

TEACHER'S GUIDE

For use with the book
The Fantastic Corn Quest.



GRADES 2-3

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LANGUAGE ARTS

Nebraska State Standards: LA 2.1.3, 2.1.5, 2.1.6, 2.2.1, 2.2.2

1. Simile Activity: Have students complete the following:
"Popcorn is like _____ because _____."
2. Adjective Activity: Ask the students, "What does popcorn sound like when you chew it?" Have students think up sound words to describe the action. Suggest words like crunch, crack and squish. Have students think of adjectives to describe the taste.
3. Make a commercial to advertise popcorn/corn.
4. Create a recipe using popcorn. Name your new treat.
5. Before Reading Activity: Duplicate one copy of **Activity Sheet A** for each student. Draw a KWL Chart on large chart paper for whole group use. Have students fill out the K and W portions on their own sheet and then compile their answers on the large chart paper.
6. While Reading Activity: Duplicate one copy of **Activity Sheets B1 and B2**. Cut apart the cards. Also duplicate one copy of **Activity Sheets C1 and C2** for each student.
 - A. Vocabulary Cards – While the teacher reads the text, she/he will present the vocabulary cards as they appear in the text. Each will have a visual with the label and definition.
 - B. Vocabulary Sheet – When class comes to a vocabulary word, each student will find the word on their sheet. As a class, read the word and definition. Each student will draw a quick sketch of the vocabulary word.
7. After Reading Activity:
 - A. Complete **Activity Sheet A** – Have students fill in the 'L' portion with what they learned.
 - B. Complete **Activity Sheets C1 and C2** – Have students write a sentence for each vocabulary word under the definition of the word.
 - C. Acrostic Poem – Duplicate one copy of **Activity Sheet D** for each student. Students will brainstorm and choose words that describe or relate to corn. They will choose one or more words that begin with the letters C, O, R and N.
Example: **C**ows
 October Harvest
 Ripe
 Notebook Paper
 - D. Corn Word Scramble – Duplicate one copy of **Activity Sheet E** for each student. Have students unscramble the words related to corn.
 - E. Corn Crossword Puzzle – Duplicate one copy of **Activity Sheet F** for each student. Have students complete the crossword puzzle.
 - F. Venn Diagram – Duplicate one copy of **Activity Sheet G** for each student. Have students list the similarities and differences of the characteristics of field corn and sweet corn. In the overlapping area, have students list the characteristics that they have in common.

KWL Chart

Name _____

I Know

I Want to Know

I Learned

--	--	--

biodegradable

able to be broken down
and become part of the Earth

kernel

the part of the corn
that can be eaten

harvest

to gather the ripened
crop from the field

husk

the part of the corn plant
that protects the kernels

tassel

the top of the corn plant
that provides pollen

ingredient

food that is part of a
mixture in cooking

stalk

the part of the corn plant
that provides support

ear

the part of the corn where
the kernels are found

emissions

a substance put
into the air

combine

a farm machine used
to harvest crops

ethanol

a fuel made
from corn

elevator

a large storage
building for grain

VOCABULARY SHEET

Name _____

Word	Picture	Definition and Sentence
biodegradable (adjective)		able to be broken down and become part of the Earth
combine (noun)		a farm machine used to harvest crops
ear (noun)		the part of the corn where the kernels are found
elevator (noun)		a large storage building for grain
emissions (noun)		a substance put into the air
ethanol (noun)		a fuel made from corn

VOCABULARY SHEET

Name _____

Word	Picture	Definition and Sentence
harvest (verb)		to gather the ripened crop from the field
husk (noun)		the part of the corn plant that protects the kernels
ingredient (noun)		food that is part of a mixture in cooking
kernel (noun)		the part of the corn that can be eaten
stalk (noun)		the part of the corn plant that provides support
tassel (noun)		the top of the corn plant that provides pollen

ACROSTIC POEM

Name _____

Write an acrostic poem using words that describe or relate to corn.
The words must begin with the letters C, O, R and N.

C

O

R

N

SCRAMBLED CORN

Name _____

Unscramble the words below. All of the words are listed in the Word Bank at the bottom of the page.

rae _____

eicmbon _____

selats _____

olhtnea _____

shku _____

vesraht _____

eklrne _____

ledbagaiordbe _____

lastk _____

ismesisno _____

nitinrgdee _____

lroeveta _____

WORD BANK

biodegradable

kernel

harvest

husk

tassel

stalk

emissions

combine

ingredient

ear

ethanol

elevator

SCRAMBLED CORN

rae _____ ear _____

eicmbon _____ combine _____

selats _____ tassel _____

olhtnea _____ ethanol _____

shku _____ husk _____

vesraht _____ harvest _____

eklrne _____ kernel _____

ledbagaiordbe _____ biodegradable _____

lastk _____ stalk _____

ismesisno _____ emissions _____

nitinrgdee _____ ingredient _____

lroeveta _____ elevator _____

ALL ABOUT CORN

Name _____

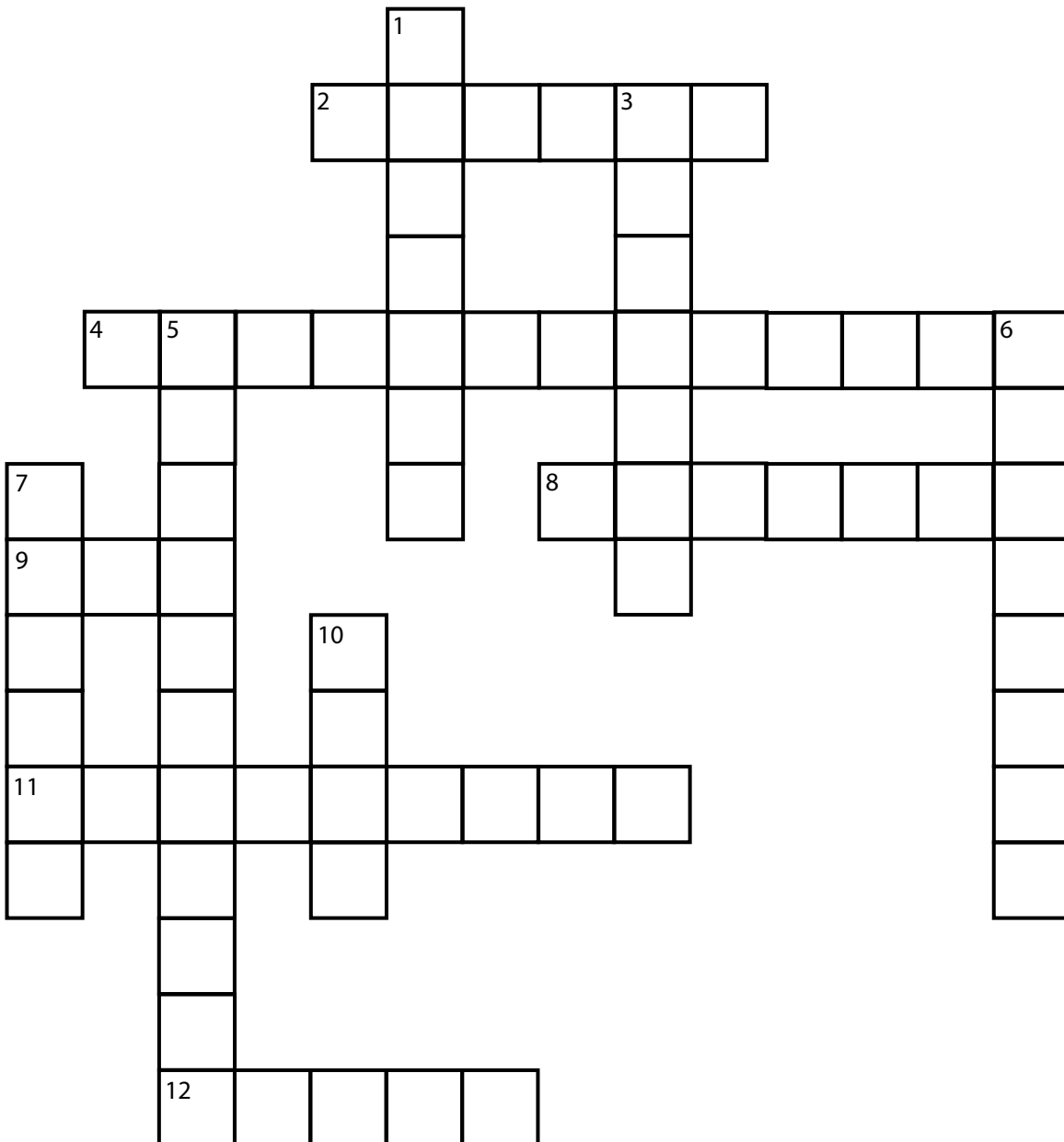
Complete the crossword puzzle using the clues below.

ACROSS

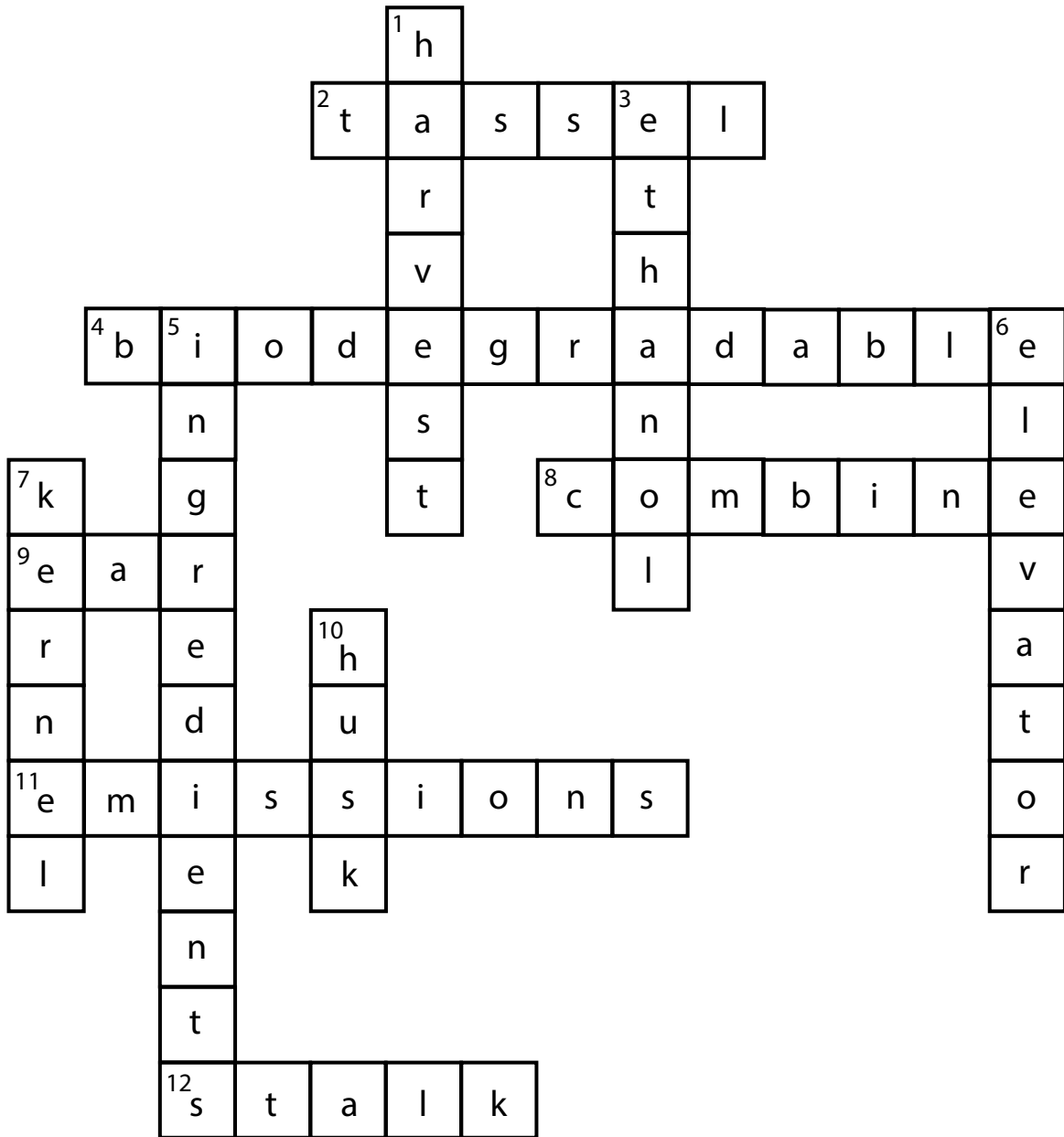
2. the top of the corn plant that provides pollen
4. able to be broken down and become part of the Earth
8. a farm machine used to harvest crops
9. the part of corn where the kernels are found
11. a substance put into the air
12. the part of the corn plant that provides support

DOWN

1. to gather the ripened crop from the field
3. a fuel made from corn
5. food that is a part of a mixture in cooking
6. a large storage building for grain
7. the part of the corn that can be eaten
10. the part of the corn plant that protects the kernels

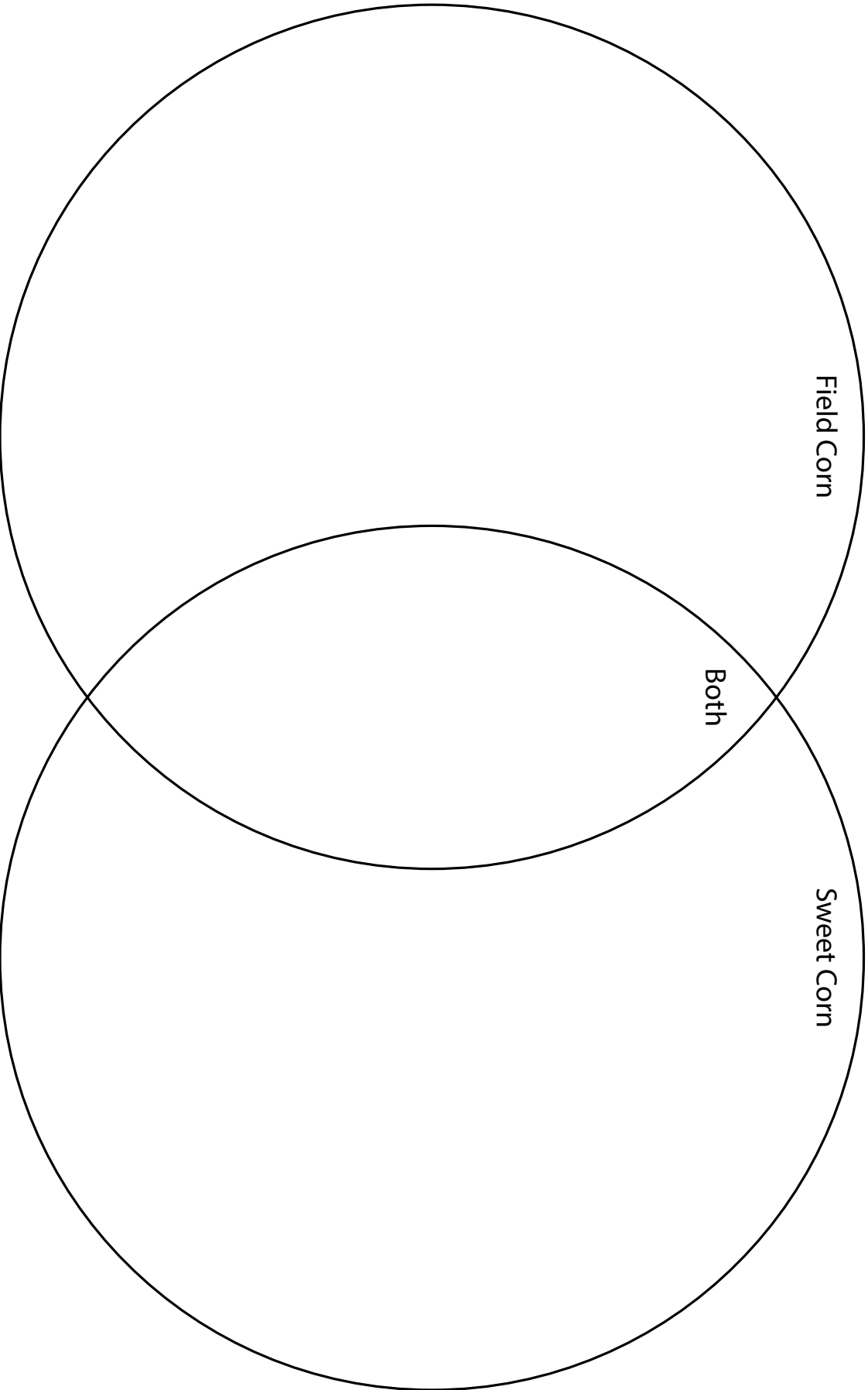


ALL ABOUT CORN

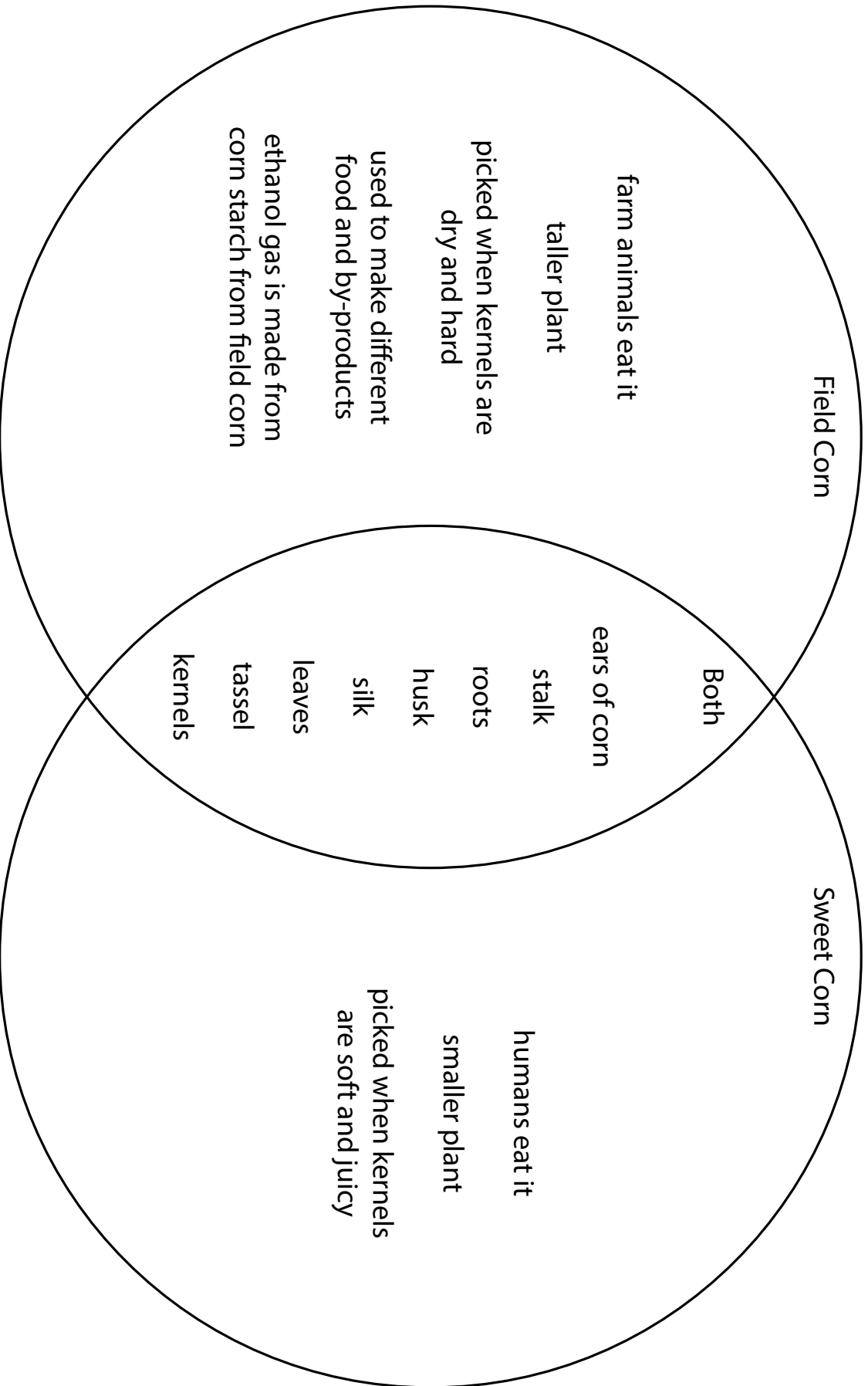


FIELD CORN AND SWEET CORN

Name _____



FIELD CORN AND SWEET CORN



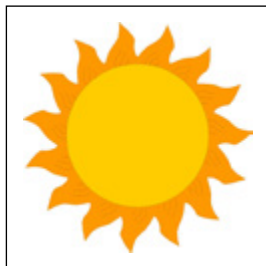
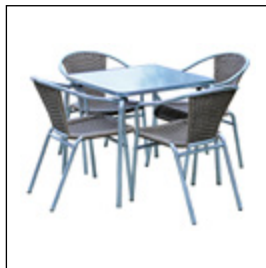
PICTURE SORT

Name _____

Cut out the pictures of products at the bottom of the page. Glue the pictures on the correct side of the sheet.

Corn Product

Non-Corn Product



PICTURE SORT

Corn Product



Non-Corn Product



MEASURING STALKS

Name _____

Use a ruler to measure the height of the corn stalks to the nearest inch or nearest centimeter.



MEASURING STALKS



7 inches/18 centimeters



3 inches/8 centimeters

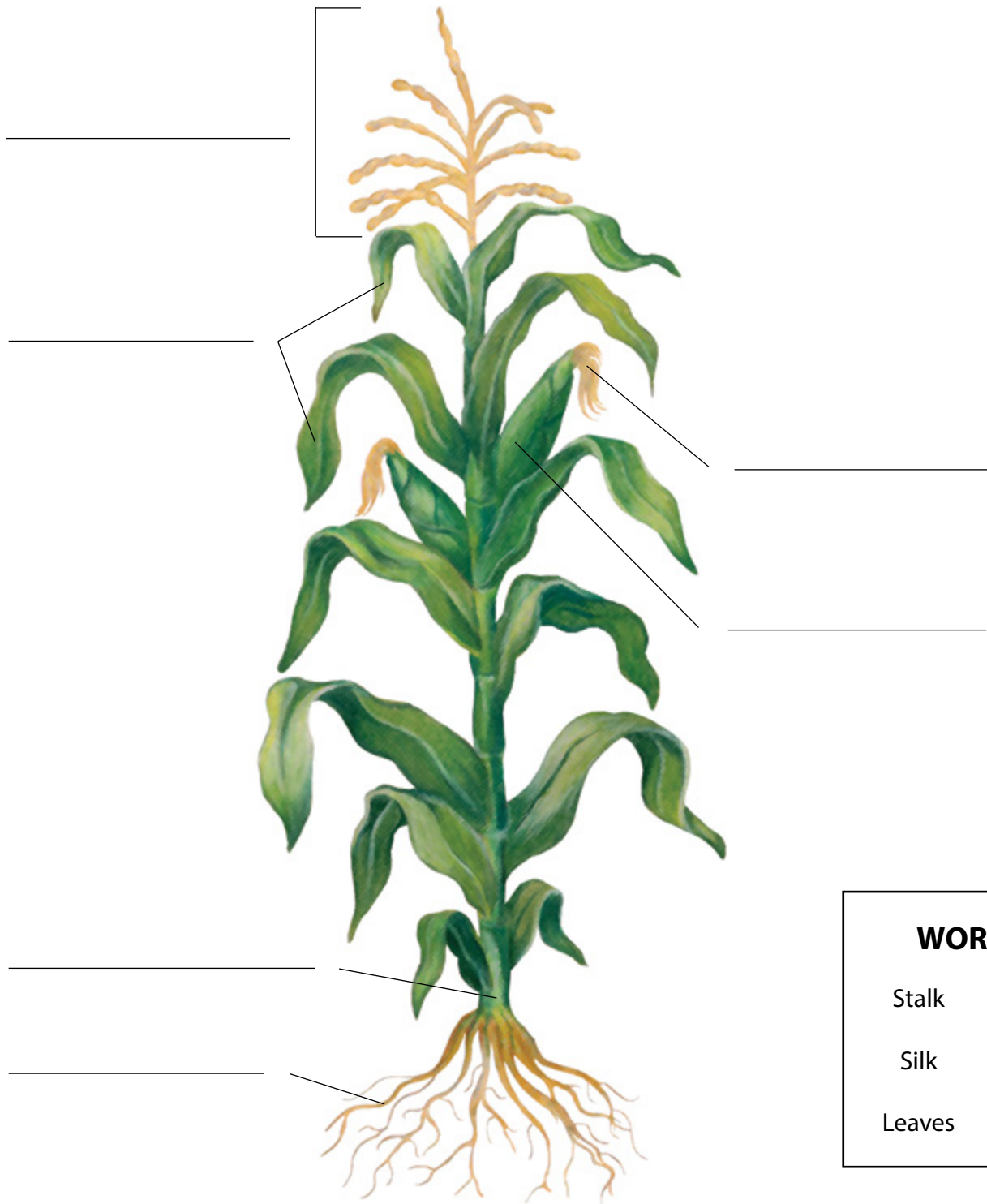


5 inches/13 centimeters

LABEL THE PARTS OF A CORN STALK

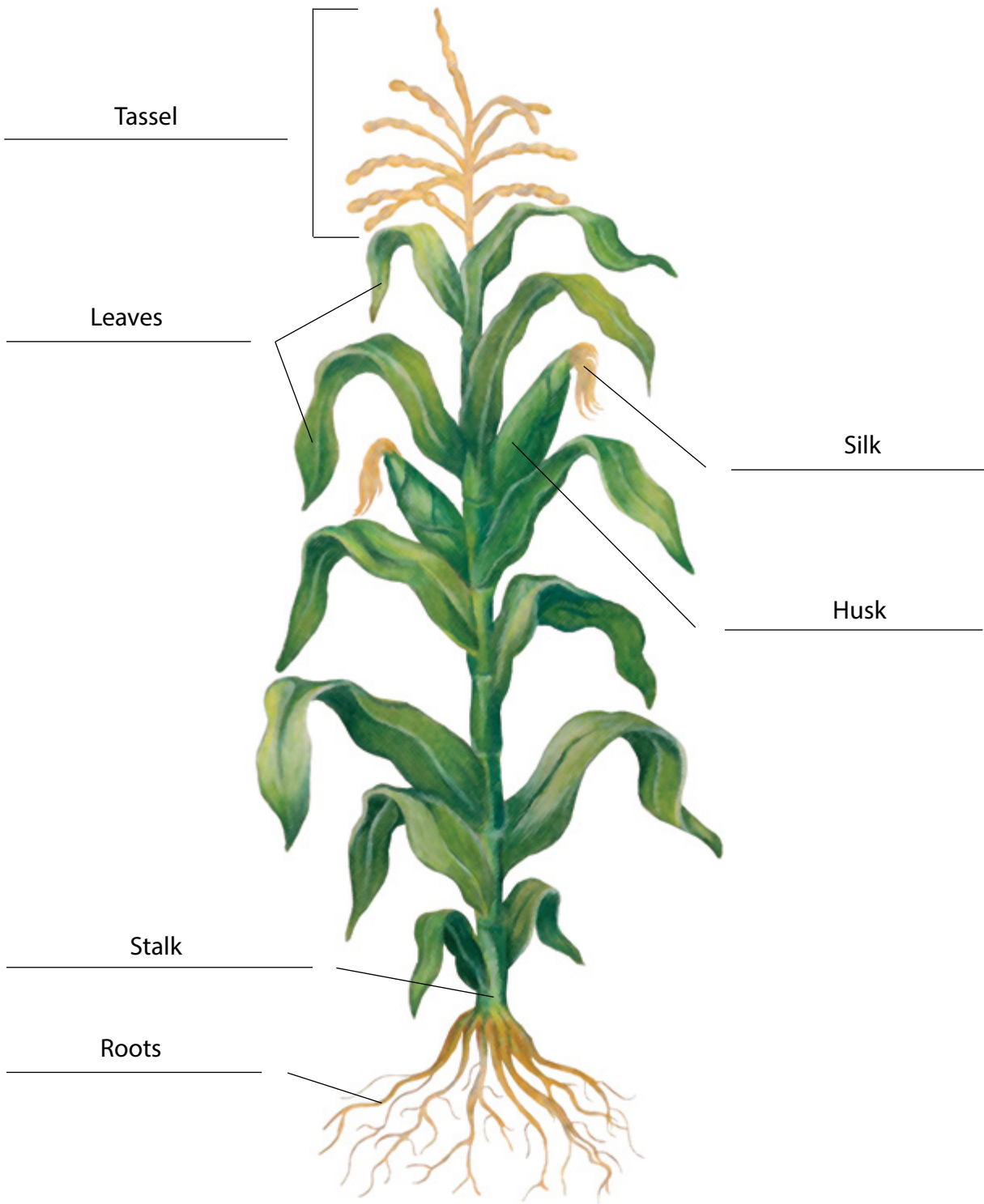
Name _____

Label the parts of a corn stalk on the diagram using the words from the word bank below.



WORD BANK	
Stalk	Roots
Silk	Tassel
Leaves	Husk

LABEL THE PARTS OF A CORN STALK



CORNBREAD RECIPE

Cornbread is a member of the quickbread family, which differs from biscuits and scones because it uses butter or shortening that is melted, not solid.

The key to a good cornbread is not overmixing the batter. Once the liquid ingredients are added to the dry, mix the batter by hand just until the flour and corn meal are moistened – no more than about 10 seconds. Too much mixing can cause the final product to be dry, tough or misshapen.

Prep Time: 10 minutes

Cook Time: 30 minutes

Total Time: 40 minutes

Ingredients

- 1 cup all-purpose flour, sifted
- 1 cup yellow cornmeal
- 1 tablespoon baking powder
- 1/2 teaspoon salt
- 2 eggs, beaten
- 1 cup half and half
- 1/4 cup melted butter or shortening
- 1/4 cup honey
- 1/4 cup sugar



Directions

1. Preheat oven to 400° F.
2. Sift together the flour, cornmeal, baking powder and salt.
3. Combine the half and half, eggs, fat, honey and sugar.
4. Thoroughly grease and flour a 9x9-inch baking pan.
5. Add the liquid ingredients to the dry ones and mix just until the flour is moistened, no more than 10 seconds. The batter should be visibly lumpy – leave it that way. It's extremely important not to overmix the batter.
6. Once the liquid and dry ingredients have been combined, place in pan and bake the cornbread immediately.
Tip: The dry and wet ingredients, respectively, can be mixed in advance, but as soon as the wet and dry ingredients have been combined with each other, the liquid will activate the baking powder and the batter must be baked right away.
7. Bake 25-30 minutes or until a toothpick inserted into the center of the cornbread comes out clean and the edge of the bread starts to separate from the pan.

Note: For an easier version, use Jiffy Corn Muffin Mix.

SOCIAL STUDIES

Nebraska State Standards: SS 4.2, 4.4

1. Picture Sort: Duplicate a copy of **Activity Sheet H** for each student. Have students cut out the pictures of products at the bottom of the page. Have them glue the product in the appropriate category (corn product or non-corn product) at the top of the page.
2. Technology/Research Component: Have students research how American Indians used corn. Research may include Indian Corn (maize), cornhusk dolls, tools, games, food, etc. Check online at: nativetech.org/cornhusk/cornhusk.html
3. Class Discussion: What does a kernel do when it is popping? Explain how heat causes the kernel to expand inside and break out of the outside covering. Ask students to become popping kernels and have several demonstrate their ideas. Tell them the popping occurs slowly at first and then speeds up as the kernels get hotter.

What Makes It Pop

The Native Americans believed there was a little demon in each of the corn kernels which caused the popcorn to pop. However, it is water inside the kernel that causes it to pop.

Water is stored in a small circle of soft starch in each kernel. As the kernel is heated, the water heats, builds up pressure and takes up any available room. When the outer surface gives way, the water expands, causing it to explode.

MATH

Nebraska State Standards: MA 2.1.2, 2.1.3, 2.1.4, 2.2.5, 2.4.1

1. Give each student samples of different types of popcorn. Construct a class pictograph to determine their favorite type of popcorn. Which is the most popular? Which is the least popular? How many more students chose _____ than _____? How many chose _____ and _____ altogether?
2. Measuring Corn Stalks: Duplicate one copy of **Activity Sheet J** for each student.
3. Wall Measuring: Draw a life-size corn stalk on large poster paper, at least 5 feet tall. Measure each student's height and place a sticky-note on the stalk to show the height comparison.
4. Prediction Jar: Fill a jar with corn kernels and have students guess how many are in the jar.

SCIENCE

Nebraska State Standards: SC 2.1.1, 2.3.1, 2.3.2

1. Label Parts of Corn Stalk: Duplicate one copy of **Activity Sheet K** for each student. Have the students label the parts of the corn stalk.
2. Discuss how popcorn is made (heat, pressure, etc.). Make popcorn and have children predict how many seconds it will take for the popcorn to begin popping.
3. Grow corn. Using seeds purchased at a garden center, wrap each seed in a wet paper towel. Place the seed and paper towel in a plastic bag and tape it to a window. This will show the root system and the development of the seed.

ART

1. Have students draw pictures of their favorite times to eat popcorn.
Example: Is it at the movies? Or while watching TV?
2. Provide students with dry popcorn kernels and have them create a mosaic design by gluing the popcorn onto paper.
3. Have students design a poster advertising popcorn.

CULMINATING ACTIVITY

Cornbread Recipe: The class will use multiple curriculum areas (math, social studies, science, reading, character education) to make cornbread. Use provided recipe on **Activity Sheet L** or for an easier version, use Jiffy Corn Muffin Mix.