curriculum modification:

making standards accessible for deaf students with disabilities

By Holly McBride and Matthew Goedecke

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Deaf students with significant disabilities face unique challenges with state standards and grade-level expectations. Their teachers, too, face unique challenges. Material making, breaking concepts and tasks down into component parts, providing time and motivational opportunities for developing background knowledge and foundational skills, and addressing generalization across environments are all things that must be carefully considered and planned for within limited instructional time for students with disabilities.

We spent a considerable amount of time looking for evidence-based practices that could be applied in our schools and recommended to others. While we found little research available on deaf students with disabilities and the general curriculum, what we did find were the recommended approaches and interventions that have shown evidence of success with other children with various types of disabilities (Moores & Martin, 2006; Spencer & Marschark, 2010). We should focus on the same knowledge and skills that the standards require for children without disabilities, but the instructional approach needs to be more explicit and intensive.

One valuable approach we found came from the Human Development Institute at the University of Kentucky and outlined a clear four-step process for curriculum modification:

1. Identify and link to the appropriate standards.
2. Define the outcomes of instruction.
3. Identify the instructional activities.
4. Target specific objectives from the Individualized Education Program (IEP).

Using this approach, teachers are able to analyze the standards, clarify intended outcomes, and design instruction that incorporates other best practices and strategy instruction, including project-based learning, priming background knowledge, teaching students to monitor their own comprehension, scaffolding instruction with prompts and cues, and collaborative group work (Jitendra, Burgess, & Gajira, 2011).

Photos by John T. Consoli

My colleague Anna Rice (another middle school teacher) and I used this process each time we sat down to plan a unit. First, we looked at the standards required for the grade level and the thematic unit content. From there, we examined grade-level indicators and identified the foundational skills that were at the root of those indicators. We wanted our students to gain skills that would help them function more independently, in school, at home, and in the community.

After identifying the set of skills that we would teach, we developed the activities that would enable the students to attain those skills. As we planned, we reviewed each student's IEP goals and objectives and discussed how those goals and objectives could be addressed within this unit. We also looked for links to tie our unit to alternate assessment (where applicable) so we could collect work samples and data for portfolio use.

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Application

Objects, Goals, Skills—and Mystery!

Last year, we focused a unit for the English/Language Arts class on the theme of "mystery." We used the University of Kentucky's four-step process to analyze the standards, outcomes, activities, and objectives from the IEP. Here is what the process looked like:

STEP 1 - IDENTIFY THE APPROPRIATE STANDARDS.

We selected the following standards and indicators from the sixth-grade content standards:

- Vocabulary acquisition: Use context clues and text structures to determine the meaning of new vocabulary.
- Reading process: Use appropriate self-monitoring strategies for comprehension during the reading process.
- Writing process: Use graphic organizers and apply appropriate pre-writing tasks.

STEP 2 - DEFINE THE OUTCOMES OF INSTRUCTION.

We decided to focus on the essential components of what the concept of mystery represents. We wanted the students to be able to explain the concept of something that is unknown but could be understood with the help of evidence, information, or clues. According to Clayton, Burdge, Denham, Kleinert, and Kearns (p. 21, 2006), "Once the broad standard and the specific grade-level content standard are identified, it is then helpful to determine...the most basic concept that the standard defines." For our students who needed substantial modification, the most basic concepts defined by these standards dealt with reading new vocabulary and using contextual clues and visualization to self-monitor comprehension. We also focused on learning to use webs as graphic organizers to make a plan for writing, especially for writing multiple sentence clues.

Our goal has become about interpreting the standards in a way that allows all students to achieve at their own highest level and being able to explain this to others.

STEP 3 - IDENTIFY INSTRUCTIONAL ACTIVITIES.

This step—our favorite part—allowed our passion for teaching to shine, and we could brainstorm and design activities that would excite and engage our students. We decided that the

Above: Students take off to hunt for clues during the mystery scavenger hunt.

culminating project for the mystery unit would be a scavenger hunt. To successfully arrive at this final product, we methodically broke down the work into all the component steps that would lead the students to the culminating project.

STEP 4 - TARGET SPECIFIC OBJECTIVES FROM THE IEP.

This step was easily integrated into our instruction as most of the students within this class have IEP goals related to acquiring vocabulary, visualizing text, using self-monitoring strategies during reading, planning for writing, and learning basic grammatical and writing conventions. We taught mini-lessons to the entire group and provided one-on-one support as needed to address specific IEP goals. Additionally, the IEPs helped us to determine the types and lengths of sentences we should expect from each student and the reading level that we should use to craft our teacher-created clues.

Reflection

When we looked for research, we were able to find the outline for a successful process for curriculum modification. When we focused on the standards at the beginning of planning rather than starting with the IEP goals and objectives, we were able to challenge students more than we had originally thought. Going through the steps repeatedly has also allowed us to better understand curriculum development. We see how students with disabilities fit within standards-based instruction. Our goal has become about interpreting the standards in a way that allows all students to achieve at their own highest level and being able to explain this to others.

Student Name: _____

Date: _____

Mystery: Scavenger Hunt

	4	3	2	1
WEB/WRITING ORGANIZATION	Student created 5 webs with at least 4 descriptions on each web.	Student created 3-4 webs and each web has 3 descriptions.	Student created 1-2 webs and each web has 2 descriptions.	Student did not create webs to organize their plan for writing.
USE OF VOCABULARY LISTS	Student used provided vocabulary lists at all times for assistance with spelling.	Student used provided vocabulary lists most of the time for assistance with spelling.	Student used provided vocabulary lists some of the time for assistance with spelling.	Student rarely used provided vocabulary lists for assistance with spelling.
COMPLETE SENTENCES	Clues are written in complete sentences following modeled sentence structures, initial capitalization, and final punctuation in each sentence without errors.	Clues are written in complete sentences following modeled sentence structures, initial capitalization, and final punctuation in each sentence with 1-2 errors.	Clues are written in complete sentences following modeled sentence structures, initial capitalization, and final punctuation in each sentence with 3-4 errors.	Clues are written in complete sentences following modeled sentence structures, initial capitalization, and final punctuation in each sentence with 5 or more errors.
VISUALIZING	Student demonstrated active visualization by "thinking aloud" after each clue (5 out of 5).	Student demonstrated active visualization by "thinking aloud" after most clues (4 out of 5).	Student demonstrated active visualization by "thinking aloud" after some clues (2 or 3 out of 5).	Student demonstrated active visualization by "thinking aloud" after few or no clues (0-1 out of 5 clues).

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A Lesson on Mystery

By Holly McBride

Last year we set out to apply the four-step approach that we found in research from the University of Kentucky to design a unit for our language arts curriculum. We identified the appropriate standards, figured out what skills we would teach in conformance with the standards and what outcomes were expected, and we decided to develop a unit on the concept of "mystery." The instructional activities that we developed would center on the unit's culminating activity—a scavenger hunt. Here is how the unit unfolded.

1. Pre-Assessing

We began with a pre-assessment to determine what students already knew. We showed students several common images associated with mysteries (i.e., a magnifying glass, fingerprints, a picture of a detective), and we asked them to tell us what they knew about those images. We facilitated a group discussion that we documented using Writing with Symbols© software. This provided us with documentation of the students' knowledge before beginning the unit of study, as well as text that they could later read with the embedded picture support.

2. Pre-Teaching

We pre-taught essential vocabulary for the unit by creating picture-supported vocabulary handouts (see Figure 1) using Boardmaker© software and discussing the vocabulary as a group. We reviewed the vocabulary at the beginning of each class; students were expected to use the vocabulary daily, both in their writing and in their signing. This interactive process helped students develop a functional understanding and an appropriate application of each term. When a sign did not exist for some new vocabulary words, we rehearsed through repeated use of print, fingerspelling, and accompanying explanation or role playing of the concept.

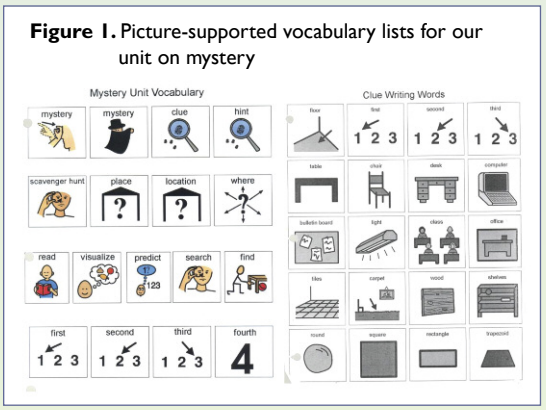


Figure 1. Picture-supported vocabulary lists for our unit on mystery

3. Generating Excitement

We knew from experience that if we let students have a glimpse of the culminating project—in this case an in-school scavenger hunt—they would be better able to maintain motivation and attention for a longer period of time. We developed written clues and then videotaped the teacher reading the clues in American Sign Language. As the teacher read the clues, she modeled "thinking aloud" to develop a mental picture of the clue. The video showed her reading, thinking aloud, and following the clues to five different locations within the school. On one occasion, we included her making a mistake in order to show how she caught her own error and repaired it.

4. Teaching New Skills

We worked on learning the foundational skills that would be interwoven throughout the mystery unit. We focused heavily on visualization of text and scaffolded this experience using component skills outlined in the Visualize and Verbalize® program. We started with visualizing characters based upon word-level visualization and the use of drawings and/or acting and then increasing complexity over time:

- First, we gave the students a list of six to eight words describing a character's physical appearance and demeanor, and then we read aloud the list as a group to be sure that all of the words were recognized.
- Next, we asked students to draw a picture of the character that the vocabulary words described.
- Then we moved on to students creating their own word-level character descriptions. Each student had to come up with eight words to describe the character he or she had visualized and draw a picture of that character. Then each student had to give a partner his or her list of descriptive words (but not show his or her partner the drawing). The partner had to draw a picture of the character based on those descriptive words. Once this was done, the students showed each other their drawings and compared them.

Through this independent work and comparison, we were able to see if all the words were taken into account in each drawing, and how visualizations of a given word might look the same or be interpreted with some range of difference. For example, "brown hair" might be dark or light, long or short.

After working on the word-level character visualizations, which were relatively concrete and easily drawn/acted out, we described and visualized locations. I composed a few simple three- to five-sentence paragraphs describing a location within the school. Using picture-supported vocabulary, the students helped each other read the paragraph "aloud." I then modeled a "thinking aloud" process to guess where the location could be.

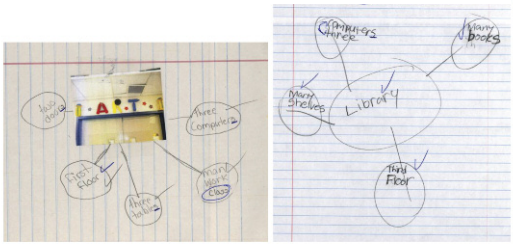
After watching me think aloud, my students and I went to the presumed location and discussed whether or not the location fit all the criteria described in the clue. If it did not, we discussed other possibilities and why our assumptions were incorrect. Going to the physical location assisted the students with matching the visualization in their mind with an actual place. It was also easier to prove or disprove our guesses in the actual environment rather than relying upon memory of the place.

5. Trying It Out

Following a few days of visualizing environments based on reading written clues, students were ready to conduct their own scavenger hunts. Each student selected a peer's name to determine for whom he or she would create a scavenger hunt. Then students selected five locations in which to hide their clues and prize. At this point, a few students clearly understood the process of making a scavenger hunt, but others were still confused. Realizing a gap in understanding had occurred, I quickly developed a checklist of the steps involved in the process. This allowed students to develop greater independence and to work individually at their own pace. It also provided a way to track data regarding sight word recognition and ability to follow directions.

6. Mini-Lessons

Figure 2. Student-created webs to organize ideas for clue writing



At the beginning of class for several days, we worked on webbing, creating simple sentences, and using editing. Each student selected his or her locations to describe; each took pictures of the locations and created a web (see Figure 2) to describe the location. Using the web, they composed simple sentences to describe the environment. We focused on two basic sentence types: "This place is _____" and "This place has _____" (see Figure 3). We also worked on subject-verb agreement, use of more varied adjectives, and editing for punctuation and capitalization.

Figure 3. Students practice sentences beginning "This place is…" and "This place has…"

7. Individual Hunters

Finally the students began their scavenger hunt using picture-supported vocabulary to read aloud the clues. They were required to state the name of the place they believed the clue referred to and to explain why they thought it was the correct place before being allowed to move to the location.

8. Extending the Lesson

We extended learning by presenting an informal activity of signing clues to our middle school students (some with disabilities and some without) at the end of our lunch period. All the students enjoyed the activity. The structured classroom practice helped our students with significant disabilities keep up with their grade-level peers. The extension allowed a skill taught in one environment to be generalized to another and reviewed and practiced in an enjoyable way.

9. Reflecting

We were very pleased with the success of this unit. Students demonstrated a good understanding of the fundamental components of mystery, and they understood visualization and its connection to what a proficient reader does.

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