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Supporting the Newcomer in the Mathematics Classroom

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Terms Used to Describe Newcomers

“Newcomer” is an umbrella term that includes various categories of immigrants who are born outside of the United States. For example, all immigrants are not necessarily ELs, as some are fluent in English, while others speak little or no English. Students identified as ELs require assistance with language acquisition (though more than 40 percent of identified ELs are born in the United States). Some ELs may need help integrating into U.S. culture. Depending on the school district, newcomers of school age who attend public school may be placed in a newcomer program or mainstreamed (National Clearinghouse for English Language Acquisition, n.d.c). The following table describes terms used by various entities to describe newcomer populations.

Term	Definition
Asylees	Asylees are individuals who, on their own, travel to the United States and subsequently apply for or receive a grant of asylum. Asylees do not enter the United States as refugees. They may enter as students, tourists, or businessmen, or with “undocumented” status (U.S. Department of Health and Human Services, n.d.a).
English Learner (EL)	An individual (A) who is aged 3 through 21; (B) who is enrolled or preparing to enroll in an elementary school or secondary school; (C)(i) who was not born in the United States or whose native language is a language other than English; (ii)(I) who is a Native American or Alaska Native, or a native resident of the outlying areas; and (II) who comes from an environment where a language other than English has had a significant impact on the individual’s level of English language proficiency; or (iii) who is migratory, whose native language is not English, and who comes from an environment where a language other than English is dominant; and (D) whose difficulties in speaking, reading, writing, or understanding English may be sufficient to deny the individual (i) the ability to meet the challenging state academic standards; (ii) the ability to successfully achieve in classrooms where the language of instruction is English; or (iii) the opportunity to participate fully in society (<i>ESEA</i> , as amended by <i>ESSA</i> , Section 8101[20]).
Foreign born	People who are not U.S. citizens at birth (White House Task Force on New Americans, 2015).
Immigrant children and youth (<i>Title III</i>)	Immigrant children and youth are those who (A) are aged 3 through 21; (B) were not born in any state; and (C) have not been attending one or more schools in any one or more states for more than for more than 3 full academic years (<i>ESEA</i> , as amended by the <i>No Child Left Behind Act of 2001 (NCLB)</i> , Section 3301[6]).
New American	An all-encompassing term that includes foreign-born individuals (and their children and families) who seek to become fully integrated into their new community in the United States (White House Task Force on New Americans, 2015).
Refugee	A refugee is a person who has fled his or her country of origin because of past persecution or a fear of future persecution based upon race, religion, nationality, political opinion, or membership in a particular social group (U.S. Citizenship and Immigration Services, 2015).
Student with interrupted formal education (SIFE)	Students in grades four through 12 who have experienced disruptions in their educations in their native countries and/or the United States, and/or are unfamiliar with the culture of schooling (Calderón, 2008).
Unaccompanied youth	Children who come into the United States from other countries without an adult guardian (U.S. Department of Health and Human Services, n.d.b).



Strategy: **Realia, Photos, and Illustrations**

Who: All Grade levels

Grouping: Individual, partners, small group, whole-class

Materials: A variety of realia, photographs, models, and hands-on materials

Description: The purpose of using realia (real items), photos, and/or illustrations, is to enable English Learners to develop a clear understanding of an unknown word or unclear concept. Providing hands-on and three-dimensional realia makes key content concepts and key vocabulary come alive.

For Example:

1. The teacher introduces key vocabulary word or the class generates a list of words around a particular content topic.
2. The words are introduced and posted on a word wall, chart, or in personal vocabulary dictionaries so that students can refer to them as needed.
3. After introducing the new vocabulary word with realia, illustrations, or photos, students are asked to turn to a partner and use a complete sentence which includes the vocabulary word, referring to the physical object (realia, illustration, or photo) and word wall (or chart or personal dictionary) as needed. Provide beginning English speakers with an illustration or picture (when possible, given the context of the word), and a sentence frame until they are familiar with the procedure and more comfortable speaking with a partner.



Classroom Thought Catcher

Adapted from "99 Ideas and Activities for Teaching English Learners with THE SIOP® MODEL" Vogt, Echevarria



Strategy: ***Simplifying Text***

Who: All Grade levels

Description: The purpose of simplifying text for word problems, is to make the language and format more accessible for English Learners. A teacher can do this by simplifying difficult vocabulary and reformatting complex word problems by bulleting or spacing out each step or important information required to solve the problem.

For Example:

Text	Simplified Text
<p>An art teacher had 736 crayons. She threw away 197 broken crayons. Then she bought 150 more crayons. Which equation shows how to find the number of crayons the art teacher has now?</p>	<p>STAAR® 2017 3rd Grade</p> <p>1 An art teacher had 736 crayons.</p> <ul style="list-style-type: none">• She threw away 197 broken crayons.• Then she bought 150 more crayons. <p>Which equation shows how to find the number of crayons the art teacher has now?</p>



Classroom Thought Catcher



Strategy: ***First Language Supports***

Who: All Grade levels

Grouping: individual, partners small group, whole-class

Materials: Any academic material in students' first language

Description: Research supports that seeing materials in their first language makes English more comprehensible, and actually supports language acquisition. It may not be feasible to provide first language support for all activities and every resource used in instruction, however when possible using first language supports help students to actually focus on learning content.

First Language Resources:

- Bilingual Dictionaries
- Commercial Math Glossaries
- Math Text written in first language



Classroom Thought Catcher



Strategy: **Personal Dictionaries**

Who: All Grade levels

Grouping: Individual, partners, small group, whole-class

Materials: Individual composition books or stapled journals (binder paper stapled with construction paper cover)

Description: The purpose of Personal Dictionaries is to support students' learning of key vocabulary. Students create the dictionaries as individual vocabulary and spelling resources, adding unknown words they come across while reading. The teacher works with students to clarify the meanings of the new words.

The words in the dictionaries can be categorized in alphabetical order, by subject, sound, morphological structure (such as past tense words), or by content and topic. Secondary teachers can have students create personal word dictionaries that include content specific vocabulary. Very young children and beginning English speakers are encouraged to use simple illustrations to represent words they are learning. In K-1, words can come from big books through a shared reading experience.



Classroom Thought Catcher

Classroom Accommodations and the Link to Language and Vocabulary Supports and Content Supports

Classroom Accommodation	Embedded Support
The teacher introduces a new book to a struggling reader prior to reading it aloud or independent reading. The topics discussed might include major concepts, difficult words, setting, characters, or prior knowledge of the subject.	➡ Language and Vocabulary Support
Using a dictionary or thesaurus, the teacher points out the meaning or synonym of a word.	➡ Language and Vocabulary Support
The teacher isolates specific information to focus the student on the core concept being taught.	➡ Content Support
The teacher acts out or has the students role-play newly introduced vocabulary or difficult concepts.	➡ Language and Vocabulary Support
The teacher simplifies difficult vocabulary and then reformats complex word problems by bulleting or spacing out each step required to solve the problem.	➡ Language and Vocabulary Support
The teacher provides the student with a specific supplemental aid (e.g., chart, table, graph, checklist, map, timeline) applicable to the question being posed, the assignment, or the task.	➡ Content Support
The student receives reading support.	➡ Text-to-speech
The teacher provides the formula(s) that is needed to solve a problem.	➡ Content Support
The teacher provides visual aids (e.g., demonstrations, photographs, art) to identify people and/or places.	➡ Content Support
The teacher provides visual aids (e.g., demonstrations, photographs, art) to define or clarify vocabulary.	➡ Language and Vocabulary Support
During classroom discussions, the teacher clarifies or rewords complex text or questions using simpler language.	➡ Language and Vocabulary Support
The teacher directs the student (e.g., highlight, bold, point to, flag the information) to the specific part(s) of the selection, diagram, map, or figure that is being discussed.	➡ Content Support
The teacher presents parts of a complex concept one at a time.	➡ Content Support

Content and Language Supports Guidelines

These designated supports, mainly in the form of pop-ups, rollovers, prereading text, and supplementary materials, are available on STAAR online tests only (They are not available for Algebra II or English III).

Pop-ups:

- isolate specific information in a question that corresponds to each answer choice
- isolate specific text or information in a selection that is referenced in the question or answer choices
- isolate specific information in a graphic or list that is referenced in the question
- define literary terms
- apply an allowable supplemental aid (e.g., graphic organizer, place-value chart, t-chart, graphic of scientific concept, timeline, map) to specific questions or answer choices
- include the formula from the grade-specific Reference Materials when the question specifies the measure or conversion to be performed
- direct student attention to parts of the grade-specific Reference Materials
- provide clarifying information for a graphic organizer, political cartoon, or map
- provide a visual representation in the selection, question, answer choices, or in the writing prompt by adding graphics, photographs, or animations
- define or clarify construct-irrelevant words, phrases, and sentences using plain language, synonyms, definitions, examples, and consistent language

Rollovers:

- bullet or separate steps in a process (e.g., multi-step problem, sequence of events)
- reword complex questions or answer choices to condense text
- reorganize and simplify historical excerpts

Prereads:

- offer text prior to the selection (for grades 3–8 reading, grades 4 and 7 writing, English I, and English II only)

Supplementary Materials:

- blank Punnett squares (biology only)
- writing checklists (for grades 4 and 7 writing, English I, and English II only)

References and Resources

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