Teachers & Writers

ORIGINS
Where Words Come From

by Sandra R. Robinson

WHO MADE UP THE WORDS WE USE? HOW does language grow? How did the words *glint*, *glad*, and *glass* grow from the root GHEL ("to shine")? How did *rip off* and *spaced out* grow from the words *rip* and *space*? Language has always grown through the inventiveness of those who use it. Word families that developed hundreds of years ago and phrases of popular speech coined yesterday and today are the legacy of people who have been playful with root meanings, extending them to make new connections. The new connections—the new meanings—often reflect the experience of a particular time and culture. What is a "free-lance" artist? Standing in the historical shadows behind the free-lance artist or writer is the medieval knight who, rather than being attached to one particular lord, hired himself and his lance out to many different lords.

The teaching materials of *Origins* are designed to recapture a sense of the playful inventiveness that fuels the growth of language and a sense of how meaning is rooted in experience. Inventiveness is the lifeblood of all the ways we express ourselves in language—new words and phrases, poems, stories, plays. In *Origins*, exploring word histories spills over into reading poetry, writing poems and short plays, inventing new words—participating in the drama as well as re-enacting it.

At the heart of *Origins* are the word families, which we explore with lots of up-on-your-feet, get-into-the-act, get-the-imagery-in-your-bones activities. We emphasize word families of Germanic origin because their words are often both colorful and down-to-earth. For example, from a root that means "to swell" we get the words *ball*, *balloon*, *belly*, *bulky*, *bulge*, *boulder*, *bold*, and *billow*. We also include families that, by going back to Indo-European roots, reveal relationships between both familiar Germanic words and more abstract Latinate vocabulary. From the Indo-European root MEDHYO, for example, come the Germanic *middle*, *midst*, and *mid-* and the Latinate *medium*, *mediate*, *intermediate*, *Mediterranean*, *immediate*, *mediocre*, and *media*.

As we suggest ways to explore word families, our focus is on the images and experience that underlie a word's "definition." In a typical lesson we might begin with a pantomime of a wrestling match. How do the wrestlers move? They twist or bend. That image of twisting and bending was a resource for coining many other words, as well—*wrap*, *wreath*, *wriggle*, *wrinkle*, *wrist*, *writhe*, *wrong*, and *wrath* (all members of the

WER family). The students examine the twisted strands of a wreath, wriggle into an imaginary pair of almost-outgrown pants, imagine the coziness of being wrapped up in a blanket, writhe with pain after an imagined soccer injury, wrinkle our foreheads in surprise or in a frown. The root image springs to life in many forms, illuminating the words of the entire family.

Why search out the images that underlie *wrestle* or *wrap* or *wriggle*? Aren't the meanings of these everyday words easy enough to grasp without digging into their roots? The meanings of such words are indeed accessible. Many of these words, however, also leave their down-to-earth beginnings and journey forth to suggest abstract ideas. What do we mean when we say "Tony wrestled with the math problem" or "Demali wrestled with her conscience"? We wrap a child in a blanket, but we also wrap up a report and keep a secret under wraps—and become so wrapped up in a book we are reading that we forget to notice the time. We may watch a worm wriggle across a sidewalk, but we may also watch a politican wriggle out of campaign promises. The images we have explored as we first encountered the WER family became a resource for understanding these "extended" or abstract meanings. When Tony "wrestled with the math problem," did he get down on the floor and use his arms and legs to grapple with the problem? How is the *idea* of wrestling with a math problem related to the twisting, bending, and sweat of a physical wrestling match? Both involve struggle, both are difficult. When you wrestle with a problem in your head, you move back and forth in your mind, trying one thing and then another as you struggle to "get hold of" a solution—just as a wrestler moves one way, then another, trying to get hold of his opponent.

Tracing the evolution of the WER family words from their earliest roots to their latest abstractions dramatizes how we use our down-to-earth experience to express our flights of thought and imagination. Abstraction—literally "drawing away"—is one term that describes such evolution. Metaphor—literally "to carry beyond"—is another. Abstraction highlights the movement from experience to idea. Metaphor highlights the inventiveness that springs from our urge to coin new words and create new meanings. We tend to think of metaphor as an item of high culture. In truth, metaphor lives as vital a life on the streets and in the back hills, on farms and in computer rooms as it does in Shakespeare. It is a vehicle by which language—and indeed our very thinking—develops. *Chill out, bedcord strong*, and *he doesn't have both drives on line* are all as genuinely metaphorical as Shakespeare's "Sleep...balm of hurt minds." From the intuitive perception that our body temperature is lowered when we relax (*chill out*) to the experience of finding strong rope to hold the mattress of a homemade bed (*bedcord strong*); from frustration with the limits of a computer that lacks a second drive (*he doesn't have both drives on line*) to the experience of feeling balm heal a wound, the varieties of human experience are the

clay we reach for to shape new meanings—or express old meanings in a fresh way. To express intangible feelings and ideas, we draw on what we know through the senses. Scenes from baseball and boxing become a resource for describing thoughts about somebody's conduct: *he's way off base; that's a low blow*. The unexpected twists of improvisation that occur as a jazz musician departs from the melody line to play "changes" become a resource for describing difficult times that put you through ups and downs: "Problems with her job have really been *putting her through changes*." An image of winds blowing "toward the harbor" is at the root of the word *opportunity*. The sensation of light and warmth suggested by the root idea "to shine" is at the base of a word that describes happiness: *glad*.

Exploring the word families of *Origins* provides a background for detecting the human experience and inventiveness that underlie the formal definitions of all words, whether they be words in the dictionary, the latest popular speech, or simply an unusual turn of phrase. Students studying the settling of the American West, for example, encountered the puzzling phrase "proving up on the homestead." What experiences on a homestead might lie behind the idea of "proving up"? The students had been immersed in *Origins* for several months, and the strategy of posing such a question was a familiar one. They were quick to come up with a list: clearing the land, building a house and barn, digging a well, planting crops. By the time they finished their list, they had a good sense of what the pioneers must have meant when they used the term "proving up."

Evoking the experience suggested by a root meaning provides a fuller understanding of how meaning develops than the unadorned this-comes-from-that approach. What, for example, is the meaning of the word *construct*? The root meaning of the word is to build (*struct*) together (*con-*). Why build *together*? If we simply set *together* beside *build*, its meaning may be puzzling, but if we delve into the experience it suggests, it can point us toward a vivid understanding of the word. What comes together in construction? A pile of logs, a stack of boards, a heap of stones or bricks. Or young saplings bent into a dome and covered by branches. Window frames, doors, plaster board. Water pipes, electric wires, insulation. Or chunks of ice carved for an Eskimo home. What holds these things together? Wooden pegs, animal sinew, nails, cement. By the time we have explored the experience suggested by the *con-* of *construct* (in conjunction with our understanding of *build*), we have a full-bodied sense of the word.

The same approach—What is the experience at the root of this word?—can illuminate the multiple meanings of a word. In *The American Heritage Dictionary*, for example, more than thirty-five meanings are given for the word *draw*. Such a long list of meanings can be daunting. The list becomes manageable, however, if we see the many meanings not as separate but as a family of related meanings that have grown from the experience

of *pulling* that lies at the root of the word—an experience we can discover in its primary meaning. A chimney that *draws* well is one whose air currents *pull* smoke upward; the concept of money *drawing* interest is a metaphorical *pulling* of one thing toward another; someone who *draws* a picture *pulls* a pen or pencil across a surface; and a fiction writer who *draws* a scene in a novel does so by a metaphorical extension of an artist's drawing.

The *Origins* angle of vision on language also provides a foundation for valuing students' own speech. Whatever background and interests students may have, their conversation will include lively figures of speech that reflect the inventive thinking that has fueled the growth of language throughout history. From the latest popular speech to the vocabulary of a non-standard dialect or the vocabulary of strikingly different languages such as Chinese or Arabic, there are words and expressions in a student's own language that can be illuminated by delving into the experience that underlies their meaning.

Even when students' home language is wholly unrelated to English, exploring metaphors based on shared experience can establish a sense of connection between the language of home and school. In all languages, vocabulary is rooted in experience, and basic to all of us, whatever language we speak, is that we experience the world through our bodies. In English, many metaphors are rooted in this experience of the body. We may aspire to be *head* of a company, our achievements may inspire us to hold our *heads* high, we may be *head*-strong in pursuit of what we want, or we may take on more than we can *handle* and find ourselves in over our *heads*. A person who is deceitful may be described as two-*faced*. We can be *nosy*, we can *nose* into a parking space or we can look down our *noses* at others. If we want to ignore something, we may turn a blind *eye* to it—or turn a deaf *ear* to it. On the other hand, we may lend an *ear*—or even be all *ears*. You can be firm and put your *foot* down—or you can throw up your *hands* and give in. You may *shoulder* a burden or get cold *feet* and avoid it. A person may be cold-*hearted* or warm-*hearted*, hard-*hearted* or soft-*hearted*—or *heartless*. We can take *heart* or lose *heart*—and we can attack a job half-*heartedly* or whole-*heartedly*. Any group that sits down to brainstorm such a list will come up with many other examples. Such examples provide a jumping off point for eliciting similar metaphors in other languages. So far, all the languages we've investigated have yielded such expressions. In Arabic, the word for the *head of a company* or *head of state* is also built on the Arabic word for *head*—and the same is true in Thai. In Hungarian, the word for disorder or anarchy is "headless-ness." In Hebrew, Rosh Hashanah means "head of the year." In Tagalog, a language of the Phillipines, the word for generous means, literally, "with open palm." In Temne, one of the languages of Sierra Leone, having a "good hand" means, figuratively, that everything you do turns out well. In Wolof, an African language, to have a "clean heart" is to be sincere.

Exploring students' own speech helps to awaken the sense fostered by all of the *Origins* material—that the story of how language grows belongs to us all. A group of reluctant Job Corps students became interested in spite of themselves when we started exploring word origins by examining items in their own speech. Nineteen-to twenty-one-year-olds who were reading at 2nd- and 3rd-grade levels, these students were hardly eager learners. By the end of a week, however, they were claiming the first word family as their own, and competed to be first on their feet to dramatize a word. They developed a grudging admiration for these people who, by coining the words of the BHEL family, knew how to be as slick with words as they were.

We have found that the *Origins* approach to exploring word families and students' own speech sparks a delight in words and illuminates many dark corners of the language arts curriculum. "That's one of our words!" echoes through classrooms where students have been tracing the life history of *Origins* vocabulary. In one inner-city class, virtually the entire group turned to their teacher, whispering and smiling with recognition as a *duet* (a member of the DWO family they were studying) was announced in assembly. Most important, the sense of family feeling developed for the particular vocabulary of *Origins* begins to spread to words in general. Where do they come from? What are their relatives? "I bet *handle* comes from *hand*, right?" "Hey, *split* is like *rip off*. When you split, you separate yourself—you get going away from where you've been." "*Nestle* must be related to *nest*. If you're going to nestle down in something, it's like getting in your nest." Everyday words take on a new life. Unfamiliar words kindle new interest. Where do they come from? Do they have any word cousins? Students who have been immersed in *Origins* are eager to hear such stories—and teachers who have been using the material are alert to the pleasures of finding and telling them. When a third grader was puzzled by the meaning of the word *cardiac*, encountered in a book she was reading, her teacher not only helped her to discover the root meaning of the word ("heart") but also introduced her to two other members of the family—*courage* and *accord*. How might *courage* and *cardiac* be related? "Because you have to have a big *heart* to be courageous," came the immediate reply. And *accord*? Together they explored its meanings as a "meeting of hearts." Because exploring *Origins* word families had been so much a part of the classroom experience, the discussion took only a moment. The territory was familiar. Several days later the third grader referred, with a smile, to her "heart" family.

Delight in words begins to animate students' writing as well. The lively vocabulary of *Origins* word families shows up with growing frequency in stories and poems. The images and words of a family can also be a formal inspiration for writing. A brainstorming meditation on *gold* (another member of the GHEL family) launched a writing session for a class of Washington, D.C., fourth graders. Here is one of their poems:

Gold

Gold,
   its reflection bends
   the earth
     with awe.
It tempts
   the gangsters
  and
     touches the
   heart.
It speaks coldly
     and
   answers softly
   while whistling
a tune of
the sun's rays.
Kissing the galaxy
    and warming the
      seas
       it opens
     all feeling
    and greed.
It tackles the
   mind
and touches
the bones.

—Amy DuRoss

Writing has grown naturally from the experience of exploring *Origins* in the classroom. The clusters of vocabulary that share images, the alliterative play of sound found in many of the word families, the inventiveness with sound and meaning revealed by many word histories, the use of images and experiences to express ideas in lively ways that catch the mind's eye—these elements fundamental to how language grows are natural resources for writing. In addition, many word family chapters in *Origins* include writing ideas specific to a family, and the Writing section of the "Using *Origins*" chapter presents ideas that can be used with any family. The interplay between personal experience, root imagery, and poetry is what makes the *Origins* approach so various and full-bodied.

Sandra R. Robinson's *Origins* is now available from T&W in a big two-volume set (352 pp.) for $23.95. It provides a new approach to word origins and teaching them, and it includes step-by-step activities, a brief history of the English language, relevant poetry examples by adults and children, and many writing ideas. Developed for working with grades 4-6, *Origins* has also been used successfully with primary students, high school and college students, Job Corps trainees, and adult writers.

Inventing Primitive Languages

by Priscilla Alfandre

October 6

Because my 3rd-4th grade class is studying early man this year, it is a perfect time to study the history of language as well. Today I started our language work with a half-hour discussion with all the children about how language might have originated.

I began by saying that (so far as we know) human beings did not always talk, that it is probable that initially they communicated by using gestures and simple sounds but that as time went on the intricacy of their lives and survival techniques must have provided the

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impetus for the development of words. I asked the children to think about what events or things early man might need words for. They were so excited by these ideas that they all wanted to talk at once. Third-grader Alan Jathoo was loudest and quickest, however, and my seizing on his answer made the other students focus on what he said and start to speculate usefully on the beginnings of language. "To communicate!" was Alan's triumphant contribution. To this I responded, "Yes, indeed! But what would they communicate *about*?" "You'd have to *warn*," Paul Delaney said thoughtfully. "About what?" I asked, and then hypothesized (dramatically) about a mother who, 25 feet away, saw a cheetah about to leap down from a tree onto her child. If she couldn't indicate what the danger *was*, she might not be able to get him to run. We imagined ourselves as early nomadic hunters and speculated about dangers we would have to name in order to save other people's lives— predatory animals, poisonous foods, traps, storms, unexpected abysses, etc. There was quite a lot of discussion about snakes and how it came about that people knew certain animals or foods were dangerous.

As we talked, I had written on the board "To communicate about: danger" and listed underneath the dangers we had come up with. "What *other* things would have to be communicated?" I asked them. Emily Paster, a 4th-grader, pounced: "To get food!" "Well," I said, pantomiming, "does that mean you'd pull on someone's arm and say, 'Get food! Get food!'?" There was considerable hilarity about this, but Malcolm interrupted it by saying, "You'd have to be able to tell the rest that there were animals nearby which the people could kill for food, and you'd have to tell them where they were. Otherwise you might not get there fast enough with the right weapons." Under the "danger" category on the board, I listed another category, "getting food," and wrote under it "locating animals" and "the right weapons." I suggested that if early people had had to depend on nothing but meat, they might have starved to death when they couldn't find any animals to kill; what else did they eat? Seeds, grasses, fruit, nuts, and roots were suggested, and we decided that these also would have to be located by use of speech, and some instruction given to others about how to pick, carry, and store such foods. These would require special words, also. We returned to the concept of "danger" and concluded that warnings about poisonous foods or dangerous thorns or spines would be an important part of the instruction to others about foods they might gather from plants.

We then considered another exciting and intriguing source for words—weapons and how they were made. Anna Maria observed that life would be a lot easier if they had ways to instruct each other in words about the best ways to make effective weapons—slingshots, bows and arrows, arrowheads and spearheads, snares and traps. I added that if each person had to figure out how to make each kind of weapon, the process would be very time-consuming—how much better to have an expert *tell* him! This prompted Diana to ponder aloud about the need for communication: cave people must have needed to communicate because they could work more effectively in *groups* than they could on their own.

I pointed out that today we had discovered a lot of reasons why early nomadic hunters would need words and terms—to warn, to locate, to instruct, and to explain. I noted that human beings have always been (glorious new word!) "gregarious," and probably also wanted words to explain how they felt. The children immediately and eagerly supplied "happy," "sad," "angry," "friendly," along with appropriate expressions and gestures. Emily Carrier mentioned sickness: people would have to express *how* they hurt or felt ill. She asked whether they had any medicines; they would also have to be able to tell what herbs or roots or bindings would be helpful and where to find them.

Time being short, I moved the children on to consideration of what further collections of words would be necessary to the first farmers. This proved to be a rich source for speculation; I was kept busy at the board noting "the right seeds," "preparation of the soil,"

"watering," "weather," and, suddenly from Randy, "time!" Randy realized it takes different seeds different amounts of time to grow, and quite a long time between sowing and harvesting, no matter what the crop. Carrie suggested that communication would be necessary for the training and keeping of domestic animals—oxen, donkeys, horses. Switching back suddenly to the hunters on a related thought, Malcolm exclaimed, "Clothes! They'd have to have words about how to skin animals and make the leather or fur soft and so it would last." "Shelter" and how to build or prepare it was Peter's suggestion.

At this point, the 3rd-graders were due at library, so we had to break up the discussion. I would like to continue it, either tomorrow or Monday, with some group work on *making* a credible language for the early humans, both hunters and farmers.

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I spent the rest of our time in the afternoon exploring onomatopoeic sources for words. This related well to our future word origins work, but my primary reason for doing this work now was to get language ideas for a play about the English language that I would like to write with them. First I worked with the 3rd-graders. I told them about the initial scene I had in mind, in which an exuberant group of children decides that language comes directly from the sounds things make. I told them I had planned that one little group of players should act out, "Splash! Ripple, ripple, ripple. Lap...lap...lap." I said I thought another bunch would act out animals. The students were full of suggestions. Lions would "r-r-oar," dogs "bark! bark! bark!," kittens "mew! mew!," frogs "c-r-oak, c-r-oak," ducks "quack! quack!", crickets "chirp, chirp," little birds "peep, peep." John Cutler got carried away with all the sound effects and started crowing like a cock, but Peter Wallace interrupted him firmly, saying, "No, she wants something that is a sound that got turned into a real *word*!" I was astounded at his perspicacity, and his statement got everything back on track. The children started carefully considering whether the noise had become an actual *word* in our language, and we got out the big dictionaries so we could make sure. We went on to the "b-a-a" of sheep and to John's new contribution, the "cackle, cackle, cackle" of hens. Cows do indeed "moo-oo," and snakes "hiss." Owls "hoo-oo-t"; bees "buz-z-z."

When I asked them to think about a storm, they were equally enthusiastic. Lightning "cracks," Nick said. Then "thunder, thunder, thunder" is the sound that follows. Trees and branches "cr-ash." The first great drops of rain "plop, plop, plop," then heavier rain "pitter-patters." High winds "ho-owl" and "roar."

I showed the 4th-graders the lists of onomatopoeic words suggested by the third-graders, and I commented that we still introduce onomatopoeic words into our language as new phenomena appear. It wasn't all happening only in the prehistoric past, it's been happening

and will continue to happen. "Think about *cars*," I prompted. They thought, and decided that cars "swoosh" and "whiz" by at high speeds; in heavy traffic, they "beep," "honk," and "put-put" as they idle. Old cars and big trucks "chug-chug" as they go up a steep grade. The children noted that we borrow onomatopoeic words from animal and storm contexts, for two, to express other things about cars; cars "roar," "rumble," "screech," and "crash." They "purr" and "buzz" and "hum." Some wonderful *non*-word noises were produced during this by their straining to find related sound words; Paul did a marvelous imitation of the noise made by a big truck passing, and John imitated the scream of brakes, but Peter reminded them that we were talking about "real words." We decided that cars do indeed "zoom," and a big sportscar does "v-room!" as it takes off.

October 12
As follow-up to the previous week's discussion of onomatopoeia as a basis for language, and to our speculations about the matters that might have prompted language in the first place, we divided the class into three "tribes" in order to see whether we could develop languages. We mixed third and fourth graders, taking cares to divide the assertive, articulate leaders as equally as possible among the three groups, and we assigned a teacher to each group. (My aide and I have an extra teacher on Wednesdays, as our intern is in the classroom all of that day.)

Before we started, I read the whole group the narrative notes I had written up on the previous week's session. As these notes complimented all of the children on their intelligent participation and quoted many of their wise observations, we started our work in a glow of self-appreciation and a clearer memory of what we had done in the last session. They were excited and eager to start, and we spent an extraordinarily productive half-hour producing nouns, verbs, and adjectives for communicating about the everyday life of cave people as the children earnestly and vividly imagined it. The words they suggested were often based on the sounds that things made, but they were also based sensitively on the feelings certain sounds produced in them. For instance, for all three tribes, a lion was called by the noise it makes, "roar!," and the words of all three tribes for deer or antelope— 'clik-a-tat' for Tribe #3, "pitter-pat" for Tribe #2, and "clip-clip" for Tribe #1—were based on the sounds of delicate hooves swiftly running. Tribes #2 and #3 made the sound word "s-s-s-s" for snake. The words for other animals were based on the sounds they made or the sounds that seemed like them. For Tribe #1, a mammoth was a "bum-bum," and for Tribe #3, a buffalo was a "boom-bah, boom-bah." For Tribe #2, there was a distinction between small birds ("eep-eep") and large ones ("eek"), whereas Tribe #3 decided that all birds were called "Ca! Ca!" All three tribes had words for danger or for warning: Tribe #1 called it "a-ru!"; Tribe #2 had

three words, "AH!," "eya!," and "ooh-ooh!"; and Tribe #3 called it "Wa!" All three tribes chose open, shouting sounds that would carry long distances. Because the children were vividly imagining the cave people's experience, such sounds were instinctive for them. Tribe #3, on thoughtful consideration, decided that their warning sound would also mean "bad" in their language.

There were other interesting connections of sounds and meaning in the Tribe #3 group. (I was working with them and thus I saw more of the ways in which they constructed their language than I did of the other two tribes.) Tribe #3 had already decided that their greeting should be a warm open sound: "Sha!" After their decision to name "bad" things "wa" (also their warning sound), they agreed that "good" should be expressed by the greeting sound, "sha." Discussing the need for words to express "many" and "few," Tribe #3 felt that "many" should have a luxurious, open sound; it should be "mymah." "Few," by contrast, should be sharp and thin, and they made the word "nin." Having decided that there should be a word for "man" or "mankind," they made the word "immalah," and this led them to "immalini" for "child." They found sounds that seemed appropriate for a cry of help ("Woonah!"), for cave or shelter ("shontee"), and for "yonder" or "over there" ("yim").

All three tribes decided on graphic sounds of disgust or nausea for "poisonous." Tribes #1 and #2 expressed it with "ugg!," while Tribe #3 agreed on a gagging sound "n-yah."

The words the tribes picked for weapons were interesting, and graphic in different ways. Tribe #1's "thush" expressed both the sound of flight and impact, while Tribe #2's "fing" seemed to express "launch" as well as the sound of flight. Tribe #3's "oisch!" was chosen to express the impact and penetration of the weapon. As soon as they had chosen "oisch!" for spear, Tribe #3 saw a need for a word for "take" to go with it; "winsch" seemed to them to have the right gathering-in kind of sound.

Some similarities between words made by Tribes #2 and #3 are worth noting; conferring entirely separately, they came up with similar sounds for several concepts. For example, compare Tribe #2's "min" (for "few") and Tribe #3's "nin." Tribe #2 also saw the need for words for "man" and "child", but they went further than Tribe #3, choosing "ums" for "man", "umm" for "woman," "ummie" for "boy" and "ummette" for "girl." It was interesting that Tribe #2, however, developed more terms for general concepts and emotions than the other two tribes. They made a word for "day" or "light," "simph," and "night" or "dark," "dar"; for "cold," "tach," and for "hot," "garbanza." Tribe #2 also made a word for "busy," "do-no," and for "chopping, pulling, and hard labor," "uugh." Tribe #2's literary bent came naturally; their two leaders are two of the best-read 4th-graders, with large vocabularies they use fluently in speaking and writing.

October 19
Today we three teachers announced the next project—a dialog to be written by each child, using the language of his or her tribe. I gave every child a ditto copy of the tribe's language as developed last week. Each vocabulary had fewer than 20 words, and the children immediately saw the need for more words if they were to write a conversation. Returning to their groups, they worked eagerly and ingeniously at adding more words so that they could write their dialogs as homework that night. More verbs were added: words for "find," "kill," "go," "run," "come," "get," "cut," and "see." Pronouns were necessary, positives and negatives, and names for more animals and other foods, like berries and nuts. Again the tribes, although working separately, came up with many words for things that were significantly similar. "Berries" in Tribe #3 language, for instance, were "lish"; for Tribe #2, they were "ush-ush." For #1, interestingly, they were "mm-da." Tribe #1, which last week had developed the smallest vocabulary, produced words for essential ideas they had not touched on before—shelter, man and woman, spear, yes and no—which had already been developed by the other two tribes.

Tribe #3 began to produce compound words to express more complex ideas. They had decided that they needed a term for "agreed" or "understood." They chose "goolam," and then created its negative form, "ingoolam." They felt there should be words for "good spirits" and "evil spirits." Going back to their terms for "good" and "bad," they produced "waggah" for "evil," "shageh" for "good." They used their "yonder" term— "yim"—to make a word for "where"—"akyim." Words for "mine" and "yours" were "hoi" and "yo." Returning to sound-like and feel-like words for the verbs they needed, they developed "chak" for "kill," "kleek" for "cut," "aha" for "find," "gway," for "go."

All of this was particularly exciting for me because the process mirrored so uncannily what language historians have imagined about the development of our Indo-European antecedent language. The similarities and differences among the three separate languages were exactly as visualized by historians—some words identical among three different locales, some words quite different. At the end of this session, the children of all three tribes made sentences in their own languages; the others tried to guess what they meant. Tribe #3's "many" word, unique to them, puzzled the others. They heard "mymah" and interpreted it as "mother." Confusions about such abstract terms misled the "foreigners" about the meaning; the more concrete, generally onomatopoeic words were instantly understood.

The children were all excited about making dialogs in their languages. They had noted their new vocabulary on their ditto sheets, and we promised to make up file-box index-card "dictionaries" for them. We discussed the best ways to compose the dialogs. Some felt it would be best to write the dialog first in English and then translate it; others argued that a more natural conversation

would come from using the language directly, composing thoughts and sentences within the framework of the new words.

November 2
Although the dialogs started appearing in my in-box the day after the assignment was made, ERB testing the following week prevented us from giving class time to reading, studying, and performing them for each other. By today, testing and Hallowe'en and UNICEF were behind us, and we could take a look at the dialogs.

The most successful ones were those written directly in the language; the words fitted together more fluently and articulately, and because the authors had worked within the limits of the existing vocabulary they had, there was no problem with missing words. Even these authors, however, were bothered by the lack of prepositions and conjunctions; none of the languages had more than one or two. Efforts to write in English and then translate were bedeviled by the lack of complete vocabularies to express ideas and meanings. These could not be performed, for the most part, because they were full of untranslatable English words in parentheses. We tried performing a few in the second half of the afternoon, after music class, but the single scripts in childish handwritings made them difficult to dramatize. I promised to xerox several that we could rehearse and present for our next session. The need for a new vocabulary session for each tribe was evident, and the children got to work again. Trying to work with the file-box dictionaries proved unwieldy and inconvenient, and I resolved to ditto each new vocabulary in enough copies so that each child could have one.

Our intern, Kathy Tolan, had planned a trip to the Smithsonian Natural History Museum for the next week, and she suggested that the students should write a script in their own languages for the Neanderthal burial scene that we would see at the end of our "walk through the ages." This use of the invented languages beautifully integrated three classroom objectives: first, the creating of an imaginary Stone Age language; second, research about primitive peoples for our social studies curriculum; and third, Kathy's need for a project that would dovetail with the students' social studies this year. The joining of the three objectives appears to be illuminating, clarifying, and reinforcing all three. Animating the development of mankind through the development of his language and need to communicate proved a memorable, involving, and challenging way to learn about human history.

Summary of Second-Semester Work
Each child makes a book every year of his or her collected writings for social studies throughout the year; these are revised, recopied, proofread, and inked before they are bound between cardboard covers on which each child's chosen title is painted in fancy gilt lettering. Most of our social studies time (and even some math, spelling,

and reading time) during the last four weeks is taken up with frenzied finishing, recopying, and inking of all the work that must be included in "*the* book." The triumphant completion of this *magnum opus* is one of the highest points of the year.

In March the children decided that they would like to include their stories and dialogs in their tribal languages about the "Burial of a Neanderthal Hunter." This required several more tribal meetings to expand the dictionaries so that the conversations and burial ceremonies they had written in English could be successfully translated into their languages. The work of devising conjunctions, prepositions, and special nouns, verbs, and adjectives that were still needed was often difficult and time-consuming. It was easier when we were just ranging about, trying to think about sights, materials, and needs familiar to cave people; it was harder to find words for specifics in their dialogs and for connecting and enhancing the terminology. Furthermore, when they got into the translation work they found that some of the words they had devised didn't fit well into the flow of spoken sentences, and the tribes had to reassemble to review and reconstruct. Matters of tense and number concerned them; how should they indicate future or past, several or solitary? Their decision to state all verbs in the present tense (whether they referred to past or future or not) saved time, but their focus on the need for such forms—in any language—taught them a lot about the established forms of our own! The need to communicate what they meant in understandable form—and not necessarily in exactly the ways that English does—made for very useful and enlightening thought and discussion about how a language could be constructed in order to cover all the possibilities that must be envisaged. The children got a deeper understanding of English grammar from trying to work out the meaningful construction of their own. They puzzled long over whether they should make auxiliary verbs, for instance, or whether they would need passive verb forms to express certain meanings properly. They argued over whether they would need object as well as subject pronouns, and they decided they should definitely have distinctive possessive pronouns. They realized why prepositions are generally short words, easy to say, and why articles can be important to a language. There were many pedagogical benefits to this exercise of language-making.

When the dictionaries were complete enough to allow full translations of the students' stories and dialogs, the children had to plan the form of their pieces. It was decided that the story of how the hunter died would be an ordinary narrative, but that the dialog at the graveside should be in play form, with the translations given in the tribal language. The exercise of setting up their writing in play form was very hard for some of the 3rd graders, who are more secure in writing words that just string along, one after the other. For some who had to struggle hardest, I typed their dialogs; they were very pleased with how professional their work looked then.

One great effect of creating language was that it made us feel a personal relationship to early man. Alertly ranging through the imagined landscapes and activities of primitive peoples, sympathetically envisioning the tragedies and pleasures, the concerns and beliefs, all these gave the children insights they could not otherwise have experienced so vividly. In trying to figure out ways of communicating, the students *were* the people they studied. They were all prompted to draw pictures of what it must have been like; their dialogs and chants for the graveside ceremony were full of the fears and emotions of the people they were imagining.

During our work, I read aloud to the children from Jean Auel's *Clan of the Cave Bear* and William Golding's *The Inheritors,* and the children began to realize that much early communication was probably in the form of gestures and signs and possibly took the form (as Golding surmises) of some mental telepathy. We talked of this in social studies discussions, but we did not devise any language in these forms. This might be a fruitful area for theater games and mime studies the next time I work with a group on early man. It would be interesting to see what kind of gesture and sign conventions they might invent to prevision or to accompany spoken languages they formulate.

Some Final Thoughts

In retrospect, many of the ways we spontaneously organized our work on this project turned out to be very sound. The division of the class of 22 into three small tribes made the work both faster and more interesting. Having an adult assigned to each group—to prompt the children for new ideas, to supervise, and, most importantly, to record the vocabulary as it was formed—also turned out to be valuable. The children needed our knowledgeable observations, side-coaching, enthusiasm, and critical judgments.

The background provided by our social studies work with evolution, primates, and early man was essential. Without clear ideas of what life was probably like for nomad hunters, the children would not have developed such a large vocabulary of appropriate and vivid words. I have always felt (following Gesell's hypotheses) that eight- and nine-year-olds are closer, emotionally and intellectually, to the people of the stone age than they can be at any other age. Their sense of intimate relationship to the hopes and fears of early man, and to the inventions and resourceful adaptations of cave people to their environment, seems to give them an almost telepathic connection with the thoughts and feelings of those peoples. During the times that we were working with our languages, in addition to Golding's and Auel's work, we referred to Richard Leakey's *The Dawn of Mankind* and Richard Attenborough's *Life on Earth,* as well as the Time-Life books on primates, the missing link, and early man. I had read all these books in their entirety, but the children saw the pictures and heard passages from both books that extended their understanding of

the ways in which life and man evolved through the ages. With pictures in their minds and the details they learned—the huge mammals they saw at the Smithsonian, the movies they saw, the replicas of skulls they held in their hands, the arrowheads and hammers they examined—the children were ready to develop appropriate words to describe the experience they entered with such imagination and enthusiasm. If you know, says Robert Claiborne, in *Our Marvelous Native Tongue*, what people needed and how they lived, you know what terms had to be included in their language. Likewise he says, "...if you know the things people talked about, you are bound to know a lot about the things they saw and did, which in turn will reflect where they lived and how they got a living." Thus, the children's language-making caused them to explore more deeply the ways in which stone-age people might have lived and felt about living.

All the way through the making of the languages the children were imaginative, resourceful, and tremendously interested. The challenge for the supervising teacher was to maintain their natural spontaneous creativity while making appropriate and prescient modifications and criticisms that could lead their efforts into useful and rewarding directions. With almost no encouragement from me (although I was wanting it to happen), my tribe started producing compounds of words they had already created in order to express new ideas.

But because I was constantly waxing enthusiastic or lukewarm to their suggestions for words, I know that I had a strong influence on their ways of forming their language. When I felt they were exploring directions that might prove unprofitable, or if I felt they were not really *thinking* about a new term, I would encourage them to try a new tack or think harder. However, my genuine enthusiasm about their good ideas and my faith in their ability to make a truly coherent and useful language, inspired them to ever better and greater efforts. The language they produced had exquisite subtleties and it developed with remarkable logic and understanding of the uses to which it must be put. Of course, the children should *respect* their own ideas, but they should have good reason for doing so.

As we have, historically, no records of stone-age languages—only suppositions based on recurrence of certain roots in different languages that seem to refer to the same phenomena—the children's inventing such languages can be a very liberating and spontaneous experience. The children went about the business of envisioning their languages with high seriousness; this was not just a game. Periodically they looked inside themselves for inspiration: "What would it *really* have been like?" they asked themselves, and they acted out scenes to each other and described their own feelings for animals, weapons, family, and good and evil forces.

On some occasions, Tribe #2, when snatching for word ideas, would take English words and reverse the spelling to produce the corresponding word for their own language; "kill," for instance, they named "llik," whereas "him" was rendered as "mih." As a number of members of this tribe were very bookish—avid readers who thought in terms of print rather than sounds—this was not surprising. It was, however, alien to the kind of work and imagining that the children most earnestly did in their language-making. By contrast, Tribe #3's "chak" for "kill" carried with it the violent sound of the impact of spear or knife and implied the finality of death in its hard sharp final consonant. Tribe #1 used "tu" for killed, with the hard sound in the initial consonant, the vowel bleeding away in its wake. To avoid literary evasions like those of Tribe #2, it was especially necessary for the supervising teacher to be on the alert, insisting that the tribe-members turn back in imagination to the *experience* of the word and its actual meaning, rather than merely playing with English forms.

Questions about tense, gender, and syntax arose naturally during the children's efforts to compose sentences in their languages. By the end of the year all the tribes had established some arbitrary rules about how their words were to be used in narratives. Rather than struggle with creating conjugations for verbs, we decided that—like strangers with only a slight knowledge of the language of a foreign country—we would establish tense by speaking always in the present tense or infinitive including some kind of time reference ("I go tomorrow" or "I go last week.") Our pronouns, generally, were single forms—"I" being used for "me" as well, "we" for "us." Our criterion was *meaning* and if the meaning remained clear in our use of the language, we did not bother about establishing nominative and accusative forms. We talked like infants, and like infants, we were anxious to get our meaning across, not to be sure we observed grammatical niceties. However, I can imagine, with more work on a language project like this, that the proprietary feeling about their creation might make very careful grammarians out of the children. This would give them invaluable insights about their own language and why it is used the way it is.

There were practical aspects to this classroom project that are worth noting. As I said before, the presence of a supervising teacher for each tribe is not only necessary for focus and support; the teacher is also essential as a secretary. I noticed, when I gathered up and studied the children's own notes on the words they developed each session, that some children left out some of the words or spelled them so oddly that they couldn't read them. The teacher is necessary to get all the words right and record them in some organized fashion. I wrote up at least three drafts of each vocabulary during the process of its development, and I composed the alphabetized dictionary for each language for inclusion in their books at the end of the year. Much would have been lost if the children had been on their own.

The most important result of this language-making project was, for me, the uncanny sense of community the children seemed to feel with their forebears. To make

languages for them was like meeting them and talking to them. They became personally involved and curious about what the lives of these "friends" had been like; naturally and eagerly they sought to know as much as they could about them. They had an empathy with their ancestors that I have never been able to generate in my students by other teaching methods, although I have been teaching (and deeply interested in) the subject of early man for many years. As Robert Claiborne says, "Language...is what makes us human," and it was the sense of warmth and humanity that distinguished our studies of early man this year.

Burial of a
Neanderthal Hunter

As imagined by
Paul Delaney, *4th grade*

This took place in Japan 70,000 years ago. A Neanderthal family lived there, and the father had just died from being attacked by a vicious saber-tooth cat. The father's name was Heyb, and his wife's name was Herk; his son was called Baba.

At Heyb's burial ceremony, the priest Baryy, led the chanting and the singing. They sang a tune that went something like this: "Ashymalletama! Ashymalletama!"

They laid Heyb on a bearskin in a hole they had dug for him in the floor of the burial cave. Then they put food in beside the body. They set up a pyramid of cave-bear skulls beside the grave. They put the bear-skin and bear skulls there because they hoped the cave bear god would protect Heyb from ferocious animals and enemies in the afterlife. Then the ceremony began:

BARYY: O, Wofa Shontee Grawn! Shama yo
           abwinschin for imma ab coomablooh!
           [O, Great Cave Bear! Give your protection
           to this man in the afterlife!]

HERK: O, Shontee Grawn! Abwinsch li naflah
           woonah-hoya, abwinsch li naflah immawag-
           gahs. Abwinscha li shanash wallid yo
           wurra-wurra!
           [O, Cave Bear! Protect him from danger,
           protect him from enemies. Keep him warm
           with your hide!]

BABA *brought* HEYB's *spear and laid it in the grave beside him.*

BABA: Abwinsch yo oisch! Chak r-roars,
           boombah-boombah, hu-hu-hu-hu-hu, clik-
           a-tat! Oh, Grawn, shama li mymah
           wurra-wurras!
           [Keep your spear! Kill lions, buffalo,
           hyena, and antelope! Oh, Bear, give him
           many animal skins!]

Then HERK *brought meat and laid it beside* HEYB.

HERK: Chimchok ab coomablooh.
           [Eat in afterlife.]

Then HERK *brought flowers and laid them in the grave.*

HERK: Winsch lahshah flah hoya.
           [Take flowers for me.]

Then BABA *brought a jug of water for* HEYB.

BABA: Winsch tinga fa coomablooh.
           [Take water to afterlife.]

Then *they all said things about him in life.*

HERK: Li wofa. Li chak boombah-boombah flah
           hoya.
           [He was great. He killed buffalo for me.]

BABA: Li woonah hoyo ab farnah, fa oisch
           boombah-boombah.
           [He helped me on journey, to spear
           buffalo.]

BARYY: Li woonah immalah dava abshablooh.
           [He helped mankind love life.]

Then *they covered his grave and left.*