rating. Feedback about the strengths or weaknesses of the lesson that explain the rating are the most constructive way to help us improve our students' curriculum and your training.

After a user has rated the lesson, his or her star rating will be displayed in the lesson viewer. The rating can be changed at any time.



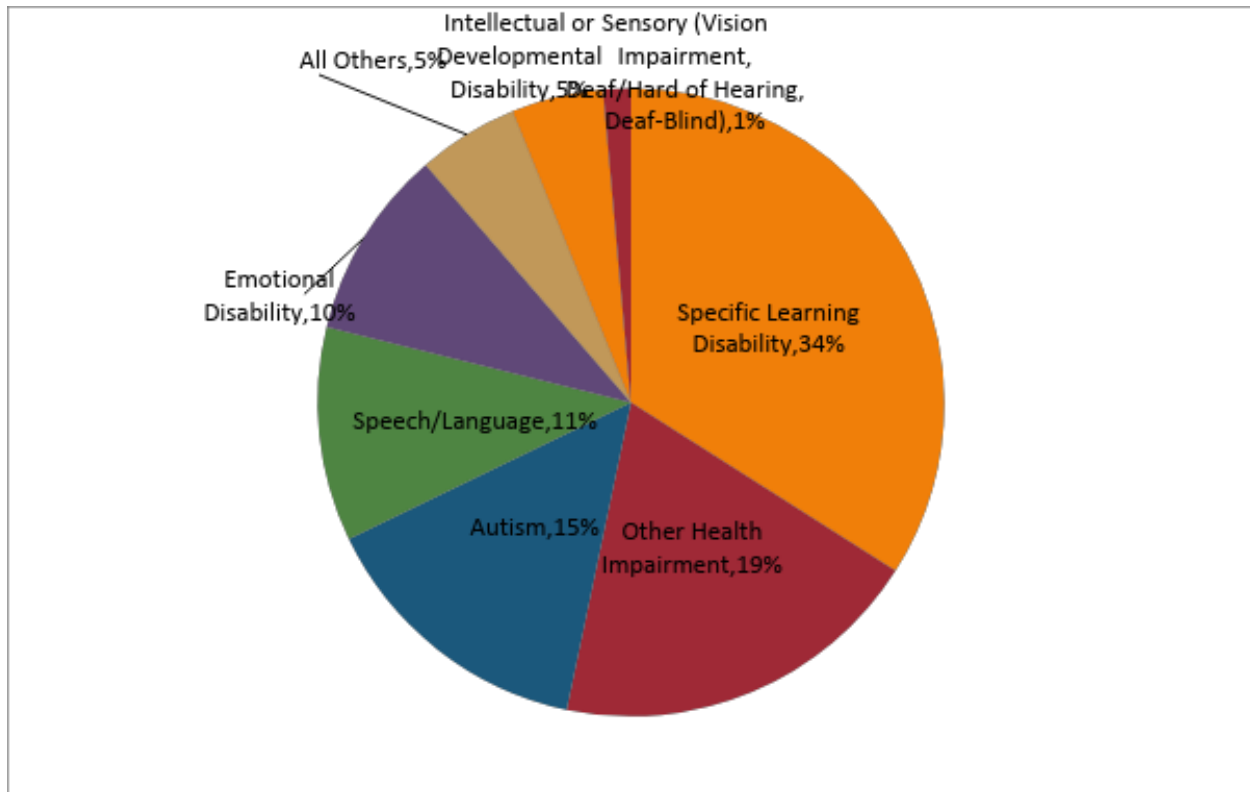
Extension

Use the StarTrack Rating system to send us your feedback on this and any other lessons as you move through this course. If you have suggestions or ideas to improve upon the material in this course, use the comment bubble to share your thoughts and explain your lesson ratings. This information will help us improve the quality of your training.

Accessibility for Students with Disabilities

Connections Education is compliant with IDEA and associated Federal laws and has extensive experience in meeting the needs of students with disabilities in a virtual school environment. Parent satisfaction is high among Connections Education families with exceptional children. The chart below indicates the current distribution of various disabilities among the 12% of Connections Education students nationally with special learning needs. "Other" includes students with vision impairments, hearing impairments, orthopedic impairments, traumatic brain injury, developmental delay and multiple disabilities, some of whom require assistive technologies or alternative curricula to support their daily work, but all of whom participate fully in the program.

2017-18 School Year



Connections Education uses technology as a means of providing equal educational opportunities to the greatest number of people, including people with disabilities. We are committed to creating an inclusive culture of learning and to providing programs, products, and services that are usable by the greatest number of people. We believe in developing solutions that remove barriers to a student's opportunity to learn and ability to demonstrate that learning.

Connections Education aims to create a culture of accessibility through education. Employees involved with the production or procurement of programs, products, or services will receive ongoing accessibility training with a focus on universal design principles, Section 508 technical standards, and WCAG 2.0 AA Success Criteria.

Connections Education is committed to working with the schools it supports in developing accessible websites and other electronic information to the Technical Standards and principles set forth in Section 508 of the Federal Rehabilitation Act of 1973. Any concerns regarding website and other electronic information accessibility are directed to our Section 508 coordinator at section508@connectionseducation.com.

Federal law requires all public schools to provide students, regardless of disability, with an equal opportunity to participate in and benefit from the school's education program. Students with disabilities receive access through the delivery of resources and accommodations tailored to each student's individual abilities and needs, including assistive technologies and individualized support.

Users can obtain 24-hour technical support by calling the Accessibility Hotline at 888-639-5960. Any other accessibility concerns or questions should be directed to accessibility@connectionseducation.com.

Connections Education complies with the requirements of the National Instructional Materials Accessibility Standard (NIMAS). As of August 2006, federal law requires publishers of K-12 curriculum to provide a digital version of textbooks and other related materials. The Individuals with Disabilities Education Act (IDEA 2004) established the format of these digital versions as the NIMAS. The NIMAS applies to printed textbooks and related printed core materials that are written and published primarily for use in elementary and secondary schools and are required by Connections Education for use by students.

Connections Education ensures access to eligible students with disabilities. All contracts with publishers of textbooks and related printed core material include a requirement for Section 508 and NIMAS compliance. Connections Education takes appropriate steps to ensure that only NIMAS eligible students receive these specialized formats. Students eligible to receive specialized formats produced by NIMAS files include students who are (a) blind, (b) visually impaired (a visual impairment with corrections and regardless of optical measurement that prevents the student from reading standard print), (c) physically disabled (a physical limitation that prevents the student from reading standard print), and (d) print disabled (having a reading disability resulting from an organic dysfunction and of sufficient severity that it prevents the student from reading printed materials).

Each student's Individualized Education Program (IEP) team determines the instructional program, related services, modifications, and accommodations needed for students with disabilities, including the need for accessible instructional materials and assistive technology. Connections Education assumes responsibility for providing accessible formats and assistive technology to students who need alternative access with these accommodations documented in an IEP or Section 504 plan.

The School Handbook: General Portion includes Connections Education's policy regarding accessibility.

Strategies for Addressing Multi-Lingual Learners

Connections Education complies with all federal and state Titles III and VI rules and regulations pertaining to the identification and service to English Learners (ELs). Connections Education provides quality English language instruction, based on established research for English acquisition, in addition to academic instruction in reading and math. Children who are becoming fluent in English are also learning

academic content in such areas as reading and math. Children receive a planned instructional program of English as a second language instruction (ESL) at their developmental and instructional level to facilitate the acquisition of English language skills. This instruction is provided by each school's highly-qualified, certified EL teacher. Connections schools may have multiple EL teachers as potentially an EL Lead. Staffing depends on the size of each school's EL population,

Connections Education provides ELs with virtual English language acquisition support. Students and Learning Coaches receive support from their EL teacher via telephone and Live Lesson® sessions. Services that promote language acquisition include instructional support to help EL students attain proficiency in listening, speaking, reading, and writing. Students receive individualized attention that facilitates fluency in English and is based on the Sheltered Instruction Observation Protocol (SIOP) framework. This targeted instruction and support is designed to assist the student with attaining English proficiency. Students are encouraged to use both English and their native language to understand and learn the English language. Intensity of service depends the student's English proficiency level as determined by English language proficiency screenings administered upon enrollment in a Connections Academy school.

Connections' academic content area curriculum will also challenge the student. The academic content areas are taught at the student's grade level. This immersion will engage and challenge the student academically while enhancing English language proficiency. Finally, parents have the right to decline EL services or to remove their child from the EL program. Federal law prohibits them from declining EL screenings upon enrollment and annual proficiency testing.

To support multi-lingual learners, teachers select SIOP strategies for use in LiveLesson sessions based on the second language acquisition proficiency level of the students. Teachers document mastery of core curriculum with student work samples. The principal or assistant principal verifies the provision of EL services and testing as well as EL student contact. This monitoring process is ongoing throughout the school year. Each school's EL teacher is provided with frequent and immediate support from the Connections Education EL Manager. The EL teachers provide support to fellow teachers, learning coaches, and students. Supplemental resources are provided, including technologies that facilitate language acquisition.

The school EL teacher or Lead will maintain EL student files; provide instructional consultation and modification of lessons, assignments, and assessments to Learning Coach(es) of EL students on a minimum biweekly basis; develop lessons based on the SIOP model and provide direct instruction to EL students in reading, writing, listening, and speaking through LiveLesson® and telephone conference; provide progress monitoring throughout the school year using various progress monitoring tools and curriculum-based measures; create and implement interventions based on student need and data from progress monitoring; monitor exited EL students for academic progress using state-specific criteria for two years after program exit; and stay current on federal and state legislation pertaining to EL students.

