Teachers and teacher educators share a common goal—they all strive to help their students become knowledgeable, lifelong learners. Language arts teachers want their students to become proficient readers and writers, to appreciate and understand quality works of literature, and to apply their literacy skills with all texts. Social studies teachers want their students to read and write like historians, to value primary sources of information, and to use this knowledge to understand the world around them and how we got here. Science teachers want their students to read and write like scientists, to understand how the world works, and to question things around them. Similarly, mathematics teachers want their students to read and write like mathematicians, develop skill in manipulating numerical data, and learn problem-solving skills applicable in the real world.

The literacy tools people use for communicating and learning constitute a thread common to learning in all disciplines. Middle grades students must be able to read, write, listen, speak, view, and visually represent information in every content area. With the volume of information students must learn, teachers cannot possibly tell them or read to them everything they need to know. They must, instead, help their students become self-directed learners, enabling them to take control of their own learning—a highly motivating experience essential for knowledge building (Guthrie, 2007).

We understand that literacy is important for learning, but we also know that implementing literacy strategies for supporting learning in the content areas is a difficult and complex undertaking. Middle grades teachers face many constraints that hinder the use of literacy practices as tools for learning. With a predominant focus on content knowledge and so little time in which to teach, many content area teachers are reluctant to invest in instructional practices that appear to be too time consuming or unrelated to their immediate purpose. For these reasons, we highlight four essential literacy components that we believe can be realistically implemented by all teachers who work with young adolescents. While there are other literacy components, we selected choice, accessibility, rereading, and supported reading with the hope that teachers can readily consider how such facets of instruction can be used in their programs (see Figure 1). We first provide a rationale for these four instructional components and then offer suggested activities that illustrate the components. In this article, we show how these activities can be applied in language arts, social studies, science, and mathematics classes.

**Choice**

It is important to allow students to make choices in school, and it is for this reason that we include choice as a critical literacy component that can be realistically addressed in all middle grades classrooms. Studies concerning students’ reading preferences have shown a disconnect between in-school and out-of-school reading (Ivey & Broaddus, 2001; Worthy, Moorman, & Turner, 1999). Such studies are the basis for reexamining the purposes for the required readings included in the curriculum and for considering the role of student choice in academic programs.
Research also has shown the importance of choices for middle grades learners in different instructional settings. For example, Triplett (2004) found that one important feature of the tutoring program for a struggling sixth-grade reader was the opportunity to make his own choices about what to read. This feature, among others, created a “context for success” (p. 221) that provided the reader with a positive reading experience. In a study of another tutoring program, Friedland (2005) noted that student engagement increased when the tutors were responsive to the needs of the students, and such responsiveness involved honoring student choice. In a study that investigated a literature-based developmental reading program (Stewart, Paradis, & Ross, 1996), the researchers included choice as one of several important program facets that led to reading improvement. In particular, choice in book selections proved to be a powerful motivation for students to read.

While choice is important, we concur with Guthrie (2004) that choice should match the maturity and ability levels of students. Furthermore, student choice must be carefully examined and realistically structured within a program to ensure a balance between teacher selection and student choice of texts. Such cautionary measures are necessary. As Moley, Bandre, and George (2011) found that, when given the choice of what to read, students may be motivated by a variety of concerns, such as the number of points particular books are worth. They described one extrinsically motivated student who elected to read *The Color Purple* by Alice Walker simply because it counted for three books based on the teacher's guidelines, not because it was interesting to her or matched her reading level. To avoid such pitfalls, we can keep in mind what Guthrie (2007) calls the teacher’s role in student choice.

The teacher’s role is usually not to inspire students to prefer choice. Rather, the teacher’s role is to provide students with academically significant and realistic choices. Effective teachers expand students' liberties and levels of self-direction as the lesson, unit, and course proceed. (p. 7)

There are a variety of realistic ways in which choice can manifest itself across subject matter disciplines. Students can choose not only what books to read but also what topics to investigate, what side to support in a debate over a controversial issue or in a political election, what order in which to accomplish required tasks, and so on (Guthrie, 2007).

One way to value student choice in middle grades classrooms is through the use of a strategy known as Think-Tac-Toe (Samblis, 2006). The Think-Tac-Toe strategy is an open-ended framework created by the teacher to provide students with a menu of activity options. Using a structure similar to a Tic-Tac-Toe board, the teacher creates meaningful and engaging activity options for students. Think-Tac-Toe boards can include before-reading, during-reading, and after-reading activities that foster deeper interaction with text to enhance students’ comprehension. These activities integrate writing skills, speaking and listening skills, collaboration, and the use of technology—all of which are expectations in the Common Core State Standards (Common Core State Standards Initiative, 2010). Think-Tac-Toes can be written specifically for a given text such as a class novel, textbook, or online articles, or they can be constructed in an open-ended manner to coordinate with a particular genre that the students read independently. A sample seventh-grade language arts Think-Tac-Toe for the book *The Hunger Games* (Collins, 2008) can be found in Figure 2.

The Think-Tac-Toe gives students ownership over their learning by allowing them to make decisions about their learning and engagement. It also provides teachers with a better understanding of their students’ learning styles, interests, and strengths based on the activities selected by the students and the open-ended nature of the work. The use of Think-Tac-Toe creates a balance between teacher-selected activities and student-selected activities. The parameters developed by the teacher
ensure academically significant and rigorous activities. Furthermore, this activity can be easily adapted to meet a range of learner needs.

**Accessibility**

Texts that are too difficult to read will not support learning for anyone at any age. If a book is far beyond a reader’s capability, even support from a more knowledgeable other may not be enough to make it productive for learning. Common sense dictates that this is true, yet teachers continue to place unreasonable demands on students to read texts that are too hard, or they eliminate the reading aspect of learning and use other ways to expose students to content knowledge, such as lecturing. By resorting to such actions, teachers do students a disfavor by not providing them the needed opportunities to become independent readers and learners in the various content areas. Both situations—using texts that are too difficult and bypassing reading—do not address students’ content area literacy needs. As previously mentioned, students, regardless of ability level, will not be able to comprehend a text that is beyond their capabilities. Even with teacher support, school texts can sometimes be beyond the reach of some students, and requiring them to read such texts leads to frustration and low self-esteem, with little or no learning occurring.

One solution to this problem offered by experts in the field involves the use of accessible texts. Accessibility refers to providing books for students and making sure they can read them. Tovani (2004) defined accessible texts as quality, well written books and passages that are of high interest to students and, most important, are suitably matched to students’ reading levels. Moreover, Ivey (2010) argued that to promote lifelong reading that results in independent learning, students need to read books they can handle. Students cannot successfully engage in higher-level, critical reading of texts involving close analysis and questioning of ideas with books that are too difficult for them. As Allington (2007) observed in his research, effective literacy teachers in Grades 4 through 12 used multiple texts to ensure that all students had opportunities for active engagement: “Virtually all students could find texts that they were able to read accurately, fluently, and with comprehension” (p. 278)—that is, accessible texts.

A collection of multiple resources, known as text sets (Darigan, Tunnel, & Jacobs, 2002; Hamman, 1995;
Hartman & Hartman, 1993; Short, Harste, & Burke, 2002), provides a range of reading material unified by a particular topic, theme, or concept. Texts included in text sets offer a variety of genres and reading levels to meet the diverse experiences, interests, and reading abilities of adolescent readers. Text sets may include print and digital genres such as narratives, nonfiction, charts, maps, timelines, primary sources, photographs, poetry, song lyrics, letters, journals, and graphic novels. Moss, Lapp, and O’Shea (2011) discussed the notion of “tiered texts” that allow students to begin with shorter, easier text reading on a topic to gain experience and knowledge and then proceed to more difficult and challenging texts.

When designing text sets, it is important for teachers to select texts at a variety of reading levels to ensure accessibility for all learners. The Lexile system provides a readability formula, or Lexile level (Smith, Stenner, Horabin, & Smith, 1989), based on syntactic and

Figure 3 Sample text set for the Holocaust

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<th>Picture Books</th>
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Using an allegory to describe the Holocaust, Bunting depicts animals as Jewish people and others who suffered as a result of the Holocaust. The message teaches the reader to stand up for what one believes in and not to be prejudiced against others. |
Two sisters who escaped the Warsaw ghetto befriend the many cats abandoned by their Jewish families. The cats help the girls discover holes in the Ghetto walls to help smuggle food to those still in the Ghetto. When the soldiers find out about the plan, the cats play an instrumental role in helping the girls continue with their plan. |
Rose witnesses the occupation of German soldiers in her own small town in Germany. Curiously, Rose follows one of the military trucks until she comes across a barbed wire fence corralling hungry children in striped uniforms. For the next several weeks, Rose returns with bread for the hungry children. One day she returns to find that the camp is empty. Suddenly, a shot is fired and Rose never returns home. |
When Nazi soldiers separate a Jewish family by taking them away to a concentration camp, the son smuggles in a harmonica that was a gift from his father. The harmonica becomes his solace in the camp. When the commandant learns of his music, he orders him to play on command. While the soldiers do not demonstrate a sense of humanity, other Jews in the camp hear the music and find it comforting. |
This true story of the author’s aunt, Monique recounts her experience growing up in France during WWII. When Monique’s French village is occupied by the Nazi soldiers, she meets a young Jewish girl, Sevrine, who has been hiding in her basement. The two become friends, but when Sevrine’s family is discovered, they must flee. |

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<th>Graphic Novels</th>
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The author recounts the removal of his parents from their home in Warsaw to concentration camps including Auschwitz and Birkenau. While they all survived the horrific experience, Spiegelman describes the suffering his family endured in an attempt to comprehend how these experiences shaped his parents and his challenging relationship with his father. The author uses little mice to represent Jews and towering cats for the Nazi soldiers. |

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<th>Chapter Books</th>
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Bruno’s family moves due to his father’s promotion with his job during WWII in Nazi Germany. Bruno, young, adventurous, and curious, explores the area around the new house and comes across a barbed wire fence separating him from another young boy wearing striped pajamas. This new friend faces different circumstances than Bruno, and, ultimately, their friendship has devastating consequences. |
Annemarie’s family disguises her best friend as a member of the family when the Germans invade Copenhagen in 1943. As part of the Danish Resistance movement, Annemarie’s family engages in a dangerous mission to smuggle the Jews to safety in Sweden. |
semantic measures of text complexity. Texts are assigned a Lexile level ranging from 0–2,000 with increasing complexity. Teachers can incorporate this staircase of levels into text sets to assist students with finding texts at their independent reading levels and not limit them to grade level texts. Furthermore, the incorporation of text sets with increasing levels and complexity addresses the Common Core State Standards to read and comprehend literature and informational text within the 6–8 grade level text complexity band that ranges from 955–1155 Lexile levels (Common Core State Standards Initiative, 2010).

Creating a text set with a variety of levels is especially crucial for reluctant readers. Because many classroom textbooks are written above grade level (Vacca, Vacca, & Mraz, 2011), it is common for struggling readers to experience frustration. Difficult text, combined with a mismatch between students’ experiences and interests, may lead students to resist reading and achieve low comprehension. As Allington (2002) noted, students cannot learn from texts they cannot read. Teachers must create ways to engage readers—particularly reluctant readers—with accessible, engaging, and interesting texts. When students are matched to appropriate texts, the material becomes more relevant and meaningful.

Tovani (2004) explained how text sets allow readers to develop understanding of a concept rather than being limited to the textbook as the primary text. Because text sets allow readers to focus on a given topic or theme, they develop deeper understanding of subject matter and more critical reading experiences. Figure 3 shows a sample text set for the study of the Holocaust.

### Rereading

Rereading is a long-standing, effective instructional practice that serves a variety of purposes. As Tovani (2004) explained, “Good readers reread and return to text to build and extend their knowledge of specific concepts, or to enhance their enjoyment of texts they have enjoyed previously” (p. 21). There are many benefits associated with rereading texts, as long as the rereadings are done for an explicit purpose. Lynch (2008) provided several reasons for using rereading as a learning tool: as a study strategy for prior learning, as a fix-it strategy for monitoring comprehension, as a way to deepen understanding of conceptual ideas, and as a tool for changing perspectives to think differently about a topic. Furthermore, repeated readings of the same text promote fluency as students become more efficient in accurately recognizing words, such as high frequency words, and in increasing their reading rate (Gunning, 2012). Such practices are especially important in one-on-one tutoring sessions.

Rereading also has a place in content area instruction to clarify information in class discussions, to find new facts, to develop appreciation for conceptual ideas, and even to broaden understanding (Gunning, 2012). Gunning argues that rereading is not necessary when students understand what they are reading during the initial read, and he contends that rereading should be done silently, reserving oral rereading for a specific purpose, such as to answer a question.

One way teachers can promote purposeful, engaged rereading is by using a type of “statement guide” called the Reaction Review Guide (Wood, Lapp, Flood, & Taylor, 2008). As the name implies, these guides use statements instead of questions to get students to think about, discuss, share, and reflect on key concepts from a text selection. The guides give teachers the opportunity to see cognitive growth in students because they typically span the pre-reading, reading, and post-reading stages of a lesson.

During the pre-reading stage, students respond to the statements in the guide with a partner or small group, contributing their thinking and prior knowledge about each statement. Then they use the statements to guide and focus their attention while reading. Afterward, they return to discuss what they have learned by referring back to the related parts of the targeted text (i.e., rereading). Statement guides such as the Anticipation and Extended Anticipation Guide can be used with any subject area, any grade level, and any form of text (e.g., online, traditional). The Reaction Review Guide is particularly suited for mathematics instruction because learning mathematics often involves the introduction of new concepts for which students may have little prior knowledge. Here, students are asked to respond to statements after the reading and learning of new concepts to confirm and solidify their new learning. A student who has had little experience in geometry will have difficulty responding to the statement, “An equilateral polygon and a regular polygon have the same properties.” Yet, encountering the same statement after teacher explanation and group and individual practice can assist students in thinking over the statement, rereading...
previous lessons and sources for clarification, and then sharing their reactions in the space provided.

Teachers frequently comment how difficult it is to get students to reread and refer back to their mathematics textbooks to answer questions they may have or to refresh their memories about how to solve a computation problem. The Reaction Review Guide (see Figure 4) is one way to engage students in the rereading of mathematic source material. As can be seen in the figure, the guide also provides an opportunity for students to justify their writing as they seek to determine if the statement is correct or incorrect according to what they have just learned. The Reaction Review Guide should precede any individual classroom test to allow pairs of students to review, process, share, and confirm their new learning.

Supported reading

When students read texts that are easy or at their independent levels, very little or no instructional support is needed for them to comprehend the texts. On the other hand, most texts used in content classrooms are at many students’ instructional reading levels or even frustration levels. Thus, carefully planned instructional support is necessary for comprehension and learning to occur. There are many suggestions for what this support might look like, such as scaffolding reading experiences (Appleman & Graves, 2012), questioning the author (Beck, McKeown, Hamilton, & Kucan, 1997), and concept-oriented reading instruction (Guthrie, Anderson, Aloa, & Rinehart, 1999), to name a few.

Instructional support can occur before, during, and after reading, or BDA (Vacca, Vacca, & Mraz, 2011). Before-reading activities are frontloading devices for building or activating important background knowledge, stimulating interest and motivation to learn the topic to be addressed, arousing curiosity, and, especially, providing a purpose for reading. During reading, teachers can support student interactions with the text by using prompts to stimulate responses and help students

Figure 4 Sample Reaction Review Guide applied to mathematics

<table>
<thead>
<tr>
<th>Using Percentages in Everyday Life</th>
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<tr>
<td>Directions: With your partner, take turns reading each statement below and discuss possible responses. Indicate if you agree or disagree but be sure to go back to your text and related materials to support and explain your answer, just as we did together in class. Use examples whenever appropriate and tell how you came up with that answer.</td>
</tr>
</tbody>
</table>

1. **A percentage is way of representing a fraction.**
   - I agree ___ x ___ I disagree ___ because: On page 96 of our book it said that.
   - We learned that the fraction has a denominator of 100. So 25% would be 25/100 which means one fourth.

2. **You can think of a percentage as meaning “out of 100.”**
   - I agree ___ x ___ I disagree ___ because: it also said that in the book and in class (See statement number 1)
   - So 6% tax added to 100 pennies ($1.00) would be $1.06.

3. **A sales tax of 7% means that for every dollar something costs, a person would need to pay seven times more.**
   - I agree ___ I disagree ___ x ___ because: the person would have to pay 7 cents not seven times more.
   - It would look like this: $1.00 + (7% of 1.00) = $1.00 + .07 = $1.07.

4. **If the state sales tax is 6%, the total cost of the $30.00 shirt is $36.00.**
   - I agree ___ I disagree ___ x ___ because: that is too much.
   - You just multiply 6 x 30.00 which comes out to $1.80, so the total price would be $31.80.

5. **Lunch was $15.00 and with the 20% tip, it was $18.00.**
   - I agree ___ x ___ I disagree ___ because: It is easy to determine 10%, which would be $1.50.
   - So then you just add another 10%, which makes it $3.00. $15.00 + $3.00 = $18.00

6. **Knowing how to calculate percentages is essential in everyday life.**
   - I agree ___ x ___ I disagree ___ because: we talked about doing percentages to figure out tips in restaurants.
   - Also when something you want to buy is on sale, you need to figure out how much it will cost.
   - You need to know percentages if you are doing a survey to find out about something.
grapple with important and difficult concepts. After-reading activities can serve to extend and reinforce text ideas gleaned from the reading.

While the end goal of any reading instruction is the development of independent, strategic readers and writers, it is sometimes necessary for teachers to demonstrate and model a new strategy for students and then give them the opportunity to work in groups, pairs, and individually to master the strategy. The Phased Transfer Model of Instruction with flexible grouping (Wood, 2002; Wood, Lapp, Flood, & Taylor, 2008) can be used in any subject area or grade level to teach particular skills and strategies. Figure 5 is a generic illustration of the model, including the flexible grouping element that provides the added social support necessary for sharing knowledge and authentic learning. This model acknowledges that teaching and learning are discursive and transactional because it allows students to work in groups, pairs, and individually, with the teacher involved in varying capacities. Figure 6 is a step-by-step description of how the model can be applied in a classroom setting. In this figure, we describe the process of teaching students how to retell, put information in their own words, and then put their oral retelling in print form as a summary of the content read (e.g., digital or print text), viewed (e.g., a science experiment), or heard (e.g., a lecture or explanation). One science teacher we know used the online resource “How Stuff Works” (http://science.howstuffworks.com/environmental/green-science/recycling1.htm) to simultaneously teach a literacy strategy (retelling) and science content (recycling). She followed the steps of the model and used various sections on the website related to the benefits, guidelines, scientific background, and history of recycling to illustrate how to synthesize and retell content.

Summary
In this column, we have presented four components for promoting literacy engagement in all content areas: choice, accessibility, rereading, and supported reading. The four components are not distinct entities but

Even with teacher support, school texts can sometimes be beyond the reach of some students, and requiring them to read such texts leads to frustration and low self-esteem, with little or no learning occurring.
Figure 6 Phased Transfer Model lesson description

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<th>Using Percentages in Everyday Life</th>
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<td>• The lesson begins with the teacher showing an example of the finished product, an exemplar of what the students should achieve. (In other instances, this could be a series of predictions, a descriptive paragraph, a final research project, etc.)</td>
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<td>• Then the teacher and the students analyze the product, looking at the features and how it represents the selection read in a succinct manner. (All the examples and passages used are related to the science topics under study to further enhance learning.)</td>
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<td>• Next, the teacher displays a passage and thinks aloud how to summarize and put the information in her own words to illustrate the invisible thought processes for the class.</td>
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<td>• The teacher displays an additional passage and, together with the students, comes up with an oral and then a written retelling of the content, discussing why they left out certain information to get to the main points.</td>
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<td>• At this point, the students are asked to work in their pre-assigned groups (preferably heterogeneous) to contribute to an additional retelling of passage content. The grouping allows the teacher to circulate, monitor, assist, and assess whether additional practice is needed.</td>
</tr>
<tr>
<td>• After feeling that the groups are ready to move into pairs, the teacher again asks them to engage in a retelling of the content of a new passage. This paired arrangement is repeated until the teacher determines the students are ready to move to the independent practice phase.</td>
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<tr>
<td>• The final two phases involve individual practice and then illustrating how to apply the new learning to other subject areas.</td>
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represent ideas that can overlap in various ways during instruction. Rather than offering a template for teachers to follow, we present choices teachers can consider as they tailor instruction to fit the needs of their students. We invite all middle grades teachers to think about how these four components can actually promote learning in their content areas and to keep in mind the words of Allington (2011): “In the end, it is the amount of appropriate instruction that a student participates in that is the best predictor of that student’s learning” (p. 12).

References


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Janis M. Harmon is a professor at the University of Texas at San Antonio. E-mail: janis.harmon@utsa.edu

Karen D. Wood is a professor at the University of North Carolina at Charlotte. E-mail: kdwood@uncc.edu

Katie Stover is an assistant professor at Furman University in Greenville, SC. E-mail: katie.stover@furman.edu

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