Think of the language used in your content area. Is it the same or different compared to other content areas, such as math, science, or music (Ranney, 2013)? What symbols are utilized within your content area? Would someone from another content area know what those symbols represented?

What is academic language?

Academic language is oral and written language used for academic purposes. Academic language is needed for students to understand and communicate with a given discipline content area within the school setting. A good analogy is the ingredients for a cake. What would your cake look like and taste like without the flour and eggs? You might ask yourself “what is the difference between everyday language and academic language?”.

See the following continuum and table, which illustrates the characteristics (Ranney, 2013).

Academic language is composed of instructional language and discipline or content-specific language. Instructional language consists of following and giving directions, establishing classroom routines or procedures, discussing ideas and asking questions among students and teacher, explanations and summarizations from students and teacher, listening to presentations, presenting, writing journal entries or formal essays, and communicating behavioral expectations, such as hand signals (Hundley, 2013). These activities can occur within a whole group setting, small group, or between partners.

<table>
<thead>
<tr>
<th>EVERYDAY LANGUAGE</th>
<th>ACADEMIC LANGUAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shorter and incomplete sentences (e.g., “Going to the store.”)</td>
<td>Longer and more complex sentences with conjunctions and connective words (e.g., “After band practice, my sister and I are going to buy groceries at Publix; however, we will be home by 6 PM.”)</td>
</tr>
<tr>
<td>Actions through verbs (e.g., “cut down trees”)</td>
<td>Make actions into nouns to build concepts (e.g., “deforestation”)</td>
</tr>
<tr>
<td>More active voice (e.g., “How many cookies did they eat?”)</td>
<td>More passive voice (e.g., “How many cookies were eaten?”)</td>
</tr>
<tr>
<td>Shorter noun phrases (e.g., “healthy food”)</td>
<td>Longer noun phrase (e.g., “Improving the nutritional quality of foods offered from other sources...”)</td>
</tr>
</tbody>
</table>

Adapted from Childress (2013) and Ranney (2013)
For example, in an elementary math class, the description would include the steps for subtracting two-digit numbers with regrouping or “borrowing”:

1. Make sure there is proper alignment with the ones’ column of 64 with the ones’ column of 27.
2. Subtract the ones’ column, 4 subtract 5. You cannot subtract 5 from 4 since 5 is bigger than 4.
3. Borrow from the tens’ column by crossing out the 8. Above the 8, subtract 1, and rewrite the number as 7.
4. Place a “1” in front the 4 in the ones’ column, which represents 14.
5. Start the subtraction process again with the ones' column, 14 subtract 5 equals 9.
6. Subtract the tens' column, 7 subtract 2 equals 5.
7. 84 subtract 25 equals 59. Your final answer is 59.

\[
\begin{array}{c}
84 \\
- 25 \\
\hline
59
\end{array}
\]

The numbers to be grouped in different ways without affecting the sum.

\[
80 + 4 = 84 \text{ and } 70 + (10 + 4) = 84
\]

**Function**

Language function, or purpose, is the action verb within the instructional objectives or learning outcomes (Constantinou & Wuest, 2014; Hundley, 2013; Ranney, 2013). With function, think of Bloom’s Taxonomy from Chapter 7. Refer to next three pages (pages 300 – 302) for defined functions and examples.

If you said “define and explain”, then you are correct!

What are the academic language functions or purposes for these prompts about genetics? See the parentheses to check your answers (Mathison, n.d.).

- What effect might selective breeding of plants and animals have on the size of the Earth’s human population? Why? (Infer)
- Should it be legal to clone human beings? Why or why not? (Justify and Persuade)

Beyond the step-by-step procedure, the teacher and students should know the explanation and mathematical justification for subtracting with regrouping. The instructional explanation includes the following:

The “crossing-out” procedure is really a way of re-writing 84 as 7 tens and 14 ones. In addition, the justification for why this procedure works includes the following: With this example, the Associative Property of Addition allows

What are the academic language functions from this lesson plan from the visual arts? (Raney, 2013).

- Define allegory.
- Explain what attributes make an image allegorical.
### Academic Language Functions

<table>
<thead>
<tr>
<th>Language Function</th>
<th>Student Uses Language to:</th>
<th>Examples</th>
<th>Tasks Associated with Academic Language Function</th>
<th>Questions Commonly Asked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seek Information</td>
<td>Observe and explore; acquire information; inquire</td>
<td>Use who, what, when, where, and how to gather information</td>
<td>Define, count, draw, identify, indicate, label, list, match, name, point, recall, recite, reproduce, repeat, trace, write, state, select, record, attributes, characteristics, main idea</td>
<td>Who __?, What happened?, Where did it happen?, When did it happen?, Where did you find that?, How do you do that?</td>
</tr>
<tr>
<td>Inform</td>
<td>Identify, report, or describe information</td>
<td>Recount information presented by teacher or text, retell a story or personal information</td>
<td>Retell, recount, reorder, represent, depict, paraphrase, summarize, give examples, draw, explain, conclude, convert, describe, prepare, transform, translate, restate, rewrite, prepare, give in your own words, generalize, extrapolate</td>
<td>Retell the story in your own words. Summarize the chapter on __. What happened?, Report your findings., Describe the main character. Tell about __. What happened? Show how __.</td>
</tr>
<tr>
<td>Compare</td>
<td>Describe similarities and differences in objects or ideas</td>
<td>Make/explain a graphic organizer to show difference and similarity</td>
<td>Distinguish, compare, contrast, group, identify, illustrate, point out, recognize, separate, describe, attributes, commonalities, differences, differentiate,</td>
<td>How are __ and __ the same? Different? Compare __ and __. Describe __. Now, describe ___. Do either of these __? What makes __ the same? What makes __ different? How do we know the difference between __ and ___?</td>
</tr>
<tr>
<td>Order</td>
<td>Sequence objects, ideas, or events</td>
<td>Describe/make a timeline continuum, cycle, or narrative sequence</td>
<td>Organize, develop, discover, complete, process, outline, order</td>
<td>Put these in chronological order. What happened first? (e.g., second, later, or last) When was ___? What would happen if ___?</td>
</tr>
<tr>
<td>Classify</td>
<td>Group objects or ideas according to their characteristics</td>
<td>Describe organizing principles, explain why A is an example but B is not</td>
<td>Classify, break down, arrange, organize, categorize, construct, create, generate, summarize, criteria, prelude, include, arrange, group, genres</td>
<td>What color is __? What size is __? What is the texture like? What types of __ are represented here? What traits do these __ have in common? What characteristics do these have in common? What makes these different? Sort these by __ (e.g., size, color, texture, or shape)</td>
</tr>
</tbody>
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<tr>
<td><strong>Analyze</strong></td>
<td>Separate whole into parts; identify relationships and patterns</td>
<td>Describe parts, feature or main idea of information presented</td>
<td>Analyze, calculate, choose, classify, criteria, diagram, break down, categorize, classify, compare, contrast, deduce, detect, differentiate, discriminate, distinguish, group, identify, illustrate, infer, order, outline, recognize, relate, select, separate, subdivide, transform</td>
<td>What is the difference? How is/are they related? Why is ___ important? Are they common traits? What caused ___ to happen? What results/consequences might ___ create? What is the main idea? What details support this idea?</td>
</tr>
<tr>
<td><strong>Infer</strong></td>
<td>Make inferences; predict implications, hypothesize</td>
<td>Describe reasoning process (inductive or deductive) or generate hypothesis to generate causes or outcomes</td>
<td>Predict, extrapolate, restate, represent, rewrite, summarize, give examples, evidence, supporting details, reconstruct, synthesize, derive, deduce, explain, create, construct</td>
<td>Why? Why did that happen? How did that happen? Why do you think ___? What makes you think ___? What tells you ___? How do you know that?</td>
</tr>
<tr>
<td><strong>Justify and Persuade</strong></td>
<td>Give reasons for an action, decision, point of view; be convincing</td>
<td>Tell why A is important and give evidence in support of a position</td>
<td>Justify, argue, persuade, make a case for or against, compare, contrast, distinguish, discriminate, illustrate, recognize, relate, deduce, categorize, combine, document, support, test, validate, verify, refer, relationship, irrelevant, preclude, give/support your point of view, tone, thesis, evidence, debate, crucial, critical</td>
<td>Why do you think this is important? What evidence do you have to support your point of view? How can you convince someone of your ideas? What reasons will you give to justify your point of view? How did you arrive at your decision?</td>
</tr>
<tr>
<td><strong>Solve Problems</strong></td>
<td>Define and represent a problem; determine solution</td>
<td>Describe problem solving procedure; apply to real life problems</td>
<td>Solve, deduce, hypothesize, causes, effects, support, test, validate, verify, summarize, rate, rank, measure, relate, recommend, justify, judge, interpret, determine, discriminate, decide, criteria, table, refer, relationship, diagram, consequence</td>
<td>What is the process to solve this problem? What is required to solve this problem? Why? What is the criteria? What is your hypothesis? What evidence do you have to support your hypothesis? What is the relationship between ___ and ___? What are the causes? What are the effects? What is your interpretation of this conclusion?</td>
</tr>
</tbody>
</table>

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<tbody>
<tr>
<td>Synthesize</td>
<td>Combine or integrate ideas to form a new whole</td>
<td>Summarize information cohesively; incorporate new information into prior knowledge</td>
<td>Arrange, categorize, combine, compile, compose, construct, create, deduce, derive, design, devise, develop, document, explain, formulate, generalize, generate, integrate, modify, organize, prepare, plan, produce, propose, rearrange, reconstruct, relate, reorganize, revise, rewrite specific, summarize, tell, transmit, write, criteria</td>
<td>What would your plan be for ___? How might this be different if ___? How would you rewrite this? How would you arrange this into ___? How do they relate to each other?</td>
</tr>
<tr>
<td>Evaluate</td>
<td>Assess and verify the worth of an object, idea, or decision</td>
<td>Identify criteria, explain priorities, indicate reasons for judgment, confirm truth</td>
<td>Appraise, argue, assess, compare, conclude, consider, contrast, criticize, critique, decide, describe, determine, discriminate, distinguish, evaluate, grade, judge, justify, write, recommend, validate, verify, test, support, rate, rank, measure, criteria, interpret, relate</td>
<td>What is your favorite ___? Why? How does this impact ___? How or why is this significant? How or why is this valuable? How or why is this useful? What did you do to develop ___? Why?</td>
</tr>
</tbody>
</table>

**REFERENCES**


**Form**

"Form" are the structures or tools for organizing the oral or written language within a content area. Form, in addition to function, is part of the instructional objective or learning outcome. For example, in math class, forms include mathematical symbols, figures, tables, graphs, and written narrative. For an art class, the students could read a short essay aloud “on the air” in a mock television or radio presentation, write an art reviews or critiques for the classroom newsletter, or conduct a self-assessment about their artwork using content-specific vocabulary (Childress, 2013). To see how form and function come together, the tables on the next page present examples of functions and forms. See the following website for content-specific examples of function and form within academic language:

http://www.pacctpa.org/_main/hub.php?pageName=Teaching_Event_Handbooks

**Vocabulary**

Within vocabulary, there are two types of words - the content-specific (or “brick” words) and the general academic (or “mortar” words). These “brick” words are words that are defined in a textbook and often are the words that a teacher asks the students to know, such as coefficient, photosynthesis, and genre.

The “mortar” words are the words that teachers often assume that students know – mistakenly, such as interpret, complex, and examine. (Ranney, 2013).

“What are the key words my students will need to read, understand, and utilize to be successful with this lesson?”

After the list of vocabulary is created, determine the new content vocabulary words, which words may confuse the students (e.g., evaluate and analyze), and which words may have different meanings in other contexts (e.g., composition, table, and balance). The words with different meanings seems to confuse students the most. For example, in PE, a student pitches the ball. In business education, one might learn to deliver a sales pitch. In music, pitch is the term for the sound vibrations that are heard when a student plays an instrument or sings a note. Now, think about kid-friendly methods to explain them to the students (Hundley, 2013). For example, I created a vocabulary book or journal for my math students. (Actually, the idea for “Bell’s Useful Guide” began with the vocabulary book.) As a class, we defined the term in words and pictures. The same definition was posted on my word wall, which I referred to during the instructional time. These vocabulary books can be personalized or individualized by student, too.

An example from Dr. Brown’s students’ math vocabulary book.
### English | Math | Science | Social Studies
--- | --- | --- | ---
Written narrative | Numbers | Chemical equations | Written narrative
Poetry | Equations | Tables | Newspapers
Theatre | Two-column Proofs | Graphs | Graphic printed material
Newspapers | Tables | Lists (e.g., materials) | Maps
Film | Graphs | Written narrative | Charts
Graphic printed material | Written narrative | | Graphs
Presentations (video and live) | | Presentations (video and live) | |

**Examples of form for the four core content areas.**

<table>
<thead>
<tr>
<th>ELEMENTARY LITERACY</th>
<th>SECONDARY ART</th>
<th>SECONDARY ENGLISH</th>
<th>SECONDARY MATH</th>
<th>SECONDARY MUSIC</th>
<th>SECONDARY SCIENCE</th>
</tr>
</thead>
</table>
* interpreting and explaining how an author indirectly conveys character’s feelings. | * interpreting a artist’s intentions and justifying the interpretation through specific references to elements of a work of art. | * interpreting and explaining an author’s use of figurative language. | * interpreting and explaining proofs. | * interpreting a musical score through performance. | * interpreting and explaining hypotheses. |

**Examples of function and form for various content areas.**

- pair and share (protein synthesis)
- graphic organizer (protein synthesis)
- connections with prior knowledge (cheek cell)
- word wall (RNA)
- asked the students to repeat the word after him (endoplasmic reticulum)
- broke down the parts of the word (endo-)
- visual representation (protein synthesis)
- students discussed in pairs (what they saw in the visual)

**How could you move students to use more academic language?**

I have gathered a few ideas for you to utilize within the classroom.

**Tiered word wall** (Larson, Dixon, & Townsend, 2013) is similar to the traditional word wall, but the words are differentiated.

- Tier 1 words are basic, everyday words (e.g., dirt, agreement, and drop.)
- Tier 2 words are similar to “mortar” words (e.g., civil, crucial, and converge.)

Watch this video of a biology teacher using several strategies to introduce the vocabulary. As you watch it, list the strategies he utilized.

[http://mpweb2.ncte.org/Pathways/BFootage/LIL/Bonine1.html](http://mpweb2.ncte.org/Pathways/BFootage/LIL/Bonine1.html)

When I watched the video clip, here is the list of strategies that I saw. I included the point of reference from the video in parentheses.
• Tier 3 words are content-specific vocabulary words, such as reservation, segregation, and sediment.

**Sentence Frames** (Hundley, 2013) are tools that provide structure for students to organize their thoughts. This tool can be used for a variety of functions or purposes.

• Since the square root of __ is __, then __ squared must be ___. (Math)

• The __ is an important symbol for __ because ___. (ELA)

• In the experiment, the __ acted on the __ and caused a ___. (Science)

• The war was caused by ___, ___, and __ because ___. (Social Studies)

**Entry Slips** or Tickets In the Door (Larson, Dixon, & Townsend, 2013, p. 18) allow the students to activate prior knowledge and prepare for the day’s lesson.

• Write down the words, ______, ______, and ______ from our word wall and, with a partner, write down everything you think you know about them.

**Exit Slips** or Tickets Out the Door (Larson, Dixon, & Townsend, 2013, p. 18) allow the students to use academic language to summarize the day’s lesson.

• Write down one new thing you learned today and use at least two of our word wall words in your response.

“Seconds” Thinking Questions (Mathison, n.d.) can serve as great formative assessments within the instruction in addition to the opportunity to utilize academic language. According to Mathison (n.d.), her “think time” questions increase the length of the student responses, the number of unsolicited, yet appropriate, responses, and student confidence in responding.

• 1 second – anyone may answer without raising his or her hand.

• 5 second – hand must be raised, but the teacher will not call on anyone for at least 5 seconds.

• 10 second – teacher will call on anyone after 10 seconds have lapsed whether their hand is raised or not.

• 20 second – teacher will call on anyone after 20 seconds have lapsed whether their hand is raised or not.

Here is the procedure for implementing the “seconds” thinking questions.

1. “All eyes on me. I am going to ask you a (5, 10, or 20 second) question.”
2. “Remember, after I ask the question, I will be quiet so you can think for (5, 10, or 20) seconds.”
3. “When I say ‘OK’, you may raise your hand or not. I may call on you whether you raise your hand or not.”

**Conclusion**

Academic language spans across all content areas. Within the concept, the components are not mutually exclusive because there is overlap among the components of academic language. Back to our cake analogy, each component is needed by the students to understand the academic content or discipline and, in turn, to communicate their academic knowledge through oral, written, or symbolic methods.

An example of a tiered word wall in a seventh grade social studies classroom (Larson, Dixon, & Townsend, 2013).
References


