



# HAWKQUEST®

Environmental Education using Live Birds of Prey

Thank you to Xcel Energy Foundation and their  
Environmental Partnership Program

## Building Words With Birds of Prey — Language Development 101 (Suitable for grades 3-12)

### OBJECTIVE

To increase vocabulary and spelling knowledge by building on known letter patterns, letter sounds, word structures, and word meanings.

### TEACHER BACKGROUND

Using the attached individual vocabulary theme words and templates, teachers will lead students through guided spelling and word sorting activities. Students will first work in teams using scrambled letters of the vocabulary theme word. Teachers will use guided clues to help students build a list of smaller words first, ending with the theme word.

Students will then work to identify patterns and create word groups, using the word list recorded on their card templates. Teachers can have students sort these words to target individual curriculum goals. Word sorting is not alphabetizing but building on known letter patterns and sounds or word structures and meanings. Word sorting categories include:

- Word construction, i.e., CVC, CVCe, CVVC, etc.
- Word sounds, i.e., long vowel, short vowel, blends and digraphs
- Number of syllables
- Meaning of words, i.e., synonyms, homophones, prefixes
- Parts of speech

It is a good idea to allow for a mystery category for those words that do not appear to fit under any category.

### MATERIALS

Set of Letter Cards (attached)  
Word Card Template (attached)  
Pen/Pencil  
Scissors

### STEP ONE - PREPARATION

1. Divide the students into groups (2 or more).
2. Prepare each letter set by selecting the letter cards necessary to spell the theme word, Alphabetize or mix up the letters, and secure them with a rubber band.
3. Select and organize the word list most appropriate for your students. (see INDIVIDUAL VOCABULARY THEME WORDS AND THEIR WORD LISTS below.)
4. Copy a word card template page for each group of students.

### STEP TWO - GENERATING WORDS

1. Provide one letter set and word card template to each group. Students work together to manipulate the letters and one student acts as the recorder.
2. Using an individual theme word, its corresponding word list, and moving from the shortest words to the longest, provide clues for each word that will help students identify the word and spell it using the letter cards. Wait a short period of time between each word before writing the word and its spelling on a chalk or dry erase board. It is at this time that the recorder will copy the intended word and its correct spelling into a single box on the word card template.
3. The teacher dialogue should sound similar to the following and should move students through the word list fairly quickly.
  - The first word is a three-letter word that is the contraction for "it is." Briefly pause while students collaborate. If you said, "it's" you are correct. Write and spell the word on the board for the class and have the recorder for each group copy it down into a single box on the word card template.
  - The next word is a three-letter word that is a homophone for the first word and shows ownership. Briefly pause while students collaborate. If you said "its" you are correct. Write and spell the word on the board for the class and have the recorder for each group copy it down into a single box on the word card template.
  - This word has four letters and is in the same word family as "last" and "fast" and means what happened yesterday. Briefly pause while students collaborate. If you said "past" you are correct. Write and spell the word on the board for the class and have the recorder for each group copy it down into a single box on the word card template.
  - Now using all of your letters, can you guess today's theme word? Briefly pause while students collaborate. If you said "\_\_\_\_\_ " you are correct. Write and spell the theme word on the board for the class and have the recorder for each group copy it down into a single box on the word card template.

### STEP THREE - THEME WORD DISCUSSIONS

1. Take a few minutes to discuss the definition of the day's theme word and how it is relevant to the study of raptors (birds of prey). This is an ideal time to provide your students with a primary source of investigation through the use of the Xcel Energy's bird cams located on the Xcel Energy web site at <http://www.xcelenergy.com/>.

### STEP FOUR - SORTING WORDS

1. Each group of students cuts their word card template into the separate words they generated previously.
2. Identify how you would like students to sort their words (see TEACHER BACKGROUND section on the previous page).
3. Circulate around the room guiding and instructing students as they work with their partners to sort their word lists into columns on their desks.

**INDIVIDUAL VOCABULARY THEME WORDS AND THEIR WORD LISTS**

Please note that all the words included beneath each theme word are constructed from the letters in the theme word. More words than are recommended for the lesson are included in order to allow each teacher to choose which words fit your students' needs, your curriculum, and time restrictions. It is recommended that you narrow the list down to 10-20 words and organize them in consideration of these factors.

1. **EXTINCTION** - to no longer be in existence; all species of raptors are protected by law; the Bald Eagle was recently removed as a threatened species on the U.S. Fish and Wildlife Services list of endangered and threatened species; the Peregrine Falcon was once on this list, and the Aplomado Falcon and the Spotted Owl remain endangered.



**Bald Eagle**



**Peregrine Falcon**

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- (3 Letter Words) con, cot, ice, inn, net, not, one, ten, tie, tin, toe, ton, tot
- (4 Letter Words) cent, coin, cone, exit, icon, into, neon, next, nice, nine, none, note, once, oxen, tent,
- text, tint, tone, tote
- (5 Letter Words) octet, toxic, toxin
- (6 Letter Words) exotic, intent, notice
- (7 Letter Words) content, context, extinct
- (10 Letter Words) extinction
  
- 2. **CAMOUFLAGE** - the use of color, texture, and design to disguise an animal, camouflage is
- used by both predator and prey, but is particularly important for owls, who sleep during
- the daylight hours when many predators are hunting.
- (3 Letter Words) mug, ace, age, cue, ego, elf, elm, flu, fog, gel, gem, gum, leg, log
- (4 Letter Words) mule, leaf, loaf, mace, male, meal, mole, glue, goal, golf, gulf, lace, lame, aloe, café,
- cage, calf, calm, came, clam, clue, coal, cola, coma, come, face, fame, flag, flea, foam, foal, fuel,
- fume, game
- (5 Letter Words) algae, camel, cameo, flame, gleam, mogul
- (8 Letter Words) glaucoma
- (10 Letter Words) camouflage

3. NOCTURNAL - to be active at night; most owl species are nocturnal, hunting at night. The Great Horned Owl is not a true nocturnal species, rather it is crepuscular which means it prefers to hunt at dusk and dawn. Both the Peregrine Falcon and Bald Eagle are diurnal, or daytime hunters.

- □ (2 Letter Words) or
- □ (3 Letter Words) act, ant, arc, art, can, car, cat, con, cot, cut, lot, not, nut, oar, oat, our, out, ran, rat, rot, run, rut, tan, tar, ton
- □ (4 Letter Words) alto, aunt, auto, can't, cart, clan, clot, coal, coat, cola, colt, corn, curl, loan, noun, oral, rant, runt, taco, torn, tour, tuna, turn, ulna
- □ (5 Letter Words) acorn, actor, canon, carol, coral, count, court, lunar, talon, ultra
- □ (6 Letter Words) cannot, carton, ocular, toucan
- □ (9 Letter Words) nocturnal

4. ADAPTATIONS - the modifications to a species making it most fit for survival under the conditions of its environment. The Bald Eagle, for example, has spicules or tiny rough structures on the bottom of its feet to better hold on to fish. The owl's feathers are frayed on the edges to help silence their flight, and the Peregrine Falcon has a corkscrew-shaped tubercle in its nostril structure which some believe baffles the wind as it reaches speeds at least as high as 240 mph in a dive.

- □ (3 Letter Words) aid, and, ant, dip, dot, its, it's, nap, nip, nod, not, oat, pan
- □ (4 Letter Words) anti, data, into, paid, pain pant, past
- □ (5 Letter Words) adapt, adopt, ditto, paint, panda, pasta
- □ (6 Letter Words) attain
- □ (7 Letter Words) distant
- □ (11 Letter Words) adaptations



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# WORD CARD TEMPLATE

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