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Cambium

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INNOVATIVE CURRICULUM FROM THE ARBOR SCHOOL OF ARTS & SCIENCES

WRITING TO LEARN

The urge to clarify and cultivate our thoughts and opinions, to grope toward answers for the big questions, feeds a multitude of writing practices. Some of us keep diaries; some of us write letters to the newspaper or correspond with distant friends; some of us write blogs and others write memoirs. We write, as William Zinsser has pointed out, to find out what we know and what we want to say. But to shape questions that help us fruitfully investigate our own experiences and those of others is a skill. A good writer is a good thinker, and guided practice of either discipline enhances both. When we teach research writing we are teaching the craft of seeking answers by the light of well-formed questions.

In this issue you will find kindergarteners and first-graders learning what it means to ask a question and how to assess the answers they might uncover; fourth- and fifth-graders considering which questions will lead to the richest writing about ancient temples and fortresses; sixth-, seventh-, and eighth-graders taking the first steps toward posing a thesis in their studies of monotheism. How does a chipmunk survive winter? Why was the fortified refuge of Masada built? Does Islam condone the oppression of women? As students followed these and other paths of inquiry, we tried to capture some of their own thoughts about writing to learn.

"Those Arbor kids question everything," an educator at a local high school once remarked. We *do* ask them to pose all kinds of questions and seek answers, to take the reins of their own education, and we intentionally create opportunities for children to tackle questions with no easy response. This can be a hard place for students to "live;" it's intrinsically messy to invite the processes of deconstruction and construction that characterize deeper thinking. But broad musing readies students for increasingly analytic and syncretic thinking and builds intellectual resiliency for wrestling with the big ideas and unanswerable questions in our complex world. Thinking and writing in the face of uncertainty furthers the habit of perseverence. Questioning and writing hone our thinking skills and ultimately help all of us to generate creative approaches to perplexing issues.

In the interest of provoking thinking about the teacher as writer, we have included an article by Annmarie Chesebro, director of our teaching apprenticeship program, on faculty writing at Arbor. The Faculty Practice feature will appear from time to time in Cambium where there are useful corollaries of the students' work to be explored. How has writing shaped your teaching practice? We welcome an exchange of ideas: cambium@arborschool.org

In this issue

ARBOR SCHOOL
OF ARTS & SCIENCES

THE ART OF THE QUESTION

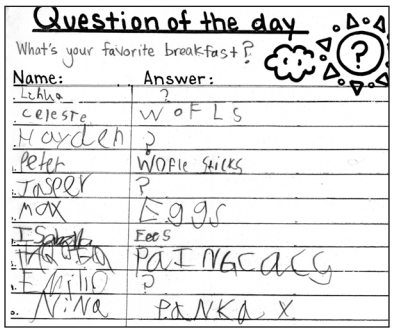
by Deborah Mandelsberg

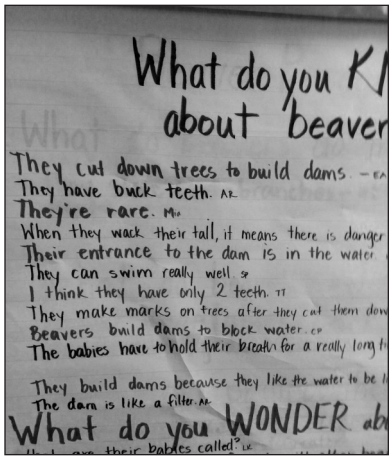
The distance between a question and a statement, if you are a Primary student, is a narrow divide. Developmentally, at five or six a child is just beginning to discern that there is a difference between the two. He is willing to venture a statement on most subjects, to declare what he knows. From announcing what happened at recess to listing animals that hibernate in winter, the Primary student is a font of information. And while both making a statement and proffering a question inherently suggest some basic connection to the subject matter, a question that efficiently elicits relevant information requires artful crafting.

Arbor teachers take question-craft seriously. It is one of the skills undergirding strong narrative, substantive research, and mathematical and scientific inquiry. Forming a good question is an act of seeking that becomes a potent vehicle for the child's entrance into the realms of thinking and writing.

How does the Primary teacher deconstruct this task, ensuring that her students are on the path to successful inquiry? Lively discourse among students is first and foremost cultivated through teachers' questions. Some questions may require only a simple yes or no answer or a clear declarative response, while others, open-ended in nature, may begin to elicit a wide range of responses. At Arbor, Primary students step into the world of questions as they first enter the classroom each day. A few steps from both Primary doors, a clipboard with a sheet containing the "question of the day" and a blank box next to each child's name calls out for a written response. In the first months of school, rudimentary questions help each child develop the habit of pondering something relevant to her life: *Did you go on a journey this summer? What is your favorite breakfast food? Do you think a potato will float? Did you remember your folder today?* Later in the year the questions might begin to connect the students to a literature study (*What do you think will happen next in* My Father's Dragon?); a math strategy (*At Arbor School we have four Pygmy goats. How many goat legs altogether?*); a science study (*What do our seeds need to grow?*); or an algebraic thinking assessment (*What comes next in an ABBCABB pattern?*). These questions ask students to begin to analyze and organize data or show their thinking. Questioning is a powerful act. It prepares the ground for cogent writing that clarifies what a child knows, which reveals in turn what he still needs to find out.

Several children named the question about their folders as their favorite kind of clipboard question because it helps them remember something organizational.



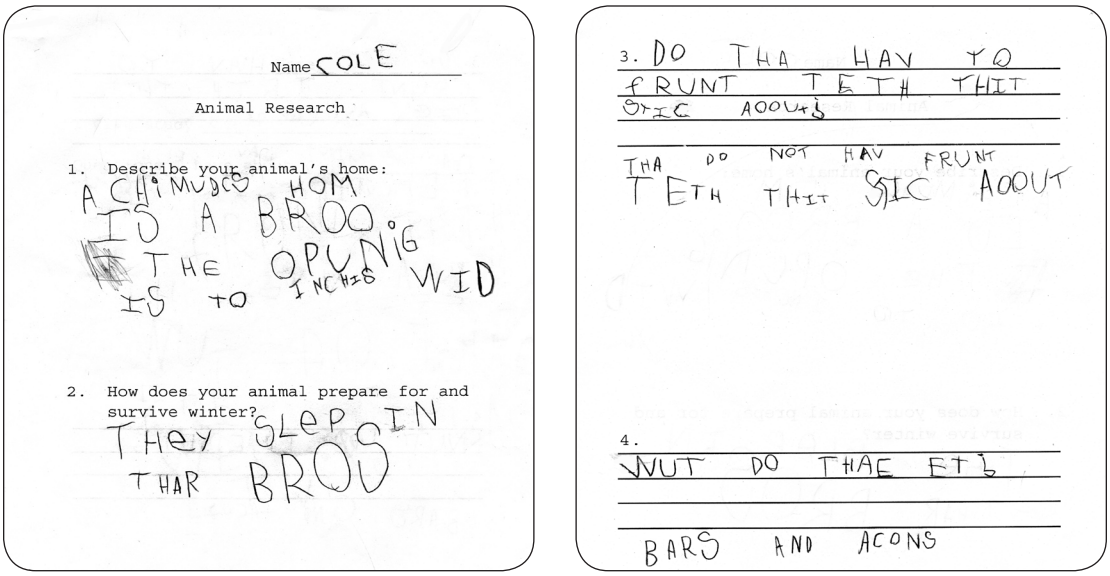


The difference between the open-ended, more substantive questions and the simpler declarative questions composed on the clipboard receives explicit deconstruction in the Primary classroom. As teachers build this critical concept with the group, the students begin to generate lists of questions relevant to, for example, a study of the beaver. *What do you KNOW about beavers?* Some of our kids' responses to that question included: "Their entrance to the dam is in the water." "They swim well." The next task involves a different kind of thinking: *What do you WONDER about beavers?* "What are their babies called?"

"How long do they stay with their babies?" "Do they migrate?" As the teacher documents each question and the responses for all to see, the students are asked to consider: Is this a "meaty" (open-ended) question or a "lightning" (declarative) question? Each question earns a parenthetical *M* or *L* as the group decides whether it will be easily answered or will require more careful research.

The group is now ready to begin some of its very first research. Grouped in smaller clusters, students start with their own questions to which they seek answers. With a teacher close and easy-to-read materials littering the tables, the messy business of building research is well under way. Pre-readers are buddied up with capable readers who read the material aloud. Parents visit the class and assist early writers by taking notes as important ideas are uncovered.

How do teachers cultivate the skill of seeking salient points? For the beaver study, and for subsequent independent research on animals in winter, a simple outline helps students focus their work and define the parameters for the project.



Cole, a kindergartener, studies chipmunks and poses his own "lightning" questions using the outline as a guide

Discussion is lively, and the work, especially for these young students, challenging. Enthusiasm, musings and frustration are all evident as students query one another, find responses to their questions, and discuss what they have uncovered.

Learning to voice new understandings is the next challenge. How does a student make the words her own? How does she build a body of work that answers interesting questions? How does she receive encouragement from the teachers that supports her curiosity for going beyond what is first asked, first learned? How does she learn to pursue the long line of inquiry that each new piece of information reveals, to ask the next set of questions entailed by information gleaned? First-grader Jasper reflected, "When I was learning about chipmunks, I kept finding information I hadn't thought about, so I just kept writing things down."

At this stage, we don't ask students to organize the information they uncover. They simply collect answers to their questions, and we find they are able to discuss strategies they might use to order their facts, but for now the only goal is to follow the question trail and bask in the satisfaction of being able to mine answers out of books. For many, a new ability to access information directly is intoxicating, and they quickly come to see books as the ultimate resource. "Felicity [his teacher] told me about the longest beaver dam, but she didn't just know all that in her head; she had to learn it in a book," Jasper explained. "Then we had to figure out how far that would be across the school—all the way to the bell!" "I can *see* that dam," first-grader Casey chimed in.

Both words, "meaty" and "lightning", have been defined and discussed in the class, the first suggesting something significant to chew on (open-ended), the other, a brief response that may require no more than a one-word answer. Meaty questions provoke dialogue. Examples of a meaty or generative beaver question included: "How do they protect their dam?" (They build really strong dams and the entrances are underwater. They smack their tails on the water to warn other beavers of predators and other dangers.) "What do beavers do in the winter?" (They keep their food underwater and mate.) Examples of a lightning question, requiring only declarative knowledge to form a response: "What do beavers eat?" (Wood, vegetables, grasses, leaves.) "How fat do they get?" (They can weigh up to 55 pounds.)

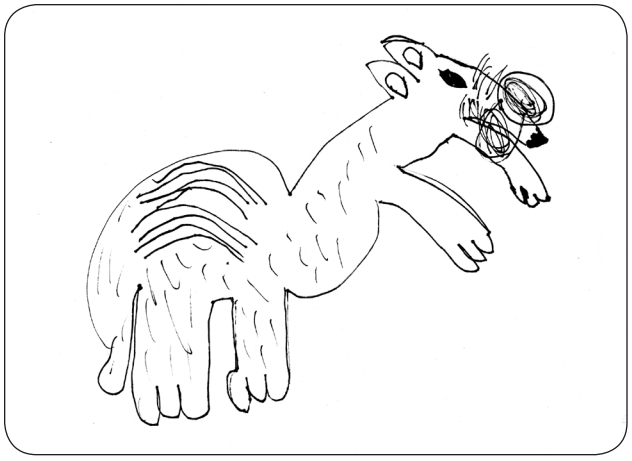
Jasper said, "I thought of making a pattern, like one thing I knew, then one thing I didn't know."

"I got to see a whole new part of Arbor [near the creek where there is evidence of beaver activity]," kindergartener Ruby remembered. Experiential learning is still the key to helping these young students make sense of the facts they uncover in their research.

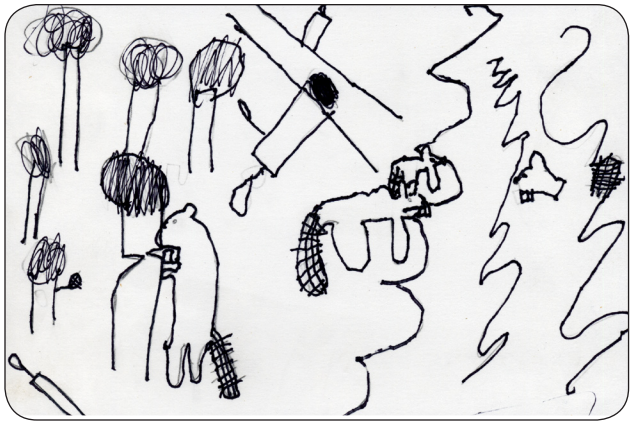
What other classroom conditions must exist in order for students to build these skills? Good teachers know that through a child's questions and responses they gain insight about his mind and his learning processes. What doesn't he know? What moves him? Where is he in the process of his research? What provokes active dialogue with this child? Where is he stuck? What will help him to move forward? We build as many opportunities into our curriculum to ask these questions as we can, and then we ask them again and again to see how each child is developing. At every class level, Arbor kids pursue research topics of their own choice as well as projects extruded from the curriculum. Among the Primaries, we look for evidence that our youngest questioners can stretch beyond what they knew at the outset, that they can discard misconceptions.

Ask students to tell you about something they thought was true about their research subject that turned out not to be true. You may meet with answers that avoid taking ownership of the misconception: "When I was two, I thought… but now I know…" "My little brother thought… but really…" Children love to be right. It is interesting to notice which students can freely admit to an incorrect understanding.

Good teachers understand that cultivating good questions requires more than memorization of facts or skills. Native, scattershot curiosity must be guided—eventually by the student himself—along robust lines of inquiry. Students need repeated opportunities to test the footholds and to judge which will support their progress toward an understanding.



Chipmunk carrying food in its cheek pouches, by Cole, kindergarten



Beavers building a dam, by Eliana, 1st grade

CONSTRUCTING KNOWLEDGE
INTERMEDIATES RESEARCH ANCIENT STRUCTURES

by Jenny Schmidt and Robbyn Leventhal

Fourth- and fifth-grade Intermediates are natural sleuths. They eagerly identify subjects that interest them and are genuinely delighted when they are able to uncover answers to burning questions that arise as they read. In this assignment, an integral part of a year-long exploration of Inventions and Discoveries beginning with the earliest civilizations and continuing into the Renaissance, students put their sleuthing skills to work as they investigate the mysteries surrounding the creation of some of the world's most awe-inspiring ancient constructions. Who built the Sphinx, and why? What motivated the Chinese to build a wall that stretches 4,000 miles? How did the Egyptians haul and place the massive blocks that were used to build the Great Pyramid of Giza? What was Stonehenge used for?

Forming questions to direct one's research is an important habit to build at this age. Fourth- and fifth-graders are often literate and practiced learners who are apt to plunge straight into a text and start writing down facts; the good habits of thinking before, during, and after reading need to be taught explicitly. The Ancient Constructions unit is one of many writing assignments that ask Intermediates to practice these skills; we think the process we have outlined here will prove applicable to many nonfiction writing projects.

FORECAST
Mini-lessons

In the months before we introduced our students to Ancient Constructions, we gave mini-lessons to air and bolster their skills in summarizing and paraphrasing, evaluating the clues to pertinent information in an article, distinguishing main ideas from details, forming questions about the material, and reading for comprehension while skimming and scanning.

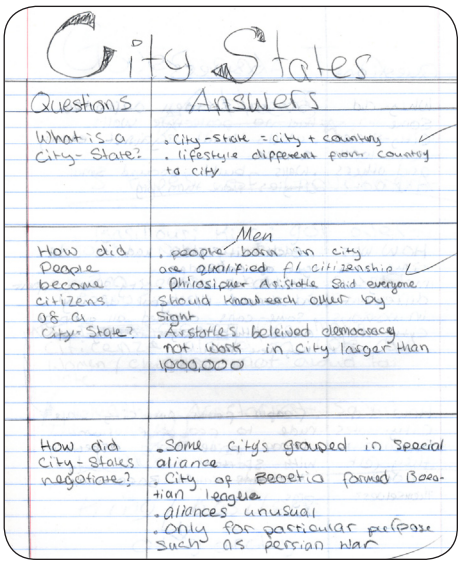
We teach the SQ3R method, an adaptation of the Cornell note-taking method, and in this case we asked our students to practice the techniques on a nonfiction article. First they Survey, looking at the pictures and headings to predict what the reading will be about. Next they Question, restating the headings in question form: "The Birth of City-States" might become "What were city states?" Then they Read with those questions in mind, highlighting main ideas as they read and recording answers

Intermediates need to be able to...

- identify appropriate sources that will be useful
- formulate the main topics and questions that they will research
- read with focus and understanding for answers to their questions
- summarize and paraphrase what they read
- record the information in a way that they can access it easily when they begin to write
- outline the order in which topics will be addressed in their papers
- organize their notes to fit their outlines
- write with clarity, incorporating their research to support their ideas
- revise their work to ensure that all paragraphs are cohesive, on topic, and connected with transitions
- edit for spelling and punctuation

Of these steps in the research process, it has been our experience that reading and note-taking are the most time consuming, and organizing ideas and notes is the most challenging.

Field Notes:
Working with a partner during the Survey, Question, Reflect, and Review stages can help students gain perspective on their growing knowledge.


City States

Questions	Answers
What is a City-State?	• City-state = city + country • lifestyle different from country to city
How did People become citizens of a City-State?	Men • people born in city • age qualified for citizenship • Philosopher Aristotle said everyone should know each other by sight • Aristotle's believed democracy not work in city larger than 100,000
How did City-States negotiate?	• Some city's grouped in special aliance • City of Beoetia formed Boeotian league • alliances unusual • only for particular purpose such as persian war

Fifth-grader Sara's SQ3R practice notes

to the heading questions in their own words. Reflection is the next step, as students consider what they have read and what questions remain, what the author intended, and whether new questions have emerged. Lastly they Review the main points of the reading by looking over the notes they have taken. SQ3R is designed to be a cyclical process, sparking further inquiry and reading.

Using an article displayed on an overhead sheet, we model and practice note-taking and categorizing for the whole group. We encourage the Intermediates to note each fact on its own index card and to mark the number of the essential question it addresses in the upper corner for easy organization. If a fact seems important but can't be easily categorized, a question mark in the upper corner serves as a reminder to consider the matter later. "Sometimes I came up with interesting information that didn't relate directly to an essential question, so I had to figure out how to put it in," said fifth-grader Hillary, who included an extra paragraph about the working conditions and deaths of the people who built the Great Wall of China. We also ask students of this age to begin to keep rudimentary bibliographies (author and title) for their research papers. We gave them a simple bibliography sheet to keep in their research notebooks; for the final research paper of the year we will ask them to append their list of sources to their papers as practice for Senior-level research writing.

The questions

1. When was the structure built and who built it?
2. Why was it built? (What was its purpose?)
3. What materials were used in its construction?
4. How was it designed and constructed?
5. Why is it remembered today?

Independent research projects driven by student curiosity occur in every class level at Arbor as each child builds toward her culminating work at the school, a Senior Project requiring a full year's research and practicum under the guidance of an outside mentor to produce a multi-faceted demonstration of learning about any passion from flying a plane to designing costumes for an opera or writing a historical novel. But as we help them develop the skills to pursue choice-driven research via the Ancient Constructions paper, a first foray into formal research at a level that might lead them to encounter sources written for adults, providing them initially with a list of the most likely essential questions helps to refine their search and focus their reading. In addition to guiding the search for information, the questions provide a natural outline for the paper, a boon to young students who are still new at the practice of organizing their thoughts in writing and conveying what is most important about a topic. As fourth-grader Maya realized, "When you write a research paper you have to think about what the reader might be wondering." As it happened, Maya uncovered plenty of things a reader might want to know about the Temple of Artemis beyond the given essential questions.

Inevitably, some of the ancient constructions the students select do not yield their most important characteristics to the questions we have provided. Scholars have no idea how the Hanging Gardens of Babylon were built, as Sierra, a fifth-grader, discovered: "The reason we know about the Hanging Gardens was because the Greeks told people and then it got passed down from generation to generation. People quarrel all the time about what the Hanging Gardens looked like, or if they even existed, but no one knows the real answer to either question." Extensive study of the history and culture of the builders is outside the scope of this project, but when fourth-grader Ori began to study Masada he found, "As I was reading I realized that I needed to write

about the story of Masada…the history. Why was Masada built anyway? I needed to talk about how the Romans attacked the Zealots and how the Zealots had to build a fortress for protection." A key feature of this project is that all students are asked to evaluate the scaffolding questions and see where they need modification to serve the topic of their choice.

The research

Simply choosing an ancient construction to investigate is an exciting first skimming/scanning challenge. A trip to the school library to search out its holdings on ancient constructions gives students a chance to browse and teachers a chance to observe what seems to draw each child: the familiarity of a structure like the Great Pyramid at Giza? The fascination of human sacrifice at the Temple of the Sun? A link to the student's own heritage or experience? Ori chose Masada because it is in Israel and figured in the lives of his ancestors; Maya was interested in the Temple of Artemis because she had portrayed the goddess in a play as a first-grader and had admired Artemis's bravery and refusal to be confined to a traditional female role.

Once each student has selected a topic, the research begins. We did all research in class and used our own library heavily, but we also asked students to go to the public library on their own for extra sources. Our kids quickly figured out how to gauge whether a text was accessible and appropriate for them; they quickly learned that neither "My First Pyramids" nor a 450-page architectural dissertation on the Parthenon would meet their needs. Ori reflected, "I could only find three books about Masada at the library near my house, and one was fiction, so I thought it wouldn't help me. But the other two were big and thick and really hard to read. The fiction book turned out to be a true story with a twist: they made up some characters, but it actually had a lot of information about the First and Second Temples. So instead of reading it like a story, I read page by page and took notes."

Even for students whose constructions were easily addressed through the essential questions, finding the answers often opened a new path of inquiry. As Hillary said, "When I was researching I'd start with an essential question and then that question would lead to another question." Maya began by adhering to the essential questions, but decided that doing so was narrowing her thinking too much. When she drew on her own curiosity and began to investigate how modern people even knew about the lost Temple of Artemis, she discovered the quest of archaeologist John Turtle Wood to locate the temple ruins: "I thought I should write down some more of the story of how the temple was found, and then it was easier to write my paper."

Writing through the challenges

It's easy for any researcher to get involved in the details and lose sight of the big picture. Injecting quick-write activities during class research times helped our students step back and think about their readers. To be sure their audience would be able to imagine the structure, they spent a few minutes mentally visiting the site and writing a letter to a friend about what they had seen. Then they tested their descriptions on a partner. Another day we took some time to work on engaging lead paragraphs that would draw a reader into the paper. Hillary wrote:

> *Imagine… You are a soldier in about 221 BCE in the time and place of ancient China. You are holding a bow and arrow, crouching, alert, ready to fire at any given time. The fierce, threatening Nomads have struck again. You and your people need the aid of the wall, the Great Wall of China…*

Sequencing the information collected on notecards can be one of the most difficult stages for students; even with notation systems in place they often have to reorder their

Field Notes:

Well-known structures like the Pyramids will yield plenty of appropriately leveled source material for less sophisticated readers.

We want our Intermediates to find one to three solid sources. Although some students did work from more books, we've found it is more fruitful for children this age to focus on a few good materials rather than jumping from book to book.

facts. During writing conferences with each student we worked on arranging ideas so they would flow naturally, developing an outline to guide the first draft. Having opened with a description of the Temple of Artemis, Maya decided to trace the history of the various temples built on the same site, explaining the third temple's slide into disuse before writing about the archaeological efforts to rediscover this lost Wonder of the World.

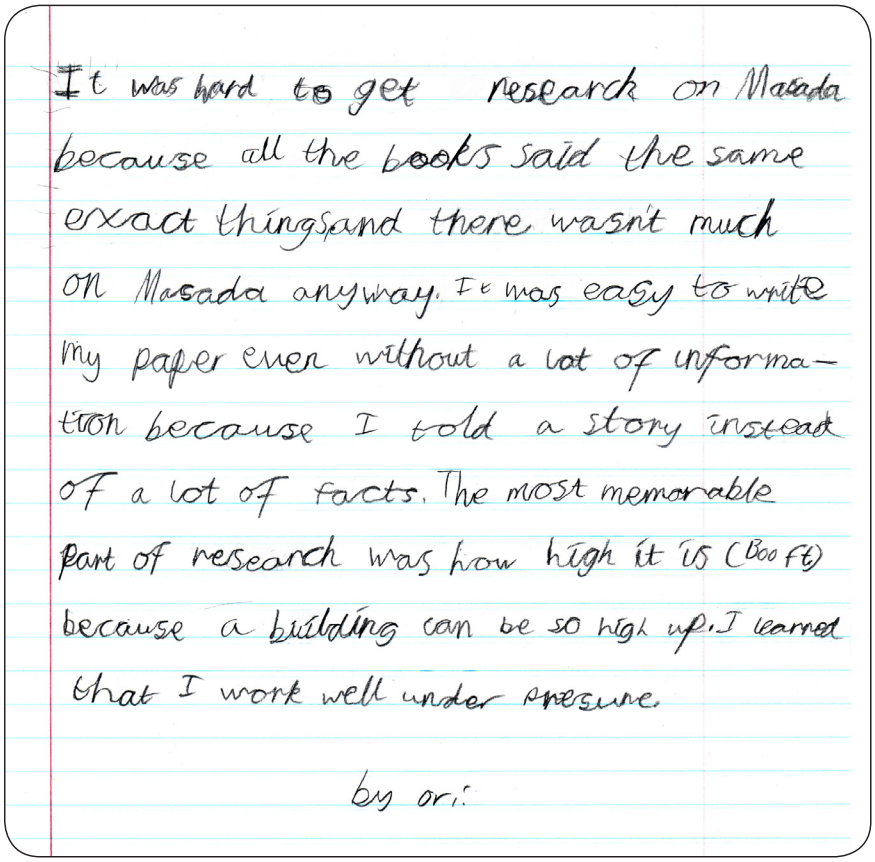
Once they had organized and written a draft of the paper, students worked on transitions between paragraphs and ideas. We copied a strong Ancient Constructions paper from a previous year onto overhead transparency sheets and read through it as a class, underlining places where the author had linked ideas to make a coherent whole.

Revision and reflection

Arbor writers are asked to think about the importance of creating a strong and inviting voice in all their writing to keep the reader hooked; riveting introductions, satisfying conclusions, and rich language were features we wanted the Intermediates to attend to in preparing a final draft. During the revision process they read and commented on one another's papers, praising sections they found particularly interesting and raising any remaining questions they felt should have been answered.

As we often do in the wake of major projects, we asked the students to write about what they had found satisfying and challenging about the Ancient Constructions paper and what they had learned.

This paper had an accompanying Design component in which students practiced perspective drawing and produced a large, beautiful illustration of the structure they studied.



It was hard to get research on Masada because all the books said the same exact thingsand there wasn't much on Masada anyway. It was easy to write my paper even without a lot of information because I told a story instead of a lot of facts. The most memorable part of research was how high it is (800 ft) because a building can be so high up. I learned that I work well under pressure.

by ori

SEEKING THE CENTRAL QUESTION
SENIORS WRITE ABOUT MONOTHEISM

by Linus Rollman, Leigh Wood, and Caroline Hurley

Writing happens in the classroom in a multitude of ways, from a spur-of-the-moment response to a conversation or an event on the playground to a carefully crafted assignment, from sonnets to essays to map keys, from personal musings to efforts at making sense of global events. The research paper rightly holds an eminent position among these many varieties of school writing. No other form of writing presents children in the elementary and middle grades with the same opportunity for sustained effort, for the freedom to follow their own interests within the constraint of using available resources and data, for honing their abilities to read deeply, to think broadly, and to make imaginative leaps that remain grounded in real-world concerns. When the Senior Humanities team constructs a research paper assignment for middle-grade Arbor students, several concerns are preeminent: to allow them considerable freedom in choosing among topics that present the possibility of differing opinions, even of controversy; to give them plenty of time to absorb, to consider, to write, and to re-write; to challenge them to rise beyond the recitation of facts, to ask why and how as well as what and when, to craft and defend a thesis.

Students in sixth, seventh, and eighth grade at Arbor School—the Seniors—meet five times a week for Humanities classes by grades. The writing assignment presented here was framed in those classes and connected to our thematic study of the rise of monotheism and the development of Judaism, Christianity, and Islam. Each grade also meets once a week for a writing class with a different teacher (the sixth- and seventh-graders in groups of roughly ten, the eighth-graders as an entire eighteen-student class). In this setting, the three of us tailored the assignment to each particular grade and read and responded to the papers that the students wrote. This allowed us, as a team, to attempt to meet the different developmental needs of the three grades within a shared framework. Our students' extensive paper-writing experiences at every class level had given them a shared vocabulary of research and writing, and, importantly, a strong sense of curiosity and faith in their own abilities. Our goal now was to guide them to find central questions in a chosen topic that would help them make inferences and begin to inject a well-researched personal perspective into their nonfiction writing.

FORECAST
Library visit and topic selection

We had spent a six weeks prior to this assignment studying Judaism and Christianity and had just moved on to study Islam. The range of topics on which the students could write their papers was extremely broad: they could study anything connected with those three monotheistic religions and with Europe or the Middle East (our geographic focus for the year), based on their interests and on accessible resources at their library.

We provided them with a number of suggestions and asked that they spend at least an hour browsing in person at the library. We asked the kids to generate strategies—browsing chapter headings and indexes, scanning for vocabulary and, especially, reading short selections—for assessing whether a book (or magazine or newspaper article) was accessible to them and contained sufficient information to support a research paper. We reminded them that they were the most competent judges of their own skills and limitations as readers and asked them to come to school the following week with a brief written description of their paper and at least two good print resources. We were careful to provide time in class for students to begin to read while we checked in individually to make sure that their sources were appropriate.

Assignments were given in class, framed by discussion, and supported by in-class work time. The bulk of the work, however, was done at home during the nightly half hour to 45 minutes of Humanities homework that we expect. All three grades followed the basic schedule outlined below, with slight variations.

Library visit and topic selection: 1 hour (allow several days—ideally a weekend—over which the library visit can take place to accommodate family schedules)

Reading without note-taking: 5 nights of homework, plus some class time; 3 to 4 hours.

Note-taking: 4 nights of homework, plus some class time; 3 to 4 hours.

First draft: 4 nights of homework; 2 to 3 hours.

Revisions: 4 nights of homework; 2 to 3 hours.

Further revisions: variable by student.

Although some students supplemented their research with online materials, we were concerned that those materials not be the primary resources.

Field Notes:

We have found that, especially for less sophisticated writers and beginning researchers, biographical research papers are particularly accessible. If you are aware that particular students face reading challenges or a lack of family support, consider accompanying them on a short visit to the school library to hunt for appropriate resources.

We ask that students take notes on index cards so that the cards can be rearranged and the students can escape from the organization imposed on the material by the sources that they read. Students were asked to bring their sources to school every day and in-class note-taking time was provided.

Reading without note-taking

This practice was suggested by the head of our school. No one expects college students to dive into a research paper without spending time simply reading beforehand; shouldn't younger students also benefit from time to explore a topic before beginning to construct a paper? We asked that the Seniors spend a few nights simply reading their sources, briefly recording the title and the pages they'd read, and that they write for a few minutes afterward—not taking notes, but sketching an overview or highlights of the most interesting points—on a sheet that we provided. The unstructured time to read about what they were interested in met with nearly universal positive feedback from the students. "It helped me get a sense of what I would need to take notes on before I simply dived in, and recording while reading let me get some premature thoughts on the subject," eighth-grader Bryan reflected.

In-class reading time can provide an opportunity to check in with individual students, review their records of highlights, and discover whether the books they've chosen are really working for them.

Note-taking

Before they began to take notes, we asked the students to write a note-taking plan in class. They had previously practiced using various graphic organizers and their plans were allowed to take whatever form made the most sense to them: outline, web, list, and so on. We modeled a pre-note plan on the board using a hypothetical paper topic (The Protestant Reformation), making a web that included several possible sub-topics. After their week of reading, the students were well equipped to take this step with their own material. "I found the pre-note plan incredibly helpful," wrote Lilah, an eighth-grader. "I had never made one before and as I took notes I was able to cross off sections and see how they related to each other." It also provided a good check for us on the depth of each student's reading and his readiness to begin focused note-taking.

First draft

As the students prepared to write their first drafts, we spent time helping them to develop a thesis by crafting a central question that their paper could investigate. We gave them time to brainstorm possible questions and to share those questions with one another. At the Senior level, we want them to try "why" and "how" questions. The question, "What did Joan of Arc do?" sets you up for a dry recitation of the events of her life, but making the shift to, "Why was Joan of Arc so important?" takes the first steps toward creating an opportunity for the reader/writer to think about context, to make inferences, and to provide explanations. "Why" and "How" questions require interpretation, which begins to introduce the student's own perspective into the writing.

At this age students are generally just developing the capacity to think rigorously in these ways, to write papers that are truly their own. You may see few fully developed, completely articulated arguments, but this should not stop you from encouraging students to take these first steps. As Linus said to one student, we would much rather see a glorious failure than a pedestrian success. Better that a student should take tentative steps toward original, creative thinking than that he should become habituated to paper-writing as a routine of read, record, and regurgitate.

Mini-lesson: Introductions

One way that many middle-grade students can successfully work toward supporting a thesis is by crafting a provocative, engaging introduction. In a mini-lesson, we offered sixth-grade students several examples of introductions to nonfiction work. It is relatively easy to cull examples that use story-like action sequences, that begin with the climactic portion of the subject, open with a relevant quote, or use a variety of other devices.

Save student work that uses these devices, as it is almost always accessible to future students and supports the notion that this is something young students really can do.

Martin Luther: The Man Who Changed the World, by Andrew, 6th grade

In the month of July, in 1505, there was a mighty thunderstorm in Magdeburg, Germany. The man hurried through the rain to get to his next class at St. George's Latin School, eager to get there quickly. Suddenly lightning struck a couple yards away from him. He cried out, "St. Anne, help me! I will become a monk!" The man did not die in the storm, so he stayed true to his word by dropping out of school and becoming a monk. This man was Martin Luther, the man behind the reformation of the Catholic Church who would change the face of Christianity forever.

Women in Islamic Societies, by Lilah, 8th grade

"And the Lord responded to them, 'I certainly do not overlook the work of any worker among you, male or female: you come from one another.'" – Koran

Women make up just over half the people of the earth, yet oppression and abuse of women is practiced all over. Oppression of women is known to most as a brutal and horrific thing. The natural tendency is to point the finger of blame at a specific group of people. The religion of Islam has been wrongly accused of oppressing women by much of the west, when in reality this religion was one of the first to fight for women's rights. In fact, four out of every five people who convert to Islam are women. The oppression and abuse of women is caused by political and economic situations, which have nothing to do with Islamic ideals.

A possible mini-lesson on reading and recording: Make copies of several short excerpts from non-fiction material unrelated to the students' paper topics. Spend 20 minutes reading quietly, then collect the copies and ask the students to write short responses, attempting to capture what they consider to be the most important points from the reading. You can collect and/or have the students share their writing aloud in order to assess their abilities to read and record successfully.

Revisions

Feedback is crucial after the first draft of a paper is complete. There is no substitute for attentive written commentary from a teacher, despite the labor involved in reading dozens of papers more than once. We have found no other way to focus as effectively on the needs of individual students. One of our teachers wrote directly on students' papers, one relied on a separate feedback sheet, and the third combined those two methods. We also value peer suggestions at this stage: the student receiving the feedback benefits from the input of multiple readers, and the student evaluating the paper has the opportunity to look critically (though gently!) at another's work, to gain insight into another writer's process, and potentially to draw inspiration from another writer's work. We handled in-class peer feedback differently for the three grades. The sixth-graders were asked to use conventional marks to point to topic sentences, indicate passages that seemed questionable or confusing, and highlight portions that they found especially well written or interesting. The eighth-graders used the same rubric as the teacher used in responding to one another's papers and were explicitly asked to set aside considerations of grammar and spelling to focus on content and organization. All students were then given several nights to respond to the input they received and re-craft their papers. "It was nice to hear from your classmates what they thought of your paper, since usually all you say to classmates is 'nice paper,'" Lilah said. "But in this form we were able to give and receive specific feedback."

"I would talk a bit more about Winter Solstice and the people that celebrated it. I would also explain Christmas a bit more and assume your readers don't know so much about it. Also, the ending feels too abrupt. Could you add a conclusion? This may not be easy, but could you put in some of your own opinions?" eighth-grader Melantha advised a peer.

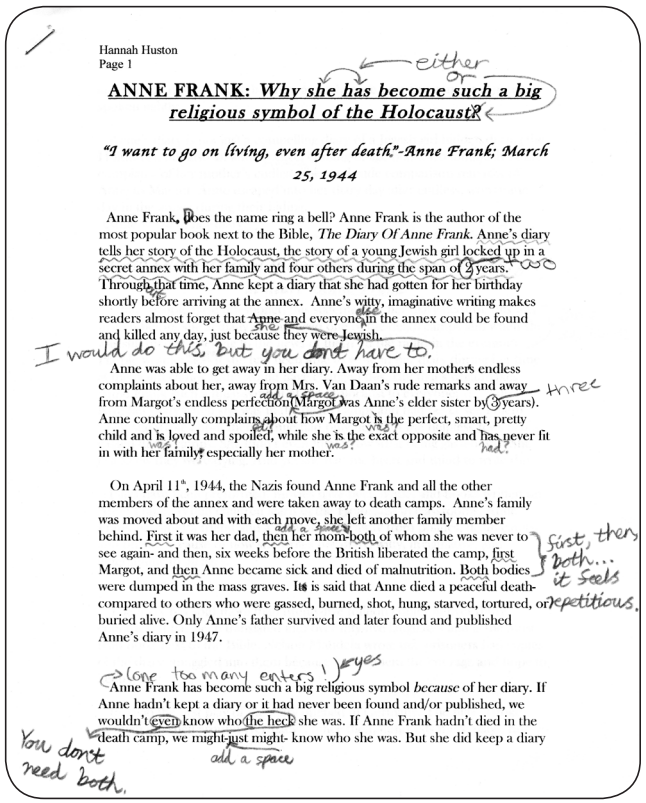
It can be helpful to make copies of students' first drafts, along with the feedback they've been given. This way, you have a chance to make a side-by-side comparison of first and second drafts instead of relying on memory to spot the revisions they've made.

Feedback guide:

1. Describe the subject of the paper.
2. What is the main point/thesis/author's view on the subject?
3. Write an outline of the paper. There should be at least one outline entry per paragraph—hopefully you can also find ways to group paragraphs together.
4. What would you say are the greatest strengths of the paper?
5. If this were your paper, what would you do to improve it? (Think about organization, possible gaps in research, questions that you have, transitions, introduction and conclusion, strength of the thesis, grammar and spelling...)

Follow-up

The next phases of the paper can (and for us, did) take many forms. The eighth-graders used another class period to re-read one another's papers with an eye to the spelling and grammar that they'd previously ignored and were then given one more night to incorporate that feedback into their papers.



Hannah Huston
Page 1

either or

ANNE FRANK: *Why she has become such a big religious symbol of the Holocaust?*

"I want to go on living, even after death."-Anne Frank; March 25, 1944

Anne Frank. Does the name ring a bell? Anne Frank is the author of the most popular book next to the Bible, *The Diary Of Anne Frank*. Anne's diary tells her story of the Holocaust, the story of a young Jewish girl locked up in a secret annex with her family and four others during the span of 2 years. Through that time, Anne kept a diary that she had gotten for her birthday shortly before arriving at the annex. Anne's witty, imaginative writing makes readers almost forget that Anne and everyone in the annex could be found and killed any day, just because they were Jewish.

I would do this, but you don't have to.

Anne was able to get away in her diary. Away from her mother's endless complaints about her, away from Mrs. Van Daan's rude remarks and away from Margot's endless perfection (Margot was Anne's elder sister by 3 years). Anne continually complains about how Margot is the perfect, smart, pretty child and is loved and spoiled, while she is the exact opposite and has never fit in with her family, especially her mother.

three

On April 11th, 1944, the Nazis found Anne Frank and all the other members of the annex and were taken away to death camps. Anne's family was moved about and with each move, she left another family member behind. First it was her dad, then her mom- both of whom she was never to see again- and then, six weeks before the British liberated the camp, first Margot, and then Anne became sick and died of malnutrition. Both bodies were dumped in the mass graves. It is said that Anne died a peaceful death- compared to others who were gassed, burned, shot, hung, starved, tortured, or buried alive. Only Anne's father survived and later found and published Anne's diary in 1947.

first, then both... it feels repetitious.

Anne Frank has become such a big religious symbol *because* of her diary. If Anne hadn't kept a diary or it had never been found and/or published, we wouldn't even know who the heck she was. If Anne Frank hadn't died in the death camp, we might-just might- know who she was. But she did keep a diary

You don't need both.

Eighth-grader Hannah's paper with feedback from her classmate Ruth

In a number of instances, students were asked to write third drafts of their papers. For most writing assignments we decide, working in concert with our students, how much revision to require based on each individual's process. How hard has he worked so far? What is his drive to continue? Does he seem close to a breakthrough to a new level of achievement? There is one follow-up that we would universally recommend: the students should be given time, opportunity, and encouragement to read one another's finished papers. It can be profitable to match particular papers to particular students so they can read with an eye toward inspiring their future efforts. Students can also be asked to choose selections from their papers to read aloud to an audience of their peers. Our Sevens and Eights closed by writing an assessment of their final draft, comparing the success of the paper to previous efforts and commenting on the utility of each step in the process.

FACULTY PRACTICE
TEACHER AS WRITER

by Annmarie Chesebro

"We do not write what we know so much as we write to know. Writing is exploration."
—Donald Murray, Write to Learn

At Arbor, teachers are writers. We write every month. Every week. Every day. A lot. In fact, we ardently believe that to be planful and reflective teachers, we all must write, regardless of whether writing is one of our own lifelong passions. The reason for this decisive point of view is several fold. To be effective and credible models for our students, we all engage seriously and publicly in the writing process. As we ask our children to do, we use writing to think and investigate ideas. Writing makes us deeper readers; we attend more closely to an author's choices and draw inspiration from the work of others. We write to reflect on our practice and on the children who form the heart of our business.

Within our classrooms, this means sharing our outlines and brainstorm lists with our students. It means bringing our own rough and jumbled story drafts to children-as-peer-editors during writing conferences and revising according to their advice. It means sharing with them the lessons we've learned about writing conventions from our own editing conference experiences—perhaps even from having worked to publish our writing within or beyond the school. These practices build a school-wide community of writers and make the publication of an Arbor teacher's work in the local newspaper a cause for celebration.

In further support of teachers' engagement with the writing process, the school engineers periodic all-staff writer's workshops, most recently led by local authors Kim Stafford and Melissa Madenski. In writing together as a faculty, we remember what it feels like to dive into a new writing prompt, to wait with quickened pulse for our turn to read aloud to a response group, or to polish a poem for publication. Through such workshops we also come to know each other more fully, learning about grandparents, childhood experiences, or travel adventures usually outside the bounds of our exchanges during the teaching day. We discuss ways to incorporate workshop ideas big and small into our own classroom practices. Most of all, we remember what it means and feels like to be students of writing once again.

We were able to coordinate with Western Oregon University to arrange continuing education course credit for this workshop series for our faculty. Ever seeking connections with the broader educational community in the Portland area, we also invited other local teachers to join us.

In our weekly faculty meetings, we use writing to think. Meetings may begin with a chance for each teacher to pen her own first responses to a text or to a pedagogical question. We may begin by reflecting upon particular children in our classrooms in order to more effectively collaborate in support of an individual need. From this writing, we are often better poised to fully enter group discussions, listening to the points of colleagues having already formulated our own first thoughts. Such a practice mirrors what we might do with our students, asking them to use writing as a tool for formulating questions and investigating ideas. Just so, we may also end a meeting together in written contemplation, clarifying what we've learned from a discussion or translating a colleague's insight into a potential experiment for our classrooms.

In keeping with the importance we place on individuals within a school community, we use writing to reflect on the progress of each child, communicating our analyses and hopes to parents through narrative assessments. Twice each year, teachers compose reports, the equivalent of a small novella, poring over portfolios of student work and students' own self-assessments as well as piles of observational notes from classrooms. From this raw material we draft our narrative assessments and, through the writing process, come to think even more deeply about each child's triumphs, struggles, and next steps. A full week's writing and much more go into the reports as teachers

advise each other and confer, adding insights about children, helping shape descriptions of a child's progress, and editing to produce fluid, clear prose. The collaborative spirit so necessary between a team of effective teachers and each child's parents is stoked by this effortful writing. In turn, we ask parents to write in response to teachers' reports as we work together in support of children.

A lively writing practice lies also at the core of the MAT teacher licensure program here at Arbor. Every other year we accept a new cohort of four to six apprentices into our classrooms; each becomes a co-teacher under the guidance of a master of the craft. These teachers-in-training complete coursework both at nearby Marylhurst University and on-site at Arbor in weekly seminars. Seminar is always infused with writing. To engage with a text, apprentices may bring double-entry journals or may pose questions and pass them around the Seminar table in silent written conversation. Apprentices may write to connect readings to the daily realities of their classrooms, to think incisively about a particular student's needs, or to remember how it felt to be a beginning reader, to struggle with fraction concepts, or to take the first tenuous steps to build a friendship. Arbor apprentices are asked to reflect weekly on their teaching through writing, searching for ways to move forward with a particular lesson or student. Throughout the two-year graduate program, apprentices draft philosophy statements, write demographic analyses of the school, build pedagogical rationales for unit studies, and finally engage in a yearlong action research thesis within their classrooms.

Making room for deep reflective writing throughout the year, writing to investigate and discover, and writing to experience the same basic processes we require of our students, Arbor faculty and teaching apprentices hope to broadcast that we see ourselves as perpetual education researchers as well as members of a school community devoted to self-reflective and literate lives.

Selections from Arbor writing workshops

To those boys:
I know the power of the stick in your hand, the pleasure in the well-thrown pinecone, the perfection of the successful sneak attack. I know the self-righteous boil of your anger, the desire to please but also to separate, the camaraderie of the pack and the loneliness of being left behind. I know the fear you feel when standing on the brink of a fight, for pride or self-defense. I remember the secret life of the mind and of the spirit, and what it means to live in stories. I know that you need to have these things, and that they may mean as much to you as anything that we can give you. But I know too our need for rules, our concern for safety, and the need you may have to be saved from yourselves. Know then that we will always be here for you to push against and that we will wield our power with care.
—Peter ffitch

Fragments from a Life in School
I am amazed at how deep the groove is in which I find myself, how habits have grown like a coral reef that keeps and contains the sea that is my life. Perhaps I should show more gratitude to the forces that threaten my domain, that stir me from the places I have come to inhabit with such constancy.

It is a truth universally acknowledged that any child in possession of an imagination should look for a friend with whom to conspire to make a certain amount of mischief. Mischief is good for the soul, a sort of inoculation against the temptations of evil.

Dear Mrs. Rickett,

I didn't really care about the Pleistocene or the Eocene, but your excitement and my devotion to you led me to try to discover the sources of your joy. The constellations displayed on the velvet blue of the auditorium's stage curtain remained a mystery

for a long time, but I continue to be your student and learn them annually, best in the years when my own students are invited to learn them themselves.

So sorry about the grasshoppers. They were so beautiful—so plentiful. I was sure the paper cup would contain them long enough for me to take them home. But reaching for the social studies textbook, I knocked the folded lips of the cup—and out they jumped.

I am glad you asked me to be the Virgin Mary in the Christmas pageant—I loved singing the lullaby.

I can spell the word "school" now—actually I'll never forget getting the paper back —ashamed at not knowing it when I should have.

Visiting you before you died, watching birds at feeders outside your kitchen window, I was filled with a sense of good fortune. You were the teacher I was to try to learn to be—I'm still trying.

Love, Kathy Kay

I have affection for the moments when attempts at explanation fall out of children's mouths as if unbidden. The internal power of the idea has a kind of force that prevents the child from doing anything but uttering it. The momentum of the insight or imagining that causes this direct levering of a notion out into the world is a constant wonder.

—*Kit Abel Hawkins*

Recommended Reading

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INNOVATIVE CURRICULUM FROM THE ARBOR SCHOOL OF ARTS & SCIENCES

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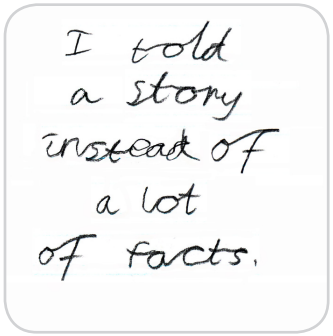
Cambium: (n) the cellular growth tissue of trees and other woody plants, from medieval Latin "change; exchange."

What content would you like to see offered in Cambium? Do you have ideas about how we can improve it? Send us an email: cambium@arborschool.org

Masthead by Jake Grant, after an 1890 botanical illustration. Plant block print by Annika Lovestrand.

The Arbor School of Arts & Sciences *is a non-profit, independent elementary school serving grades K-8 on a 20-acre campus near Portland, OR. Low student-teacher ratios and mixed-age class groupings that keep children with the same teacher for two years support each child as an individual and foster a sense of belonging and community. An Arbor education means active engagement in learning, concrete experiences, and interdisciplinary work.*
For more information on the Arbor philosophy, please visit www.arborschool.org.

ICCI *is a private, non-profit organization created to train teachers in the Arbor educational philosophy through a two-year apprenticeship while they earn MAT degrees and licenses, and to offer guidance to leaders of other independent schools.*
In 2007 its mission expanded to include the publication of material underpinning the Arbor School curriculum.



Writing reflection excerpt by Ori Alon

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