

Hog Hat Zone

Hog Hat Zone helps participants develop morphological skills, the ability to understand and correctly use small words, letters, and letter combinations that change the meaning of a word. Because morphologically important words affect the relationships between words, the meaning of a sentence, and the relationships between sentences, the morphological skills developed in Hog Hat Zone help participants read longer passages, an important aspect of fluent reading. Hog Hat Zone also helps participants use morphological affixes-prefixes and suffixes-to increase their vocabulary, which in turn aids in automatic word recognition, another important factor for proficient reading.

Reading Curriculum Standards and Hog Hat Zone

Hog Hat Zone reinforces the following nationwide Language and Reading Arts curriculum standards that center on third grade but contain items above and below grade level:

- Identify and correctly use regular and irregular plurals (*dog/dogs, house/houses, fly/flies, wife/wives*)
- Spell correctly one-syllable words that have blends, compounds, and complex orthographic patterns (*qu*, consonant doubling, changing *y* to *ies* to form plurals)
- Spell correctly common homophones
- Spell correctly root words, inflections, suffixes and prefixes, and syllable constructions
- Use knowledge of homophones to determine meaning of words
- Use sentence and word context to find meaning of unknown words
- Use knowledge of prefixes and suffixes to determine the meaning of words
- Understand and be able to use complete and correct declarative, interrogative, and imperative sentences
- Identify subjects and verbs that are in agreement
- Identify articles
- Identify adjectives and compound words
- Identify pronouns
- Identify past, present, and future verb tenses properly
- Read and respond to a wide variety of significant works of children's literature
- Recognize the similarities of sounds in words

The Skills Developed in Hog Hat Zone

Hog Hat Zone helps the participant improve paragraph comprehension skills and develop a better understanding of morphological complexity in the following ways:

- **Paragraph comprehension:** Hog Hat Zone presents paragraphs excerpted from classic children's literature that are missing morphologically important words. The missing words follow the progression of participants' acquisition of pronouns, plural and possessive nouns, auxiliary verbs, third person singular and past tense verbs, derivational affixes (prefixes and suffixes that change a word's meaning or part of speech), and contractions. Understanding these morphologically important words and how they are spelled in English is crucial for understanding the links between words, the meaning of a sentence, and the relationships between sentences.
- **Morphological complexity:** Hog Hat Zone displays four choices for each missing word: one choice is the correct word, and the other three choices are foils—incorrect choices closely related to the correct choice. The foils are systematically chosen to include words that are commonly confused with the correct word, and they are similar to the correct word either morphologically (through similar root words, affixes, or parts of speech) or orthographically (through similar spellings or spelling-sound correspondences).
- **Vocabulary:** Hog Hat Zone helps participants learn to recognize and correctly use morphological affixes—prefixes and suffixes. Because comprehension of morphological changes leads to vocabulary growth in 3rd grade and beyond, Hog Hat Zone helps participants increase their vocabulary skills. These vocabulary skills, in turn, contribute to automatic word recognition, an important factor in fluent reading. Hog Hat Zone presents paragraphs that contain a range of vocabulary words appropriate for the 2nd through 4th grade levels.

How Participants Work on Hog Hat Zone

When the participant clicks the yellow paw, a paragraph appears, minus some key words. Four choices for the first missing word appear, and the participant must click the word that correctly fills the gap. After the participant selects a choice, a group of four choices for the next missing word appear; this sequence repeats until the paragraph is complete.

How Participants Progress through Hog Hat Zone

Hog Hat Zone progresses through four tiers of morphological complexity as follows:

- **Tier 1:** Pronouns (such as *she*) and auxiliary verbs (such as *will*)
- **Tier 2:** inflectional suffixes, which are suffixes that add information about number, case, tense, or person, or but do not change a word's part of speech. inflectional suffixes can be added to nouns (such as the *-s* in *cats*) and verbs (such as *worked* and *working*).
- **Tier 3:** Prefixes (such as the *re-* in *reheat*) and derivational suffixes, which are suffixes that change a word's meaning (such as the *-less* in *useless*) and often its part of speech (such as the *th* that changes *heal* to *health*)

- **Tier 4:** Deictic pronouns, which are pronouns that point to something (such as *here*); possessives (such as *Mike's*); and contractions (such as *they're*). Many of these pronouns are challenging because they have highly confusable homophones (for instance, *they're* has two homophones: *there* and *their*).

At each tier, Hog Hat Zone presents several categories of morphological complexity that are mastered at roughly the same age in participants' spoken language development.

Tier 1 (Pronouns and auxiliary verbs):

1. Nominative case pronouns, which are the subject of a clause
2. Accusative case pronouns, which are the object of a verb
3. Third person gender
4. Possessive pronouns
5. Deictic pronouns, (this, that, these, those)
6. Auxiliary verbs

Tier 2 (Inflectional suffixes and verb tenses):

1. Comparatives and superlatives
2. Plural nouns
3. Third person singular verbs
4. Gerunds, which are verbs that function as nouns, end in *-ing*, and describe an action or state of being
5. Progressive tense, which uses a form of *to be* plus a verb ending in *-ing* and describes a continuous action
6. Past participles, which are verbs that function as adjectives and end in *-ed* or *-en*
7. Perfect tense, which uses *have* or *had* plus the perfect tense of a verb to refer to a completed action that occurred at a different time
8. Present participles, which are verbs that function as adjectives and end in *-ing*

Tier 3 (Prefixes and frequent derivational suffixes, which change a word's meaning and often its part of speech):

1. Prefixes
2. [Combined with Category 1]
3. Derivational suffixes that create adverbs
4. Derivational suffixes that create adjectives
5. Derivational suffixes that create negative adjectives
6. Derivational suffixes that create nouns

Tier 4 (Deictic pronouns, possessives, and contractions):

1. Deictic pronouns, (here, there)

2. Possessive nouns
3. Contractions of *will*
4. Contractions of *would*
5. Contractions of *is* and *am*
6. Contractions of *are*
7. Contractions of *have*, *has*, and *had*

Within each tier, Hog Hat Zone presents two units. The first unit presents paragraphs of 2 to 3 lines displayed on pipes, and the second unit presents paragraphs of 4 to 5 lines displayed on girders. After the participant has completed the first unit (shorter paragraphs on pipes), Hog Hat Zone presents the second unit (longer paragraphs on girders).

The paragraphs can have as few as one missing word and as many as five, but each line as presented on the exercise screen contains at most one gap.

How Participants Advance in Hog Hat Zone

Hog Hat Zone presents the categories within a tier in random order. The participant works on 10 different trials per category.

After the participant works on all trials in a tier, Hog Hat Zone evaluates all the trials in that tier for advancement. If the participant correctly completed 90 percent of the trials in the first unit (pipes and shorter paragraphs) and 90 percent of the trials in the second unit (girders and longer paragraphs), Hog Hat Zone advances to the next tier.

Plateau-Based Transitions

If the participant did not correctly complete 90 percent of the trials in either unit Hog Hat Zone presents that unit again. If the participant repeats a unit 3 times but does not achieve 90 percent correct, Hog Hat Zone presents the next tier.

Before the participant completes the exercise—and after the participant completes as much of the material in Hog Hat Zone as possible—Hog Hat Zone returns the participant to the units that the participant did not complete with 90 percent accuracy. Hog Hat Zone requires the participant to work on these units until he or she achieves 90 percent accuracy.

Points Rewarded in Hog Hat Zone

Hog Hat Zone awards points to the participant based on the following conditions:

- **Correct answers:** The participant earns 8 points for each trial that is correctly completed.
- **Bonus points:** After the participant completes 10 trials correctly, Hog Hat Zone rewards the participant's performance with 20 bonus points.