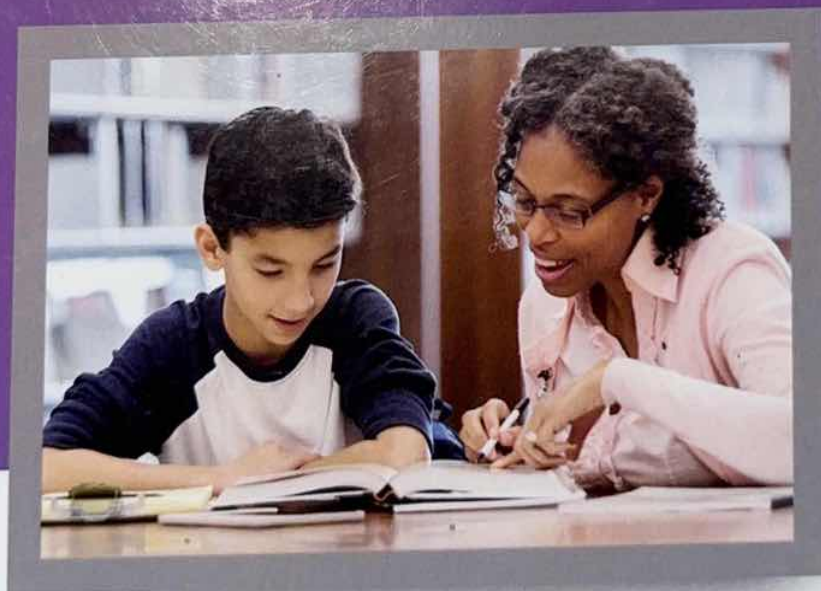


FOURTH EDITION

ASSESSMENT FOR READING INSTRUCTION



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TABLE 5.1. The Original Essential Vocabulary

adults only	flammable	noxious
antidote	found	nurse
beware	fragile	office
beware of the dog	gasoline	open
bus station	gate	out
bus stop	gentlemen	out of order
caution	handle with care	pedestrians prohibited
closed	hands off	poison
combustible	help	poisonous
condemned	high voltage	police (station)
contaminated	flammable	post no bills
deep water	information	post office
dentist	instructions	posted
do not cross, use tunnel	keep away	private
do not crowd	keep closed at all times	private property
do not enter	keep off (the grass)	pull
do not inhale fumes	keep out	push
do not push	ladies	safety first
do not refreeze	live wires	shallow water
do not shove	lost	shelter
do not stand up	men	smoking prohibited
do not use near heat	next (window) (gate)	step down (up)
do not use near open flame	no admittance	taxi stand
doctor (Dr.)	no checks cashed	terms cash
don't walk	no credit	thin ice
down	no diving	this end up
dynamite	no dogs allowed	this side up
elevator	no dumping	up
emergency exit	no fires	use before [date]
employees only	no fishing	use in open air
entrance	no hunting	use other door
exit	no loitering	violators will be prosecuted
exit only	no minors	walk
explosives	no smoking	wanted
external use only	no spitting	warning
fallout shelter	no swimming	watch your step
fire escape	no touching	wet paint
fire extinguisher	no trespassing	women
first aid	not for internal use	

MORPHOLOGICAL ANALYSIS

Morphemes are the smallest units of meaning in a word. The word *cat* has just one morpheme, but *cats* has two (*cat-s*) and so does *cattail* (*cat-tail*). Following are five types of morphemes we want our older students to work with and understand; for older students, we strongly recommend posting an anchor chart in your classroom with these five word parts highlighted, for reference throughout the year.

1. **Prefixes:** Units of meaning that are attached *before* a base word or root (e.g., *pre-*, *in-*). Prefixes can modify the core meaning of a base word or root (*preview* is "to view before"; *inhuman* is "not human").
2. **Suffixes:** Units of meaning that are attached *after* a base word or root (e.g., *-ion*, *-ist*, *-ous*). Suffixes can change a word's part of speech (e.g., *-ion* changes the verb *elect* to the noun *election*).

3. **Affixes:** The collective term for prefixes and suffixes.
4. **Base words:** Words that can stand alone as English words. For example, in the word *ungovernable*, *govern* is a base word because it can stand as a word by itself. *Un-* ("not") is the prefix, and *-able* ("capable of") is the adjective-forming suffix.
5. **Roots:** Word parts, often of Greek or Latin origin, that combine with affixes to form words. A root *cannot* stand alone as a word (e.g., the *-spect* in *retrospect* is a Latin root that means "look"). *-Spect-* is not a word in English, but when combined with the prefix *retro-*, it creates a word. In contrast to many programs, we prefer the term *root* to the more commonly used *root word*, because, as one of our students asked us, "Why do they call it a root word when it's not even an actual word?" Remind your students that Latin and Greek roots, like *-spect*, need to be attached to other word parts to "live" as stand-alone words in English—just as plant roots need to be attached to other plant parts, like stems and leaves, to stay alive.

Morphological analysis is the act of breaking down words into these various units of meaning (e.g., prefixes, suffixes, roots). Children are required to use morphological analysis from an early age, as when they differentiate singular from plural forms or past and present tenses of verbs. As the material they read becomes more complex, a greater array of affixes confronts them. The ability to take apart an unfamiliar word in order to determine its meaning is of increasing importance.

Just how powerful is this morphological system? Is it worth teaching? Consider this: 90% or more of upper-level English vocabulary words are of Latin or Greek origin (Green, 2008). When we teach just one powerful root (e.g., the Greek root *-arch/-archy*, meaning "rule" or "chief"), we are giving our students the key to unlock scores of related word meanings (e.g., *monarch/monarchy*, *anarchy*, *patriarch*, *matriarch*, *oligarchy*, *archetype*, *hierarchy*, *archbishop*, *archangel*, *architect*), all sharing the core meaning of "rule" or "chief." With morphology, a little goes a long way. When we teach affix and root knowledge like this, we are not just giving our students fish so they can eat for a day; we are teaching them how to fish for words for the rest of their lives. This is an incredibly powerful and efficient way to boost vocabulary knowledge.

Assessing Affix and Root Knowledge

However, assessing a child's proficiency in the area of affix/root knowledge can be problematic. One way would be to show the child a sentence containing a word that is subject to structural analysis (i.e., a word that can be structurally analyzed). This approach allows the teacher to see if the student can apply his or her affix and root knowledge in context. For example, let's say the child is shown this sentence:

The hot sun made the man uncomfortable.

The teacher asks the child what the word *uncomfortable* means, or perhaps how the man felt. If the child responds by saying that the man felt bad, or words to that effect, would

the teacher be justified in assuming that the child has used structural analysis? Perhaps, but the word *uncomfortable* is so common that it might well already be a sight word for that particular child.

Another approach to assessment is simply to ask the meanings of common prefixes and suffixes, such as those shown in the following charts. That is, if the child understands that the prefix *un-* means "not," then this knowledge can be tested the way we might test other vocabulary knowledge. For example, a teacher could simply inventory a child's ability to supply the meanings of familiar affixes. The problem with this approach, however, is that it in no way guarantees that the child can apply this knowledge of affixes to the words encountered in real reading and writing.

Assessing Application and Depth of Affix and Root Knowledge: *Generating Related Words Task*

To solve this problem of assessing affix/root knowledge in isolation, you can add a simple task called Generating Related Words to the affix/root assessment described above, to assess whether students can actually apply their affix or root knowledge to English words (as opposed to simply knowing that the prefix *sub-* means "below," but not being able to apply it to related words like *submarine* or *subatomic*). Following is a sample assessment task you can use to assess a learner's affix or root knowledge (Templeton et al., 2015). For each affix or root, the student is presented with the target word part (which is not defined) and an example word that contains that target word part (e.g., *re-*, *return*). For each affix/root, ask the student to (1) think of and write four (or more) related words with the same prefix or root as the example word, and (2) then write the meaning of the prefix or root.

Prefixes and Roots

re- (example: *return*) *redo*, *reuse*, *replay*, *rerun*

re- means: *again*

inter- (example: *international*) *intermission*, *interact*, *intercontinental* railroad

inter- means: *between*

-tract- (example: *distract*) *retract*, *traction*, *tractor*, *contract*

-tract- means: *pull*

While this assessment may be somewhat challenging for students, it is one of our favorite ways to assess morphological knowledge with older students, for a number of reasons. First, we can quickly and efficiently gauge the depth of learners' knowledge of a target morpheme by the quantity and sophistication of the related words they can generate. Second, we can administer this assessment quickly and efficiently in a whole-group setting. Third, this task taps learners' ability to apply their affix/root knowledge in writing. Finally, we've found that students are often better able to determine an affix or root's meaning after generating the related words. We can also dig deeper later by asking students to define the actual words they've generated. Periodically assess these same

affixes and roots as a postintervention assessment to measure growth in morphological knowledge.

The three lists below include (1) high-utility prefixes and their meanings, (2) high-utility suffixes and their meanings, and (3) high-utility Latin and Greek roots and their meanings. You can assess and teach these in the upper elementary grades and beyond. Use the Generating Related Words task described above for these affixes/roots. Those the child cannot define and/or generate related words for can be taught, and the list becomes an informal diagnostic assessment.

We strongly recommend posting these affixes/roots and their meanings in your classroom as you teach them, and providing individual affix/root reference sheets your students can refer to while reading, writing, and learning across the content areas. You and your students will be amazed at how often these roots come up across the day in math, science, social studies, and ELA. It is one of the best ways we know to make connections across the content areas, as these meaning parts are already naturally embedded in the vocabulary of your curriculum.

Common Prefixes and Their Meanings

un-	not	ir-	not	ex-	out
in-	not	il-	not	ante-	before
im-	not	a-	not	anti-	against
sub-	below	kilo-	1,000	de-	away
super-	above	mega-	large	dis-	apart from
mono-	one	micro-	small	dis-	opposite
uni-	one	multi-	many	extra-	beyond
bi-	two	over-	above	fore-	in front of
di-	two	poly-	many	mal-	bad
tri-	three	prim-	first	magni-	large
quad-	four	proto-	first	medi-	middle
tetra-	four	sol-	along	mid-	middle
quint-	five	tele-	far	mis-	wrong
penta-	five	under-	below	neo-	new
hexa-	six	ab-	away from	omni-	all
septa-	seven	ad-	to	post-	after
oct-	eight	auto-	self	pre-	before
deca-	ten	bene-	good	pro-	forward
cent-	hundred	circ-	around	re-	again
ambi-	both	con-	with	trans-	across
semi-	half	com-	with	ultra-	beyond
hyper-	over	con-	against		

Common Suffixes and Their Meanings

-less	without	-ness	state of	-ment	state
-er	more	-ous	like	-itis	disease

-est	most	-ish	like	-phobe	one who fears
-ette	small	-logy	study of	-ism/-ist	belief/one who
-trix	woman	-ly	like		believes in

Suffixes can be difficult to define. We recommend that suffixes be presented in words, rather than in isolation.

Common Greek and Latin Roots and Their Meanings

micro, min	small	macro	large	aud	hear
scope	watch	spec/spic	see	gram/graph	write
scrib/script	write	voc	call	fract, rupt	break
struct	build	bio	life	geo	earth
therm	heat	photo	light	port	carry
tract	pull	hydra/hydro	water	aster/astr	star
dem	people	jur, leg	law	spir	breathe
fid	faith	soph	wisdom	polis	city, state, citizen

SPELLING

Since the pioneering work of Edmund Henderson (1981), Charles Read (1971), and Carol Chomsky (1979), educators have known that the invented spelling of young children follows a clear developmental pattern. As children learn about written words, their attempts at spelling reflect this growing sophistication of their knowledge of orthographic patterns. We follow the stages outlined by Henderson as we examine this growth. Different authors may use different names to describe the developmental stages. We apply the stage names used by Bear and colleagues (2020).

Emergent Spelling

Children's initial attempts at writing are generally nonalphabetic; sometimes these first attempts are pictures but are called "writing" by the children. Later attempts are scribbles that, although illegible to observers, can be "read" by the young writers. Harste, Burke, and Woodward (1982), working with children of different cultures in a university day care center, found that their scribbles reflected the print to which they were exposed. Thus children from Arab families produced scribbles that resembled Arabic, children from Chinese families made scribbles that resembled Chinese characters, and so on. This correspondence suggests that scribbles represent an early understanding of the form of print.

When children learn letters, they incorporate those letters into their spelling. At first, these letter strings have nothing to do with the meaning of the word. As they hear