

Get Ready for Reading

A Guide for Professionals Working with Children Using Hearing Technology

BACKGROUND

Children with hearing loss face challenges learning to read with research identifying reading progress and outcomes below expected even when the variants of receptive vocabulary, non-verbal cognitive ability, and demographic factors are controlled (Cupples et al., 2014). Newborn hearing screening and early fitting with hearing technology are associated with improvements in listening and spoken language abilities, however, research documenting the flow-on effect on literacy outcomes has yielded less conclusive results.

Further research is required to identify best practice in intervening to facilitate improved literacy skills for children using hearing technology. There is, however, compelling evidence to support professionals targeting the awareness of written language and phonological awareness in the rehabilitation of children with hearing loss.

This guide provides clinicians with goals, activities, and resources designed to target the skills of awareness of written language and phonological awareness.

Awareness of Written Language

Awareness of written language facilitates the understanding that meaning is carried by the *scribbly marks* visible on paper, electronic media, and on display in our environment. An additional goal of awareness of written language is to pull the child's interest towards text to increase their attention to written words.

Shared Book Reading is an interactive activity involving a child and an adult. The adult guides the reading in a way that encourages the child to join in and share in the experience.

Ideas for activities:

- Demonstrate and talk about how to handle the book before, during, and after reading (e.g., *We need to turn the book over, so the title is on the front. See the title; that's the name of the book. Now, we can open to the first page.*).
- Talk about and model how to look from the left to the right (e.g., *We read this page first* (indicate the left) *and then this page* (indicate the right). *We will start here* (point to the text at the beginning of the sentence) *and read this way* (move finger across to the right).).
- Pull the child's attention to some interesting parts of the text (e.g., *Look this bubble shows us that the girl is talking. She is saying, 'I love my hat'.*).
- Develop the child's vocabulary of words that are required for reading and writing (e.g., *This word jump starts with the letter j, like your name. It makes the 'j' sound. Let's read the whole sentence.*).
- Talk about features of alphabet letters and their most common associated sounds (e.g., *This letter 'b' has a long line and then a circle... It looks like a bat and a ball. It makes the 'buh' sound.*).
- Comment more than question during Shared Book Reading. Offer a statement or observation about the story or illustration and wait with expectation to invite the child to add a comment.

The additional slide deck **MY HOUSE** may be used to work on building early literacy skills through Shared Book Reading.

Use **writing** to demonstrate that written words are used to communicate information, ideas, thoughts, and feelings.

Ideas for activities:

- Encourage the child to watch while you talk about and write the following
 - A shopping list to refer to later or give to another family member
 - Notes for other family members with instructions to be followed
 - Birthday or other occasion cards
 - A journal or diary
- Encourage the child to *have a go writing*
 - Provide paper and a pencil to practice *writing*.
 - Talk about what information might be in the written message.
 - Remind the child to start on the left and write across the page.
 - Try and identify any letters in the text or features of letters (e.g., *That circle looks like the letter o.*).

Here is an activity to develop interest in writing. See the materials, **WHO'S IN THE HOUSE** and **WRITE A NOTE** on pages 7-9. Print one copy of both the house and people, plus the notes on lightweight card. Pick a person to write a note to. Talk about what you want to say to that person and then write it together.

Call attention to **text in the environment** to help the child recognize and attach meaning to signs, shops, and screens.

Ideas for activities:

- Point out text that the child will see regularly (e.g., food labels, brand names on appliances or devices, text on favorite clothes). Do this every time the child eats, watches, or wears those items to facilitate recognition of those words.
- Point to words that are repeated in the environment (e.g., stop signs, fast food restaurants, no parking, entry, exit).

Develop the child's **knowledge about the alphabet**. Not all languages are alphabetic. Some, like Chinese, use characters to represent words or parts of words. If your language is alphabetic this means that children need to learn the letters or symbols and the sounds that are associated with them. For languages with an alphabetic writing system, being aware of the sounds in spoken words supports the understanding of the logic of written words.

Alphabet letters are always arranged in order. For English that begins with *a, b, c*, however, knowing this order is not very useful when learning to read!

Ideas for activities:

- Teach the child the sound associated with each letter. In the case of a letter or combination of letters being associated with more than one sound, teach the most common sound.
- Start with the sound and show the child the letter or letters that you can write to represent that sound.
- Teach lower-case letters first.
- Use an upper-case letter for the first letter of the child's name.
- Read alphabet books and teach the alphabetic principle. This is the knowledge that a letter *makes* a particular sound.
- Use the vocabulary *letter* and *sound*.

Here is an activity you can use to build alphabet knowledge. Print the [ALPHABET CARDS](#) (page 10-11). You will need more than one copy. Print [ANIMALS MATCH UP](#) (page 12-13) onto lightweight card. You will need a split pin. Cut out the arrow and insert the split pin through the middle and into the circle in the animal spinner.

Spin the arrow and spell out the animal name using the alphabet letters. Talk about the sounds in each word and the letter (or letters) that make each sound. This is tricky for some of the animals, for example, sheep has only 3 sounds; *sh ee p* but 5 letters!

Phonological Awareness Skills

1. Rhyme and Alliteration

Rhyme is when two or more words have the same sounds at the end of the word, usually the final syllable. They do not have to have similar spelling (e.g., *light* and *bite*) so rhyme is something you can only appreciate through listening.

Alliteration is when two or more words start with the same sound (e.g., *big bouncy ball*). You need to attend to the sounds to find alliteration for example, *funny photo* is alliteration but *pink phone* is not.

Calling the child's attention to rhyme and alliteration helps build the understanding that words are made up of sounds, and this contributes to the development of literacy skills.

Ideas for activities:

- Sing rhyming songs.
- Read rhyming books.
- Have fun repeating rhyming words.
- Comment on rhyme (e.g., *Oh, those words rhyme; they sound the same at the end of the word*).
- Acoustic highlight alliteration. Emphasize or stress words that start with the same sound or pause just before them to call attention to their similar features.
- Use alliteration to target specific speech sounds.
- Comment when you read, hear, or say sentences that contain words with alliteration (e.g., *Sammy the seal saw a seashell; Wow that has lots of 's' sounds*).

The additional slide deck [WHAT COULD THAT BE HIDING FROM ME?](#) may be used to call attention to rhyming words.

2. Syllable Blending & Segmentation

A **syllable** is a single unit of speech for pronouncing parts of words. Every syllable contains a vowel. Syllables can be thought of as beats in a word (e.g., *cat* has one syllable and *caterpillar* has four syllables).

Blending is the process of building a word from individual sounds or syllables.

Segmentation is the process of breaking a word down into syllables or individual sounds.

Being aware of syllables contributes to the child's understanding of stress patterns within words. This helps develop a natural rhythm during reading out loud and assists the child in working out how to read and spell long words.

Ideas for activities:

- Sing songs with a strong beat on each syllable.
- Add movement to each syllable in nursery rhymes and songs.
- Play with blending broken words (e.g., *Guess what I'm saying... se...ven*).
- Clap or tap out the syllables in names and words.
- Count the number of *syllables* in words.
- Break long words up into syllables and practice saying them *segmented* and then *blended*.

Here is an activity you can use to work on syllable blending and segmentation. Play [BUG BINGO](#) (page 14-18) and as you say the name of the bug on the bingo draw card, segment the word into syllables. The finders must blend the syllables back together to work out the name of the bug and then search for it on the bingo card.

3. Onset and Rime

The **Onset** is the consonant sound that precedes the vowel (e.g., 'k' in cat).

The **Rime** is the vowel and any sound that follows it (e.g., 'at' in cat).

This skill requires the child to attend to the sound at the beginning of words and the sound or group of sounds that follow that starting sound. Being able to attend to the onset and rime is the first stage in thinking about words as made up of individual sounds. This skill is required when reading to blend sounds to make a word and to break words into sounds when spelling.

Ideas for activities:

- Teach rhyming skills (i.e., rhyming words have the same rime).
- Play rhyming games (e.g., *I know a word that rhymes with mat it starts with 'b' the word is _?*).
- Play *fix the sound* games (e.g., *Mum is talking on her bone*).
- Read alliterative books and identify starting sounds.

The additional slide deck [I KNOW A WORD](#) can be used to work on developing awareness of Onset and Rime.

4. Phoneme Blending and Segmentation

A **phoneme** just means a speech sound.

Phoneme blending is the process of building a word from individual sounds.

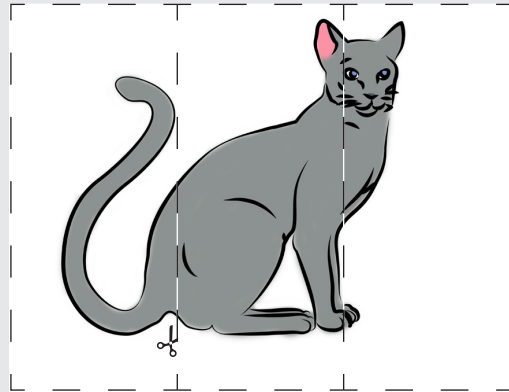
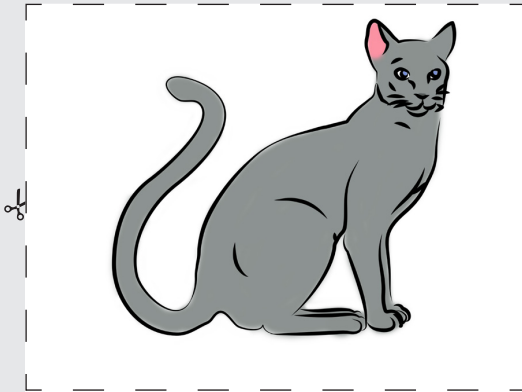
Phoneme segmentation is the process of breaking a word down into individual sounds.

Phonemes are the smallest sound units in words. The ability to isolate individual sounds in words makes it easy for the child to sound words out for spelling. Blending the sounds is required for reading.

Ideas for activities:

- Practice *breaking* words up. Try using blocks or raised separated fingers to represent the individual sounds.
- Move the blocks or fingers back together to practice blending the sounds together to make a word.
- Play *make a new word* by blending a sound onto the beginning of another word (e.g., s + wing = swing).
- Talk about the position of sounds in words (e.g., *sheep has got 'sh' sound at the beginning and 'p' sound at the end. Can you hear the 'ee' sound in the middle?*).

Here is an activity you can do to work on phoneme blending and segmentation. Print the **ANIMAL MATCH UP** cards (page 13). Keep one copy of each animal whole and cut the other into three equal vertical pieces.



Each piece represents one sound in the word. Place each cut piece onto the whole picture as you say the sounds and practice blending the sounds to make the animal name. Remember to work from left to right.

5. Phoneme: Grapheme Association

A **phoneme** is a speech sound.

A **grapheme** is a written letter or combination of letters that can be read as one sound.

The **alphabetic principle** is the understanding that a letter (i.e., grapheme) or combination of letters represent a spoken sound (i.e., phoneme) in a consistent and predictable way. The alphabetic principle is required for decoding words, which is correctly pronouncing words when reading, and for encoding words, which is correctly writing down words from their sounds.

Ideas for activities:

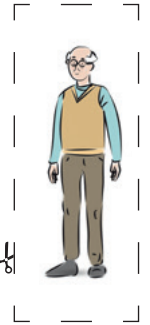
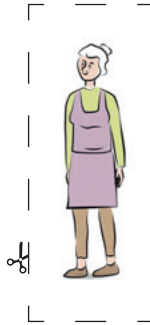
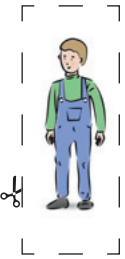
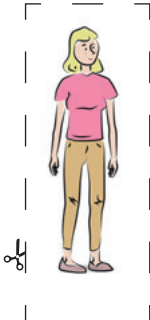
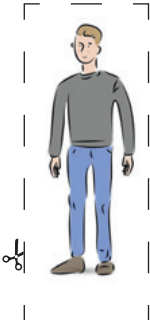
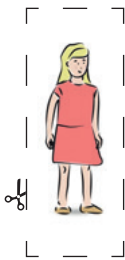
- Read alphabet books.
- Call attention to a grapheme and label its phoneme.
- Teach phoneme-grapheme association.
- Create a phoneme book (e.g., use a scrapbook and make a page for words and pictures that start with the one sound).
- Encourage *have a go writing*.
- Practice writing graphemes in all different media (e.g., use a pointer finger in sand, flour, shaving cream).
- Sound out words.

Here is an activity you can do to work on phoneme-grapheme association. Print the **ZOO ANIMALS** (page 19-20). In a scrapbook make a page for each letter of the alphabet. Stick the animals on the appropriate page and fill the rest of the page with drawings and pictures of things that start with the same sound. Write the words underneath.

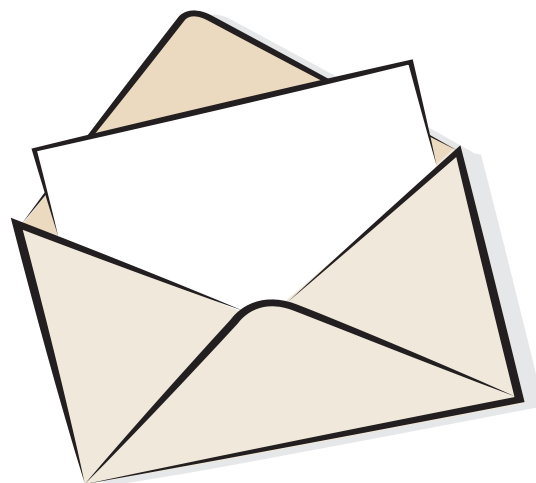
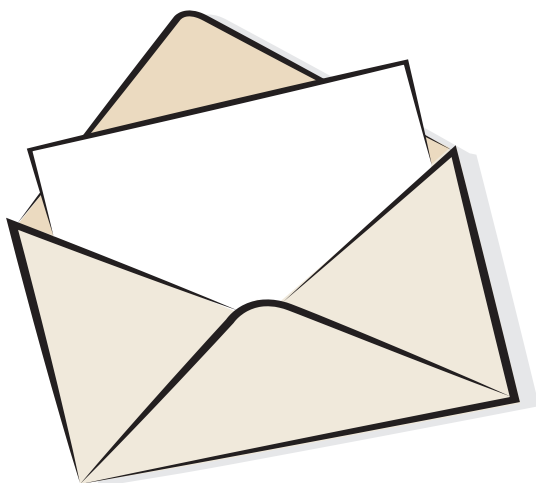
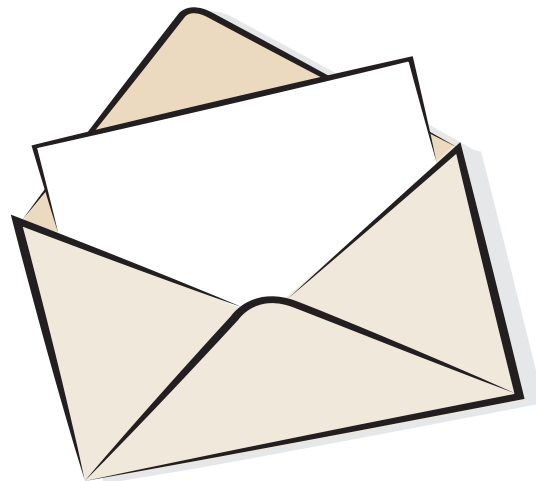
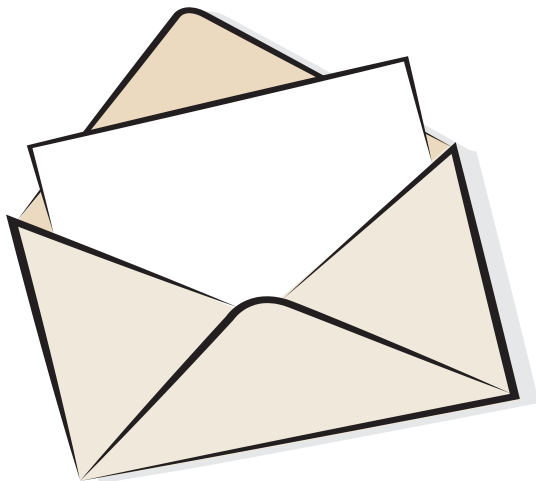
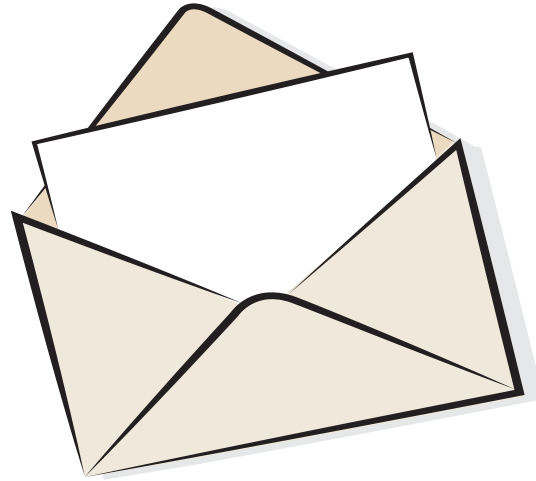
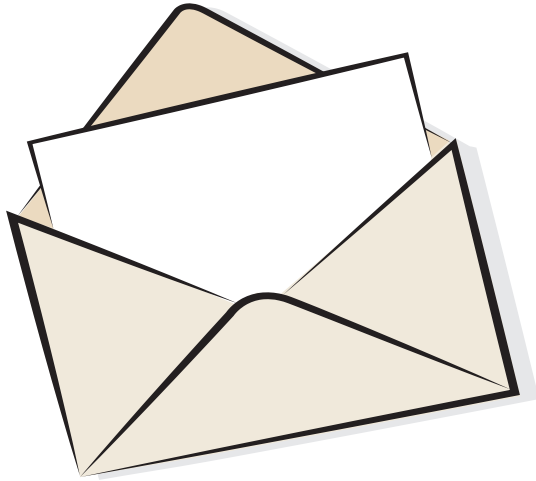
Who's in the House?



Who's in the House?



Write a note



Alphabet Cards

a

b

c

d

e

f

g

h

i

j

k

l

m

o

p

r

s

t

w

z

Alphabet Cards

a b c d e

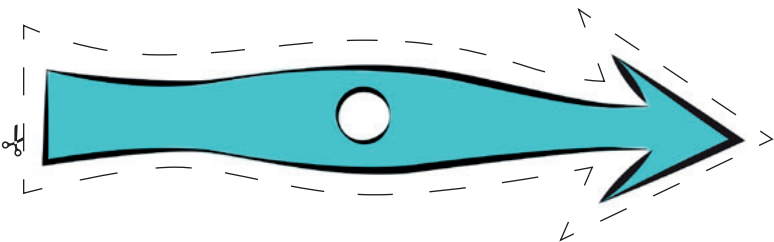
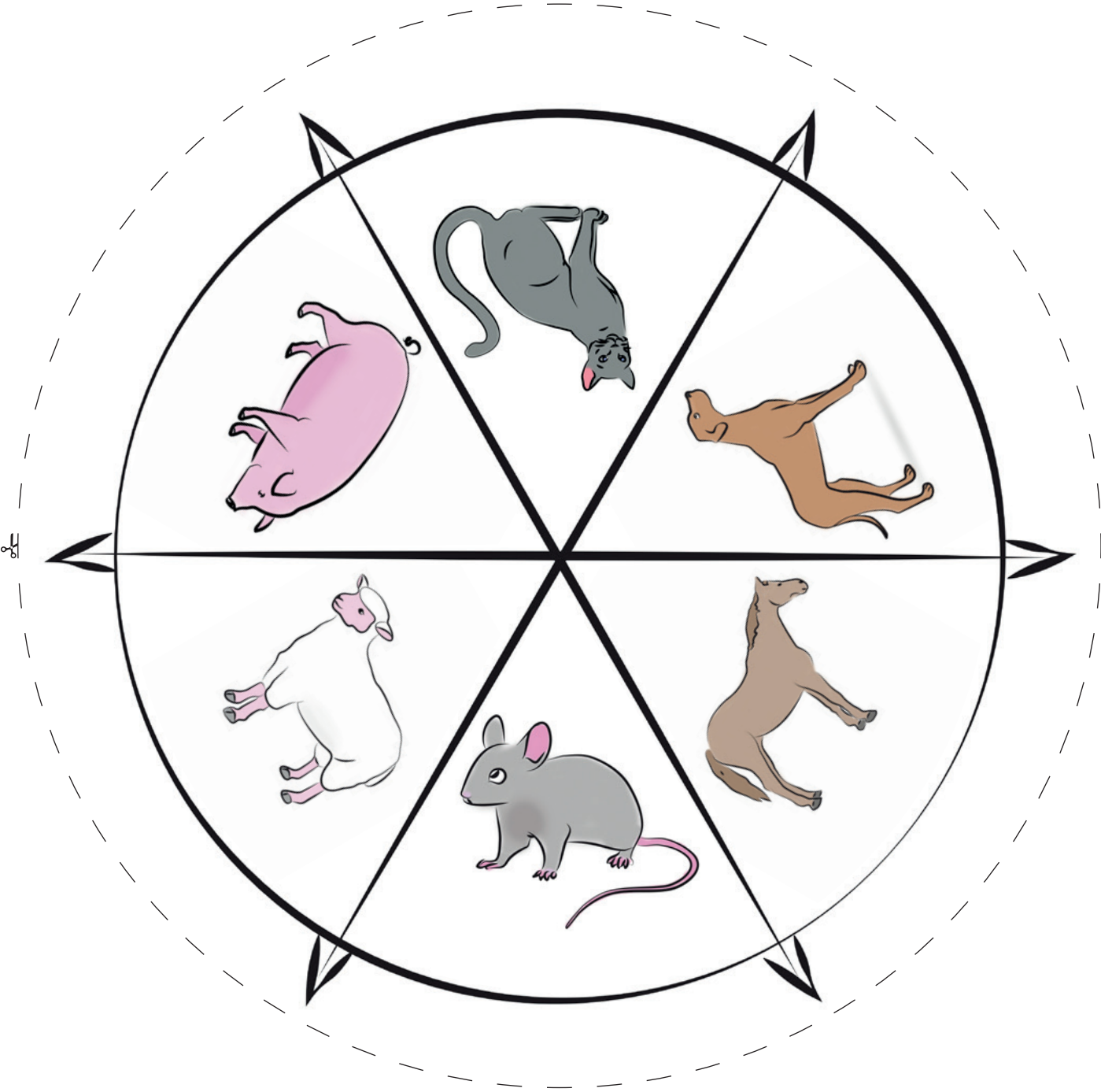
f g h i j k

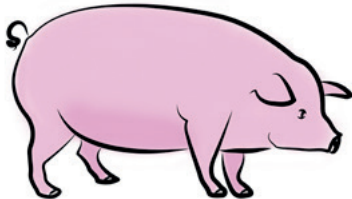
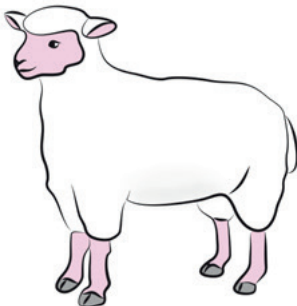
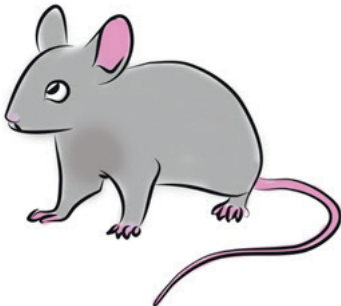
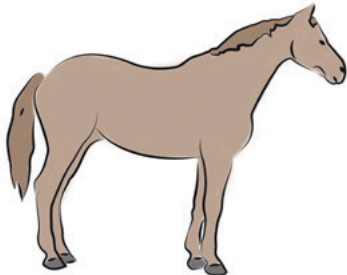
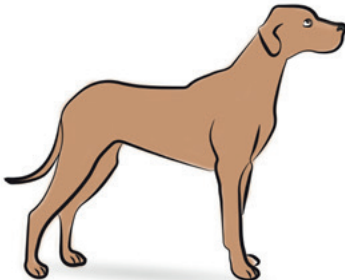
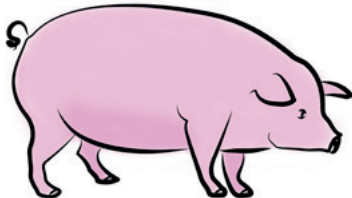
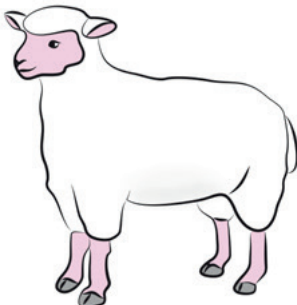
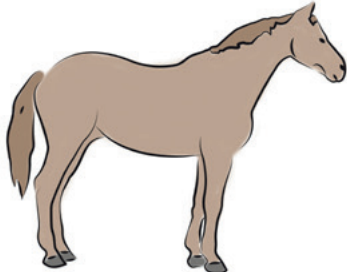
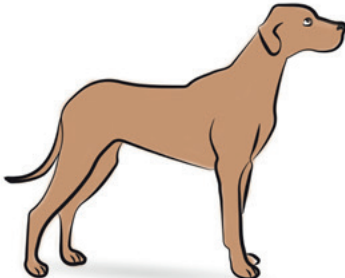
l m n o p

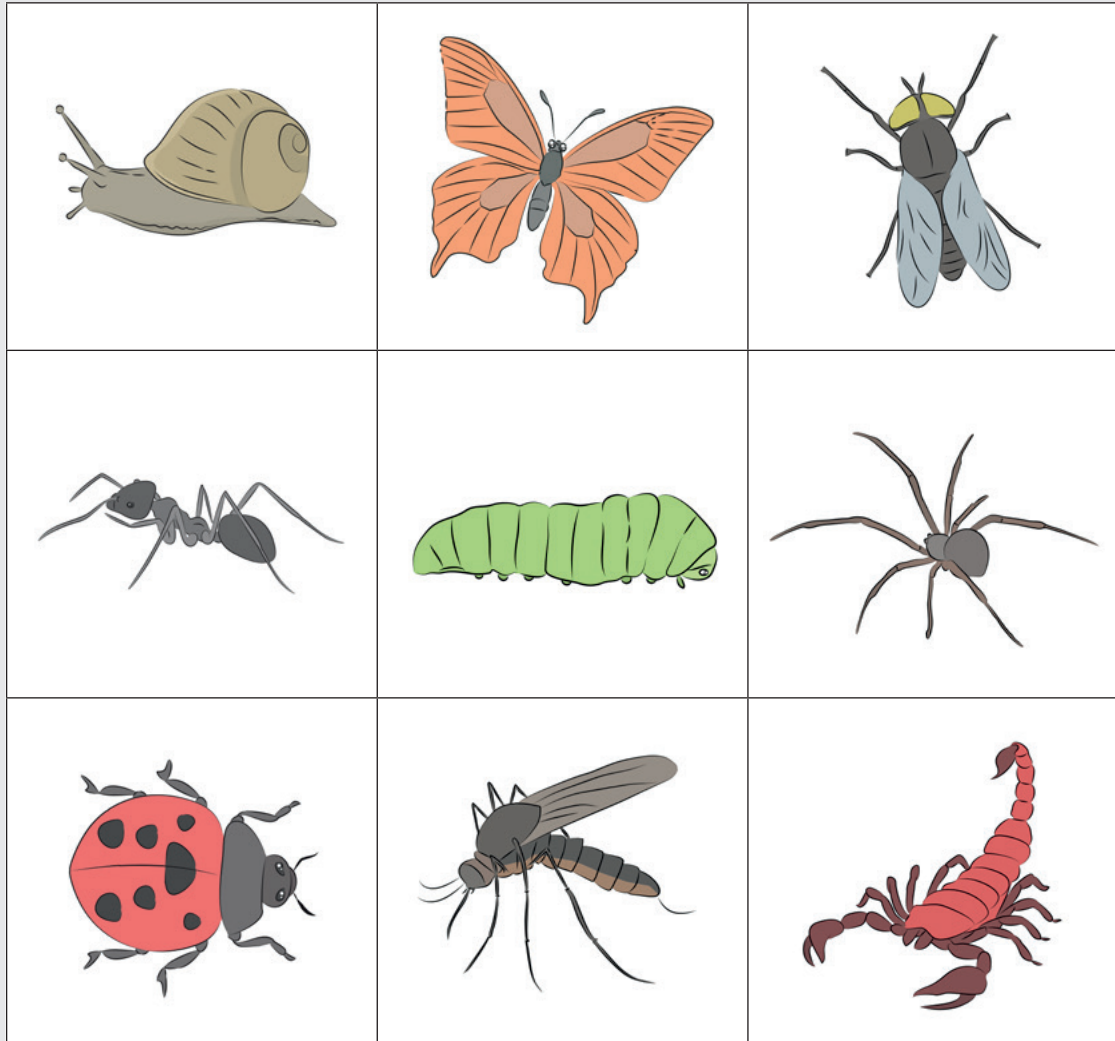
q r s t u v

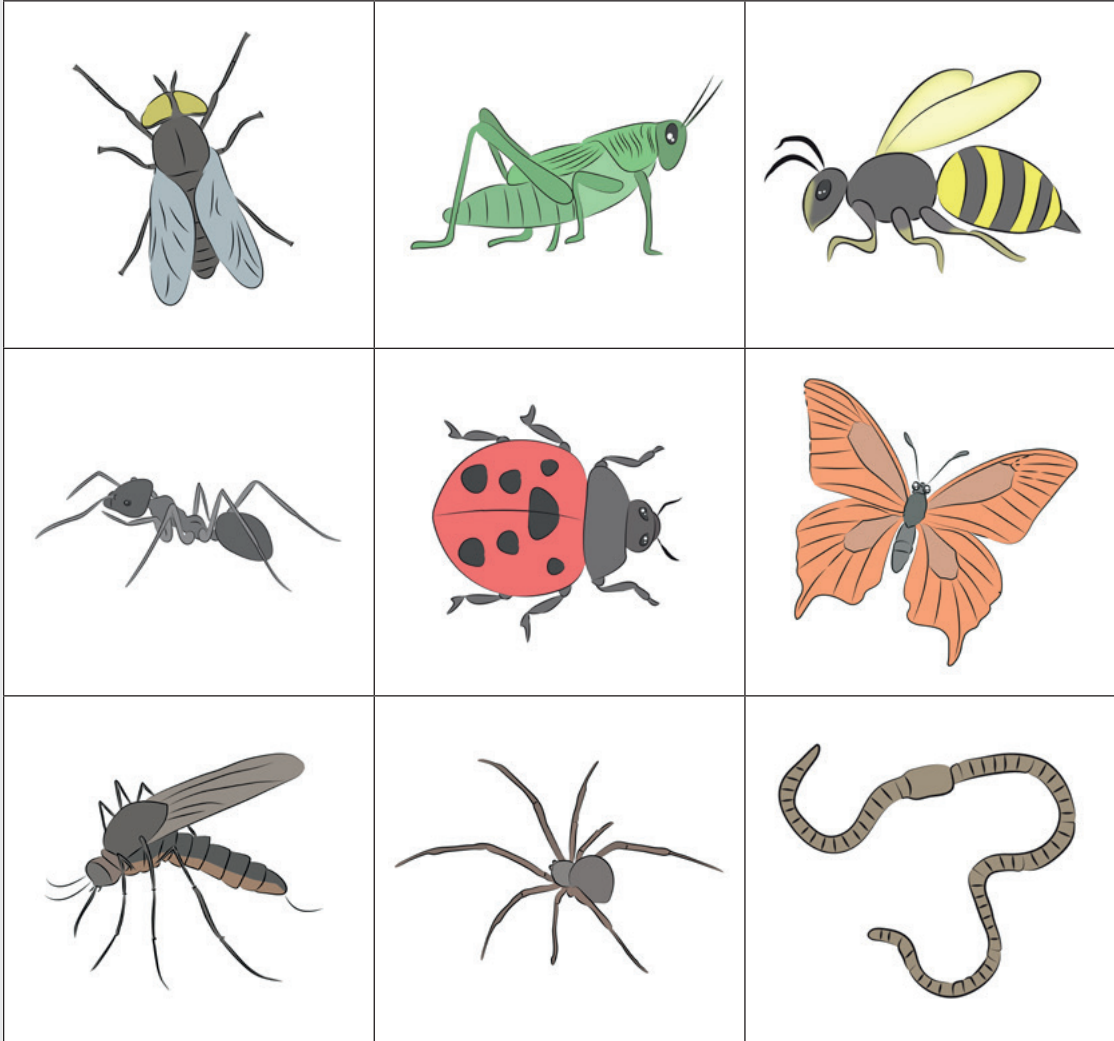
w x y z

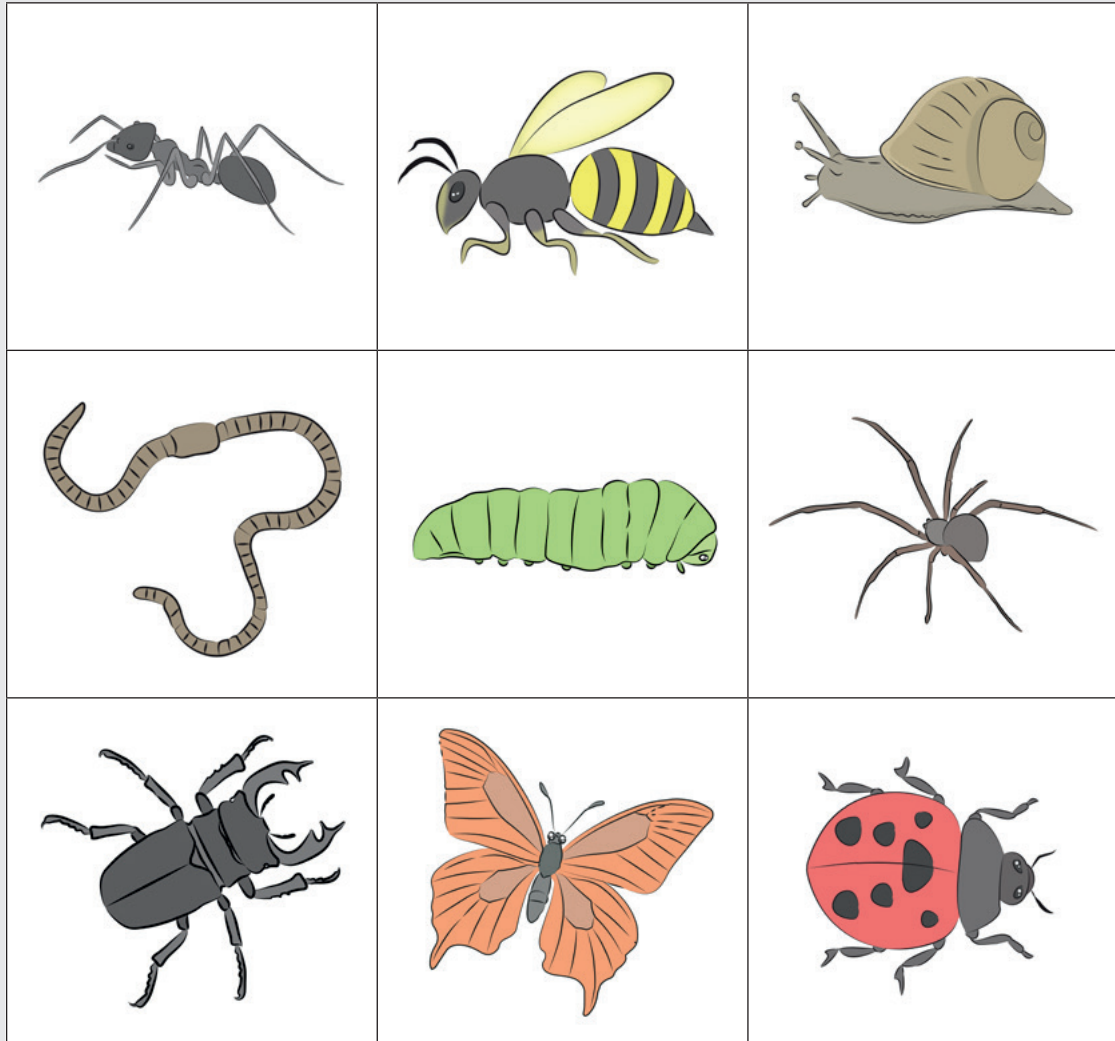


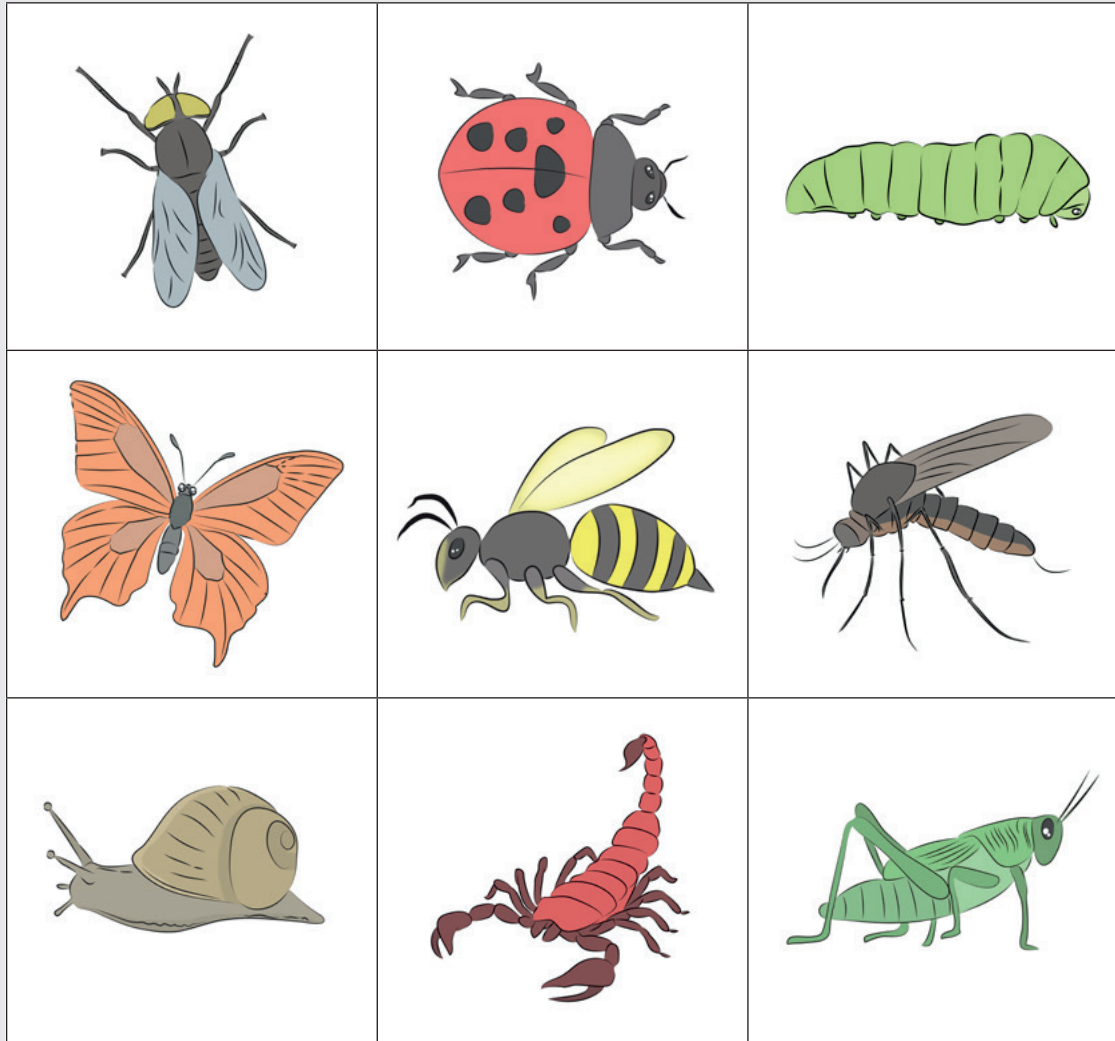


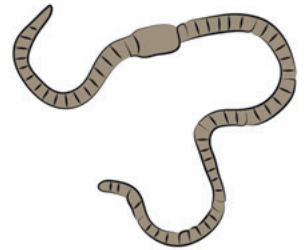






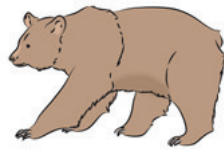








alligator



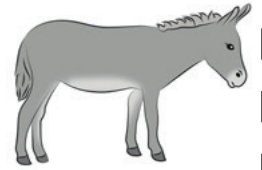
bear



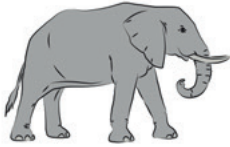
camel



cheetah



donkey



elephant



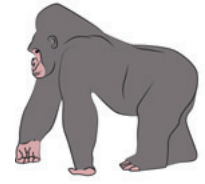
fox



gazelle



giraffe



gorilla



hippopotamus



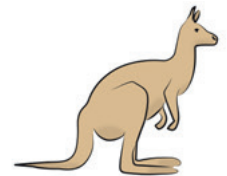
hyena



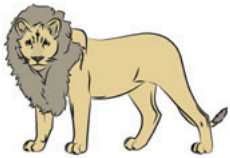
iguana



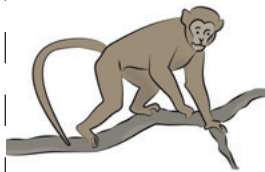
jaguar



kangaroo



lion



monkey



newt



ostrich



otter



owl



panda



panther



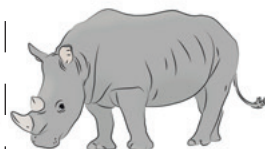
peacock



penguin



polar bear



rhinoceros



seal



snake



tiger



vulture



wolf



wombat

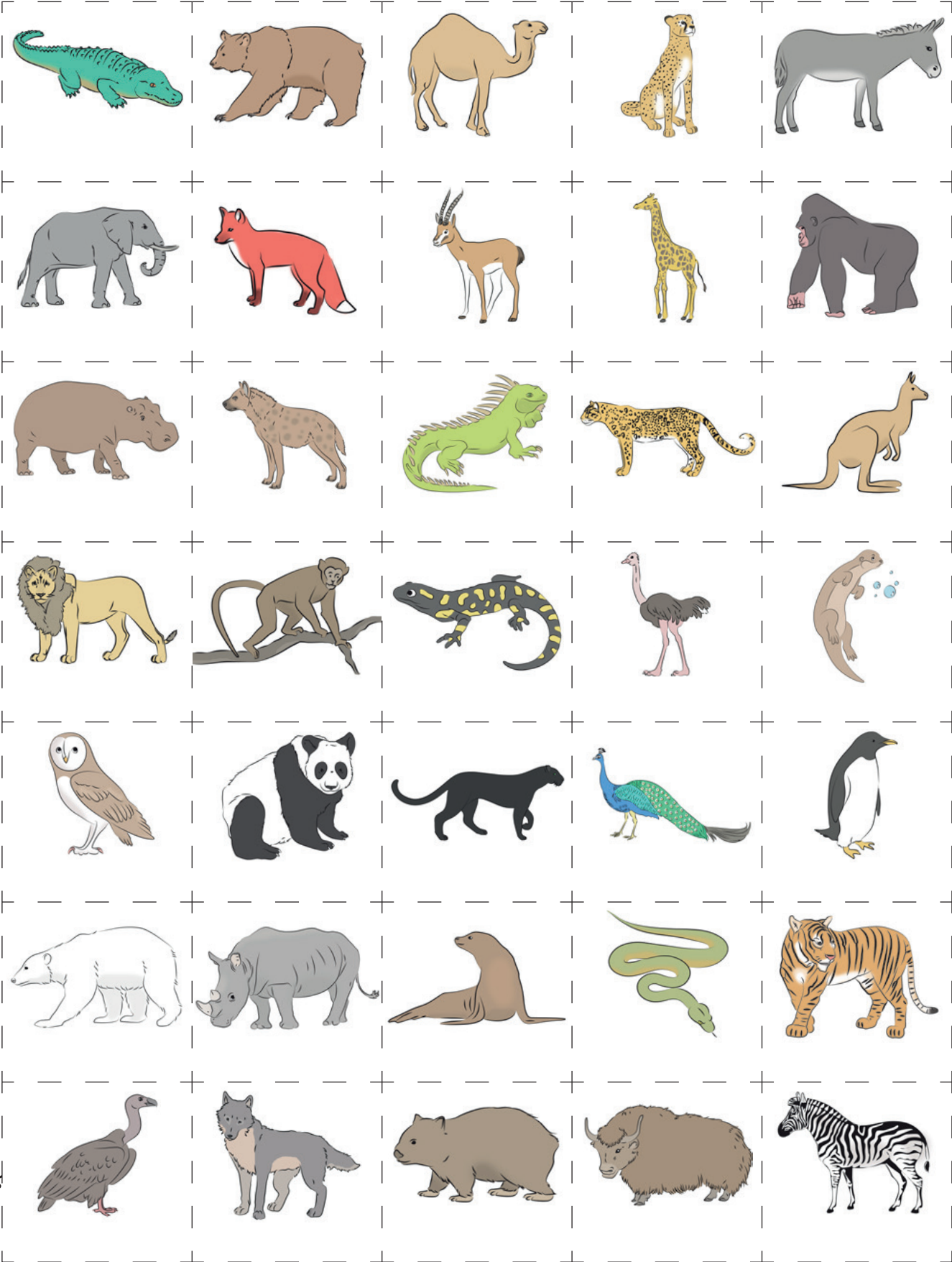


yak



zebra





BIBLIOGRAPHY

- Adams, M. J., (1990). *Beginning to read; Thinking and learning about print*. Cambridge, MA. MIT Press.
- Bergman, J.P. Lederberg, A.R., Easterbrooks, S. R., Miller, E.M., & Connor, C. M. (2009). Building the Alphabetic Principle in Young Children Who are deaf or Hard of Hearing. *The Volta Review*, Volume 109, 87–119.
- Bryant, P. E. MacLean, M., Bradley, L. L., & Crossland, J. (1990). Rhyme and alliteration, phoneme detection, and learning to read. *Developmental Psychology*, Vol 26, 429–438.
- Cupples, L. Ching, T.Y., Crowe, K., Day, J., & Seeto, M. (2014). Predictors of Early Reading Skills in 5- year old children with Hearing Loss who use Spoken Language. *Reading research quarterly*, 49, 85–104.
- Ching, T.Y C. & Cupples, L. (2015). Phonological Awareness at 5 years of age in children who use Hearing Aids or Cochlear Implants. *Perspectives on Hearing and Hearing Disorders in Children*. September 25, 48–59.
- Ehri, L.C. Nunes, S.R., Willows, D.M., Schuster, B.V., Yaghoub-Zadeh, Z., & Shanahan, T. (2001). Phonemic Awareness Instruction Helps Children Learn to Read: Evidence from the National Reading Panel's Meta-Analysis. *Reading Research Quarterly*. Vol 36, No 3. 250–287.
- Entwisle, L.K. Brouwer, K., Hanson, E. & Messersmith, J. (2016). A systematic Review of emergent literacy intervention for pre-school aged children with cochlear implants. *Contemporary Issues in Communication Science and Disorders*, 43, 64–76.
- Gilliver, M. Cupples, L. Ching, T.Y.C. Leigh, G., & Gunnourie, M. (2016). Developing Sound Skills for Reading: Teaching Phonological Awareness to Preschoolers With Hearing Loss. *Journal of Deaf Studies and Deaf Education*. 268–279.
- Goodman, I. Libenson, A., & Wade-Woolley, L. (2010). Sensitivity to linguistic stress, phonological awareness and early reading ability in pre-schoolers. *Journal of Research in Reading*, 33, 113–127.
- Lawrence, S. (2017). Print referencing intervention during shared storybook reading for preschool children with hearing loss (Order No. 10603873). Available from ProQuest Dissertations & Theses Global.
- Lederberg, A.R. Miller, E.M, Easterbrooks, S, R., & Connor, C.M. (2014). Foundations for Literacy: An Early Literacy Intervention for Deaf and Hard or Hearing Children. *Journal of Deaf Studies and Deaf Education*. 4384–55.
- Hulme, C. Bowyer-Crane, C. Carroll, J., Duff, F. J., & Snowling, M. J. (2012). The Causal Role of Phoneme Awareness and Letter-Sound Knowledge in Learning to Read; Combining Intervention Studies With Mediation Analyses. *Psychological Science*, 23, 572–577.
- Miller, E.M. Lederberg, A.R., & Easterbrooks, W. R. (2013). Phonological Awareness: Explicit Instruction for Young Deaf and Hard of Hearing Children. *Journal of Deaf Studies and Deaf Education*. 206–227.
- Pimperton, H. Blythe, H., Kreppner, J., Mahon, M., Peacock, J.L., Stevenson, J., & Kennedy, C.R. (2016). The impact of universal newborn hearing screening on long-term literacy outcomes: A prospective cohort study. *Archives of Disease in Childhood*, 101, 9–15.
- Smith, J., Wolfe, J., & Ching, T. (2016). Lessons from LOCHI. *The Hearing Journal*, 69, 18–23.
- Wade-Woolley, L. (2016). Prosodic and phonemic awareness in children's reading of long and short words. *Reading and Writing*, 29: 371–382.
- Wade-Woolley, L. (2016). Prosodic and phonemic awareness in children's reading of long and short words 29: 371–382.