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Vocabulary Visits: Virtual field trips for content vocabulary development

Vocabulary Visits are virtual field trips that appeal to the senses while developing new concepts and vocabulary.

At a meeting of a teacher study group on vocabulary learning, a group of primary teachers were sharing stories of surprises they encountered when reading with their students. "I had a whole group of kids who didn't know what an umbrella was," lamented one teacher. Another chimed in, "I took a wonderful running record of one child who was reading about the Olympics. He decoded everything perfectly, and when we discussed the selection, he didn't know the word *athlete*...and he had read it perfectly 11 times!" The grade team leader asserted, "Our students are smart, but they need more concept and vocabulary development. Every time we take a field trip they learn a lot. I wish we could take more field trips!" Many of the teachers in the room nodded affirmatively.

Discussions like this are echoed in schools around the United States. They reflect a significant body of research that suggests wide differences in concept and vocabulary knowledge exacerbate the achievement gap seen in so many schools, especially those with large numbers of children living in poverty (Hart & Risley, 1995). Educators sometimes attribute this difference to the Matthew effect—the sad reality that having a well-developed vocabulary allows you to learn new words more easily than classmates who have a smaller fund of word knowledge (Stanovich, 1986). This is especially significant in the content areas—not knowing what a circle is will make it a lot harder for students to understand and learn new terms like *diameter*, *radius*, and *circumference*. Students need "anchor" concepts and vocabulary to learn new words, which are then connected to the concepts they already know.

Similar experiences, knowledge, and thinking led a reading specialist and a group of teachers in a multiethnic urban school to develop Vocabulary Visits—virtual field trips using books to develop the content vocabulary of first-grade students.

Why a vocabulary field trip?

Because school budgets are stretched to the limit, teachers are limited in the number of field trips they can take during the school year. The school in which this strategy was designed has 50% of its students receiving free lunch and a 13% mobility rate, leaving little discretionary family income to contribute extra funds. Yet the teachers all recognized that students came back from field outings with new ideas, new questions to pursue, and new vocabulary to use in talking and writing about their learning. The teachers wanted to capture some of the positive aspects of field-trip learning and integrate them with the instructional program. The specialist and teachers spent considerable time thinking about and discussing what made a good field trip and why their students seemed to come away from these experiences with such increased concept and vocabulary knowledge. After some discussion, they decided that the following characteristics of field trips help students develop vocabulary:

- Field trips have a content focus. Good field trips connect to the curriculum and its content, which provide an integrated context for

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learning and a relational set of concepts and terms.

- Field trips engage the senses. Students are seeing, hearing, smelling, feeling, and sometimes tasting as they encounter new concepts and vocabulary.
- Field trips are preceded by preparation that helps "plow the soil" for planting the seeds of new learning. Students know what they are going to encounter and often teachers do a read-aloud to get them ready.
- Field trips involve the mediation of an adult. A docent, teacher, parent, or other chaperone is there to help explain, clarify, focus, or point out interesting things.
- Field trips involve exploration, talk, reading, and writing by the students.
- Field trips often involve a follow-up of new concepts and terms.

The teachers decided to structure read-aloud book experiences as virtual field trips for the classroom using scaffolded book read-alouds, active learning with visuals, and other activities that appeal to the senses while developing new concepts and vocabulary.

Grounding Vocabulary Visits in theory and research

Two areas of theory and research ground the Vocabulary Visit instructional process: vocabulary development through read-alouds and active learning.

Read-alouds

Reading aloud to children, sometimes also referred to as shared storybook reading, gives students the opportunity to develop new vocabulary. Because children's books present more advanced, less familiar vocabulary than everyday speech (Cunningham & Stanovich, 1998), listening to books read helps students go beyond their existing oral vocabularies and presents them with new concepts and vocabulary. Discussion after shared storybook reading also gives students opportunities to use new vocabulary in the more decontextualized setting of a book discussion (Snow, 1991).

Numerous studies have documented that young students can learn word meanings incidentally from read-aloud experiences (Eller, Pappas, & Brown, 1988; Elley, 1988; Robbins & Ehri, 1994). Involving students in discussions during and after listening to a book has also produced significant word learning, especially when the teacher scaffolded this learning by asking questions, adding information, or prompting students to describe what they heard. Whitehurst and his associates (Whitehurst et al., 1994; Whitehurst et al., 1999) called this process "dialogic reading."

Research also suggests that scaffolding may be more essential to those students who are less likely to learn new vocabulary easily. Children with small vocabularies initially are less likely to learn new words incidentally and need a thoughtful, well-designed, scaffolded approach to maximize learning from shared storybook reading (Robbins & Ehri, 1994; Senechal, Thomas, & Monker, 1995). Research points to teacher read-alouds as a positive way to develop the oral vocabularies of young learners.

Active learning

The role of active learning in vocabulary development has been well established. Students who engage with words by hearing them, using them, manipulating them semantically, and playing with them are more likely to learn and retain new vocabulary (Beck, McKeown, & Kucan, 2002; Blachowicz & Fisher, 2005; Stahl & Fairbanks, 1986). Furthermore, relating new words to what is already known creates elaborated schemata and links between concepts that provide for enduring learning (Anderson & Nagy, 1991).

A series of studies by Senechal and her colleagues (Hargrave & Senechal, 2000; Senechal & Cornell, 1993; Senechal et al., 1995) found that students' engagement and active participation in storybook reading was more productive for vocabulary learning in storybook read-alouds than passive listening, even to the most dramatic "performance" of book reading. This has been confirmed by a growing number of studies that scaffolded young students' learning by focusing their attention on target words and engaging them in interactive discussion about books using specific vocabulary before, during, and after reading (Brett,

Rothlein, & Hurley, 1996; Penno, Wilkinson, & Moore, 2002; Wasik & Bond, 2001). So the activity of the learners is an important component of learning from read-alouds.

Use of the senses, particularly of visualization, is an important activity for engagement and for focusing attention in learning. Sensory representation helps learners connect with new information and provides alternative codes for understanding and retention (Paivio, 1971; Sadoski, Goetz, Kealy, & Paivio, 1997). Classic, seminal work on concept mapping (Johnson, Pittelman, Toms-Bronowski, & Levin, 1984) has been extended to current strategies such as concept muraling (Farris & Downey, 2004), which represents words and their relations to a topic in a semantically organized graphic. All of these studies attest to the enduring power of visualization in word learning.

When the teachers in this study decided to couple the power of field-trip learning with the research and theory on vocabulary learning, it was agreed that the process would share books and new vocabulary and concepts through teacher read-alouds, that the teacher's role would be to scaffold word learning by focusing attention on specific vocabulary, and that questioning and probing would be used to make students use the new vocabulary and relate it to what they already knew. Each lesson would also be linked to the senses that are stimulated in a real trip, and students would also be called on to use the words though semantic grouping, manipulation, speaking, and writing.

Planning a Vocabulary Visit

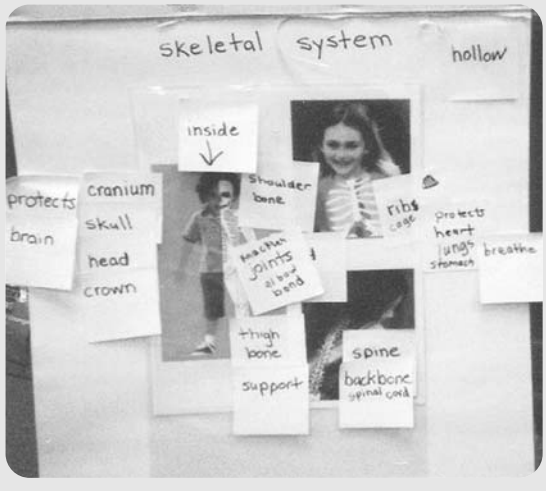
The first step in planning was to identify focal topics for the Visit. The teachers in this study decided to use content area books. Much new research on primary-age students and their learning suggests that the primary curriculum is ripe for content learning and that many more resources for content reading now exist (Duke, Bennett-Armistead, & Roberts, 2003). The Vocabulary Visit team decided to use the standards for social studies and science to help them pick topics. They looked at first-grade standards and also at later years to develop vocabulary that would bootstrap students in following years and provide an appropriate learning challenge (Biemiller, 2001). The topics they chose for the first trials were the human body (skeletons), weather and climate, animal habitats, and recycling. All of these topics were relevant to their curricula.

The next step was to assemble a set of at least five texts that could be used for the Visits. Read-alouds are an important part of the process and an important research-based strategy for increasing vocabulary knowledge. Such primary books are now easy to find online and through references on literature for school-age children. Consulting school and local librarians and just rummaging through various classroom libraries quickly produced a starter set. Choosing books in a range of difficulty allows for scaffolded learning and provides for individual differences.

The third step was reviewing the books and choosing a basic vocabulary set that the teacher wanted to use during the discussions. For example, for the set of skeleton books, some core words were *bone*, *skull*, *leg*, *arm*, *wrist*, *ankle*, *foot*, *ribs*, *brain*, *spine*, *backbone*, and some functional words such as *protect* (the skull *protects* the brain).

Last, after selecting the core vocabulary, one of the teachers made a poster with some interesting thematic pictures to stimulate discussion. This was the chart the class would "visit" (see Figure 1). Visuals must stimulate sensory response and lead to discussion of key concepts and vocabulary. Other materials needed are sticky notes, a large marker, and a piece

FIGURE 1
Vocabulary Visits chart—skeletons



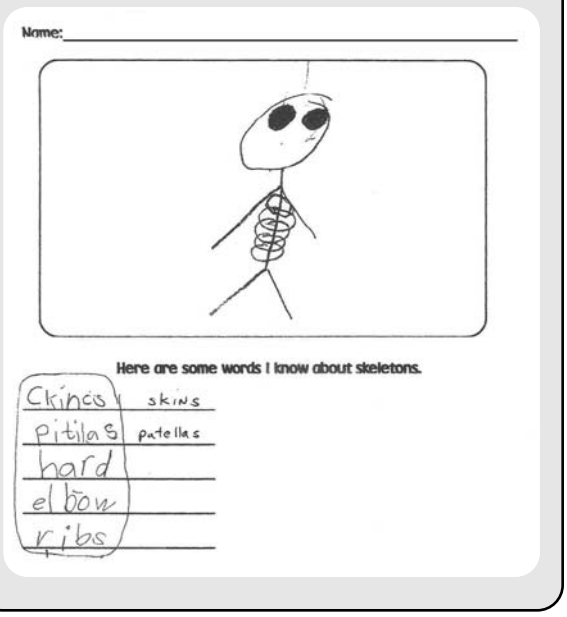
of chart paper or poster board to make a poster. This chart forms a dynamic record of the visit.

The Vocabulary Visit

Jump-start and First Write

Once the materials are prepared, the teacher gives the class a Jump-start to help them activate their prior knowledge. He or she introduces the topic and asks students to talk, briefly, about some things they know about it. Then each student takes a piece of paper and does a First Write, which is a simple list of words they can think of that connects to the topic (See Figure 2). These are archived in a folder and serve as a preassessment. First Write is also a good diagnostic tool for teachers and can provide surprising insights. Speaking about a very shy and quiet little first grader, one teacher remarked, "I didn't know Keisha [pseudonym] knew so much about animals. It turns out she goes to the zoo almost every other week with her Daddy. I'll really have to draw on that in the discussions."

FIGURE 2
First Write



Group Talk

The next step is Group Talk. Students meet on the rug in the classroom, and the teacher brings out the poster and starts with the first question, "What do you see?" just as a teacher would on a regular field trip. As students contribute words related to what they see, the teacher records their contributions on sticky notes and puts them on the poster. For example, on the skeleton chart shown in Figure 1, the first word that came from the students was *skull*. The teacher recorded it on a sticky note and placed the word in a relevant place on the chart. The second word to come up was *cranium*, which amazed the teacher. The children then informed her that Cranium was a game advertised for the holidays and was in the school game collection. This led to *head* and then *crown* followed by a chorus of the nursery rhyme "Jack and Jill."

As students make new suggestions, teachers must mediate as needed. They must make sure that supporting the students' learning with questions, explanations, and suggestions generates the targeted vocabulary. "Touch your skull. What is a skull for?" A student answered, "To protect your brain." The teacher added *brain* and *protect* to the chart and then asked, "How does it protect it?" This new question led to the word *hollow* for skull and then led to the teacher asking for an example of the word, which was supplied by a student who was surprised to find that his chocolate Easter bunny wasn't all chocolate. "Yeah, I hate that," agreed some of his classmates.

The words come fast, and it is the teacher's job to focus on the important ones, to ask for clarification and an example ("Where is your wrist?"), and to group them in some relational way. Other senses besides sight are used. For example, in the visit about weather, the teacher asked, "What do you hear in a storm? What are some words for how you feel in rain?" After 5–10 minutes, there are usually quite a number of words on the chart, which the students have now heard, seen, discussed, and sometimes acted out.

Reading and Thumbs Up

The next step is the reading of the first book. Reading aloud to students has been found to be a significant way to increase vocabulary. However, research suggests that this reading should have some mediation involved for new words and should

RECORD OF WORD GROWTH

Student	Words before Vocabulary Visit cycle	Words added after Vocabulary Visit
1	8	20
2	7	23
3	4	6
4	6	23
5	7	27
6	4	32
7	4	13
8	7	8
9	5	10
10	7	26
11	3	10
12	4	18
13	5	11
14	5	11
15	0	6
16	0	6
17	0	14
18	0	19

not be a dramatic performance (Dickinson & Smith, 1994). It should be like the kind of reading a parent does with a child, sometimes stopping to clarify or ask about something, much as the highly popular Richard Scarry books call for labeling and finding. We use the Thumbs Up procedure to help students become active listeners. Students put their thumbs up when they hear one of the new words. Sometimes the teacher stops or rereads a sentence when no thumbs go up for a critical term, but the goal is to have a fairly normal reading experience.

After the reading, the students discuss what they learned and add a few new words to the chart. If time permits, the teacher sometimes does semantic sorting activities with the words and tries to involve more of the students' senses. For example, for a unit on weather, the teacher asked, after reading the first book, if there were sound words that they associated with thunderstorms. The students came up with *crash*, *boom*, *thunder*, *thunderclap*, and other words; some of them were from the book and some were from personal knowledge.

Finally, a short writing activity occurs in which the students write about something learned or something that particularly interested them. The books are also put in a central location for reading during independent reading time, and students are asked to read at least one of the books each week and record it in their reading logs. One teacher noted,

> These books circulate four or five times more than they did last year. The read-alouds help my kids get interested in the topic and also make the other books accessible to them because they know some of the ideas and the vocabulary. It really works!

Follow-up

The visit poster is kept on the classroom wall, and the activities are repeated for each book in the set. The students also start adding new words to the chart on their own and sometimes regroup the words. Over the course of the unit, students apply their new word knowledge through extension activities that include semantic sorting, word games, writing, reading new books on the same topic, and rereading the books the teacher has read. One participating teacher said,

> My students began making up some of their own activities. They would take the sticky notes and put them in new sets or make sentences with them. They got interested in the new words and were proud that they knew such grown-up ones.

Final Write

At the end of the entire five-book sequence, the students do two writing activities. One is a longer piece about their learning. In some classes, for example, students made their own books about the skeletal system, either to take home or to put in their classroom libraries. In others, students did a report on their favorite book. In first grade, this is often in the form of "The three most interesting things..." or "What the author could do to make this book better" (D. Gurvitz, personal communication, February 7, 2000) rather than a contrived book report form.

Students also do a Final Write, a list-writing activity of all the words they now can write that are associated with a certain topic. Their lists increased dramatically from First Write (t = -8.453, significance level = . 0001). Those students who listed the fewest words at the beginning of the visit usually made the greatest gains, but even those starting with richer initial vocabularies made significant gains. Teachers can also evaluate word learning by students' uses of the words in all of

these final activities. Another anecdotal bit of evaluation was provided by reports from parents of new word use and sharing and requests to get books on class topics from the library and bookstores.

A last word

We learned so many things from our first trial of this process that we are now trying to add a randomized sample study of Vocabulary Visits. We need to extend our list of topics to provide more text sets, and some students are still not active enough in the Thumbs Up part of the process. We are searching for other methods to help students focus on the words without losing the thread of the read-aloud. We also want to find more sensible, uncontrived, and motivating ways to revisit the newly learned words.

Vocabulary Visits has proved to be an exciting and effective research-based strategy for teachers to add attention to vocabulary in thematic units. The pre- and postwriting activities provide evaluation information in a way that is positive for students and teachers alike; it is motivating to see how many topical words are added in the Final Write (see Figure 3). As students work their way through the books in the thematic text set, they become more knowledgeable and confident as they encounter repeated and related vocabulary. They are proud of learning big and technical words, and the spread of words can be infectious, especially with those that are long, funny, or interesting sounding. After playground duty on a day that was growing stormy, an incredulous fifth-grade science teacher popped into one classroom to ask, "How in the heck did all you kids get to know *cumulonimbus*?" They had been using the word in the playground. In explanation, the students pulled him over to the classroom wall and treated him to a tour of their word chart—a Vocabulary Visit all of his own!

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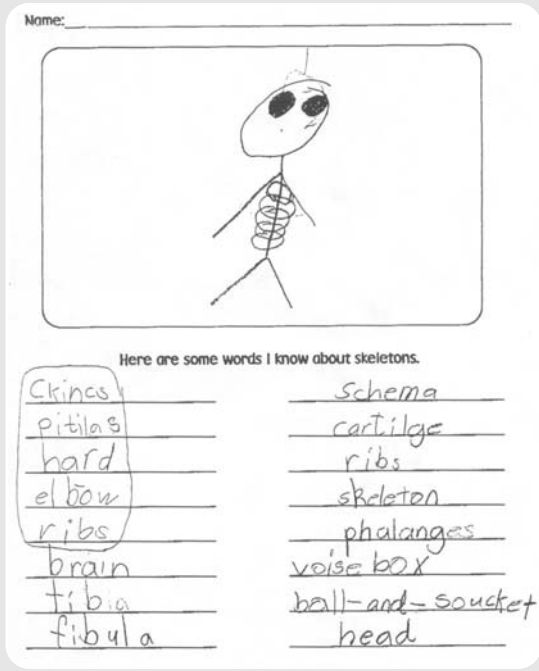
FIGURE 3
Final Write



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