

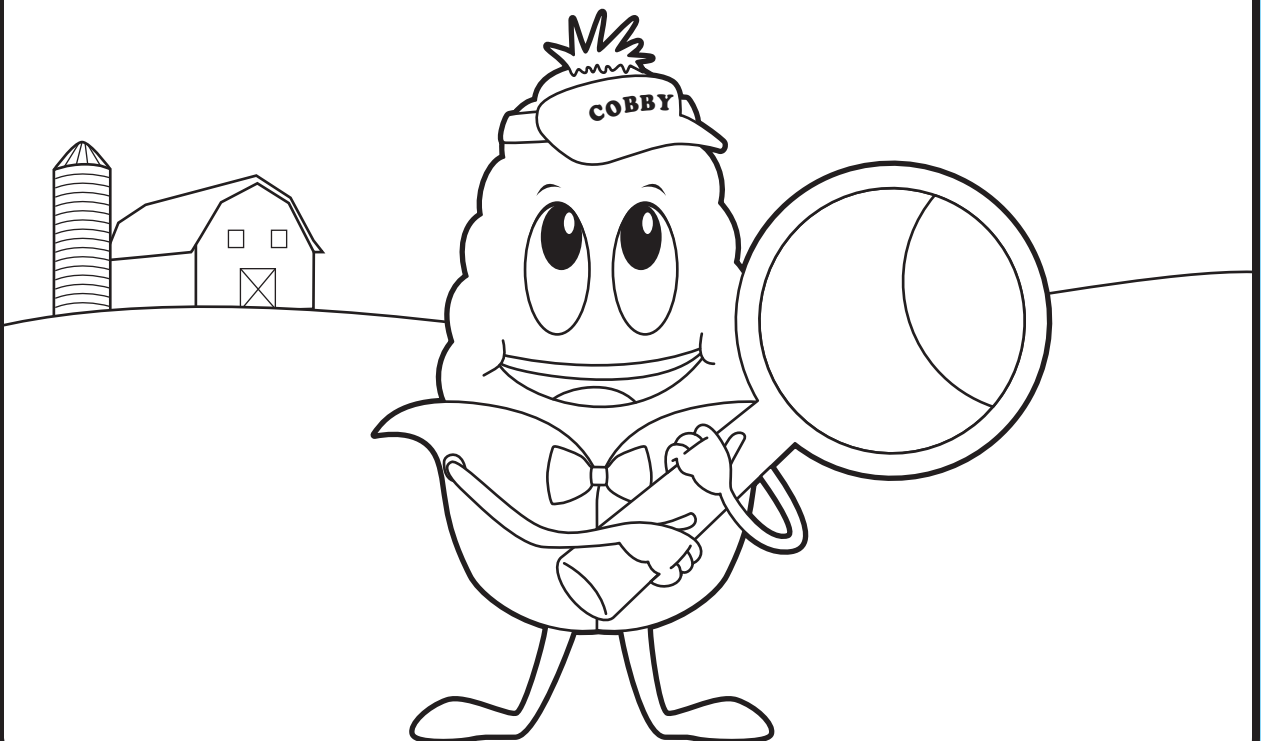
The Adventures of Cobby Corn



Word Scramble

Unscramble the following list of items that contain corn.

1. elacsnkofr is c _ _ _ _ l _ _ _ _
2. meracice is _ _ e _ _ _ _ m
3. eetpabturunt is _ _ _ _ _ t _ _ _ t _ _
4. raconys is _ _ _ y _ _ _
5. istaeebtr is _ _ _ t _ _ _ _ _
6. atgrhbsa is _ _ _ s _ b _ _
7. lssddsgainea is _ _ _ a _ _ r _ _ _ _ _
8. sowlmmsaralh is _ _ _ _ h _ _ _ _ _
9. sisfotkrnd is _ _ f _ _ _ _ k _
10. eolcaotch is _ _ _ _ o _ _ _ _

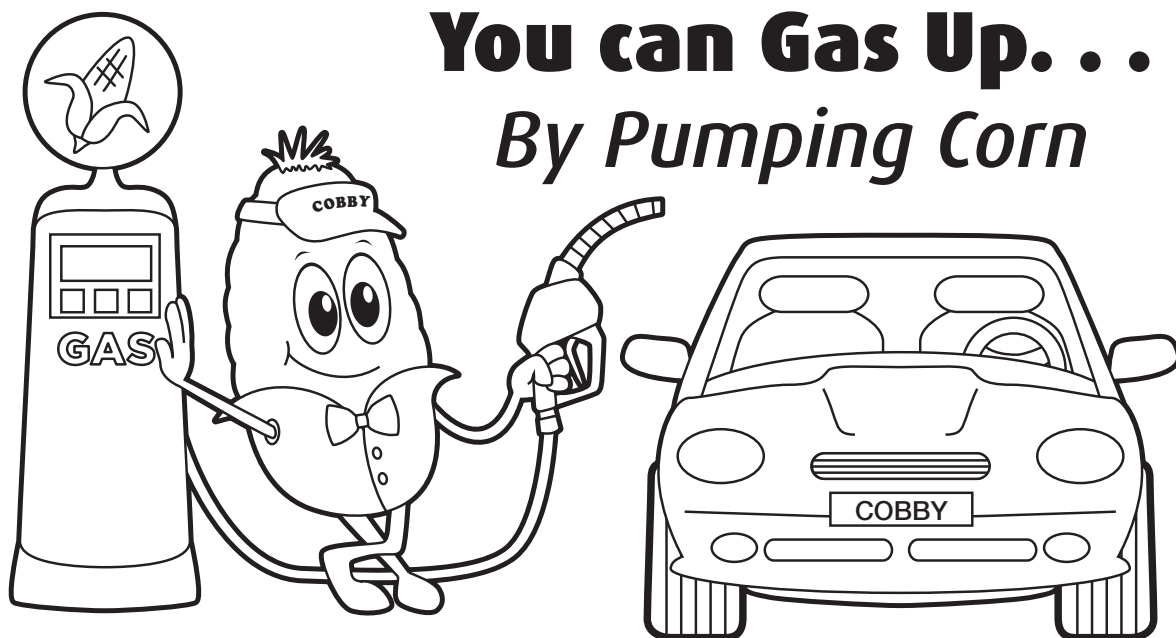


**of 10,000 items in a
typical grocery store,
how many would you
guess contain
CORN
in one form or
another?**

Of 10,000 items in a typical grocery store,
at least 2,500 items use corn in some form
during the production or processing.



You can Gas Up. . . *By Pumping Corn*



Scientists are working to find ways to reduce air pollution and use less gasoline, which is made from crude oil. One of the ways is growing in cornfields!

Ethanol is an alcohol fuel made from CORN and other abundant agricultural resources. It is called a renewable resource because unlike oil, when we need more, we can grow more corn. What is left over after making ethanol is called distillers grain and is fed to livestock so nothing goes to waste.

Ethanol is blended in almost all gasoline sold in the U.S. This ethanol-blended fuel burns clean, which reduces air pollution and keeps your car running its best. It also saves you money at the pump, an average of 89 cents per gallon in 2010.

Blending ethanol in gasoline stretches the supply of oil. This reduces our dependence on foreign oil and increases the United States' ability to control its own security and economic future.

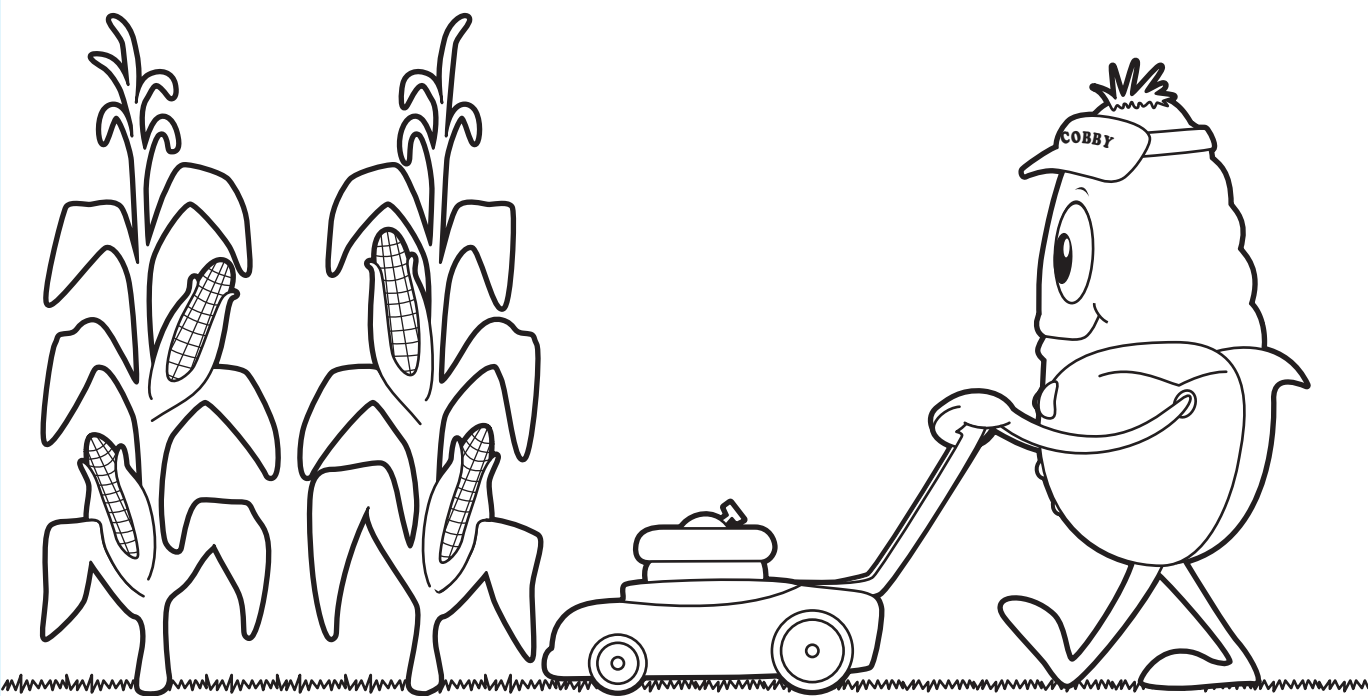
a-**"MAIZE"**-ing Facts

"Corn can be traced back over 7,000 years"

The corn we know today would not exist if it were not for the Mayan, Aztec and Inca Indians of North and South America who developed "maize" from a wild grass and cultivated it. It is a human invention that does not exist in the wild and can only survive if planted and protected by humans.

"Indians discovered Chewing Gum and Popcorn!"

Native Americans were not only the first to discover corn, but also the first to experiment on its many uses. The leaves were used as the first chewing gum, because of their high sugar content. Immature corn was eaten as a fresh vegetable by boiling or roasting it. The dry, mature kernels of corn were ground into flour, parched or popped. Yes, they invented chewing gum and popcorn!



"Corn is actually a member of the grass family"

How would you like to "pick" your lawn instead of mowing it?

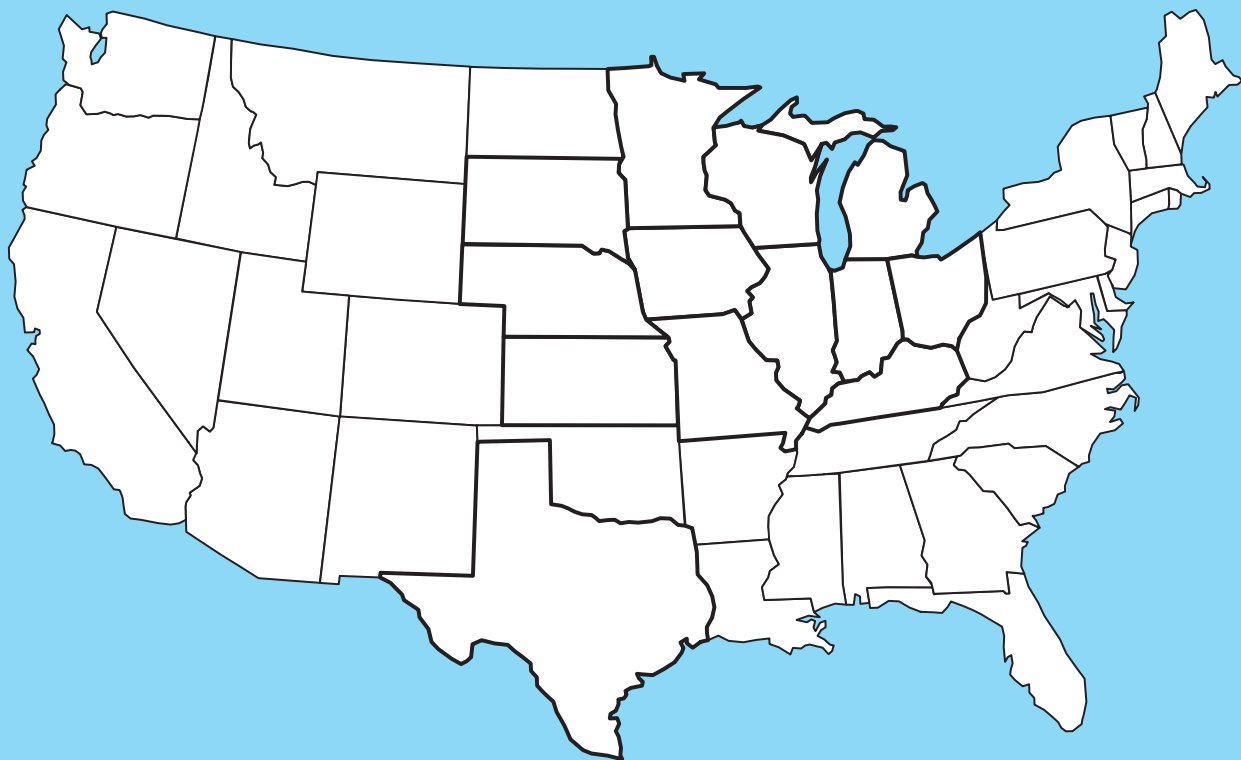
"You can paint with it!"

Cornstarch Paint Recipe

- 1 tsp. vinegar
- 1 tsp. cornstarch
- 20 drops of desired food coloring

Mix vinegar, cornstarch, and coloring in baby food jar and shake.
Use paint brush and use like tempera paint.





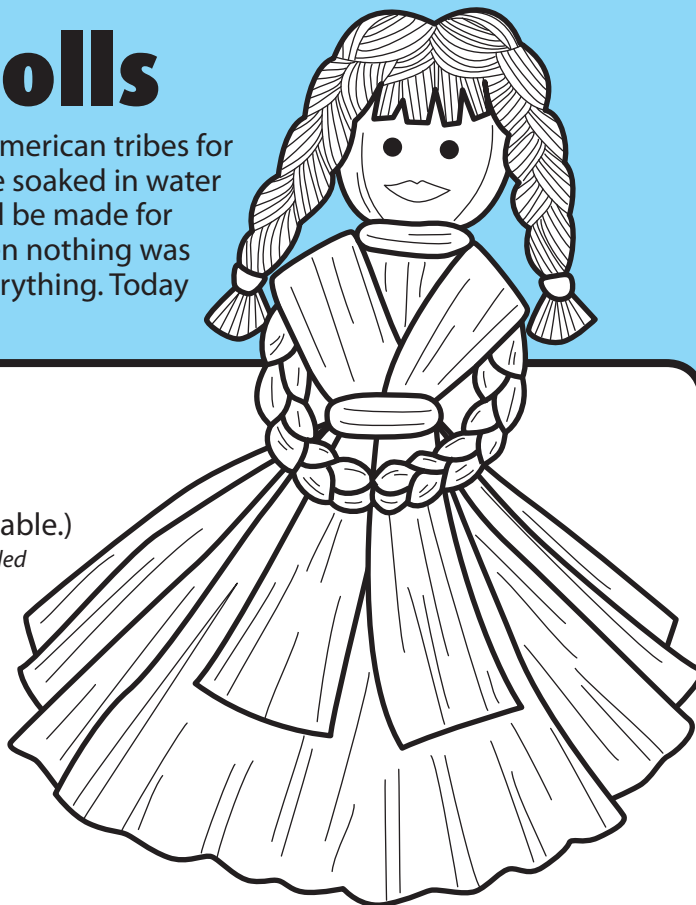
Where is Corn Grown?

Texas is the 12th ranked corn producer in the U.S., planting approximately 2 million acres each year. About 40% of the corn planted in Texas is irrigated, which greatly increases the yield. Texas corn production contributes approximately \$1.2 billion to the state's economy. The Midwest part of the United States, including Iowa, Illinois, Nebraska, Indiana, Ohio, South Dakota, Minnesota, Wisconsin, Michigan, Missouri and Kansas, is called the "Corn Belt" because most of the corn is grown there. Alaska and Hawaii are the only two states in the U.S. that do not produce corn. See if you recognize the states listed above by coloring them in on the map.



Corn Husk Dolls

These dolls have been made by Native American tribes for many generations. Dried cornhusks were soaked in water to become soft so that sturdy dolls could be made for children to use as toys. It was a time when nothing was wasted and a purpose was found for everything. Today we call this recycling.



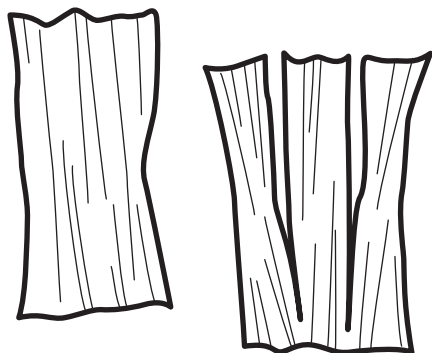
Supplies:

Corn Husks, cotton ball, string
(Corn Silk may be used for hair if available.)

If actual cornhusk is not available, you can use crinkled tissue paper or crepe paper. However, they will not need to be soaked in water and will not be as stiff and durable when complete.

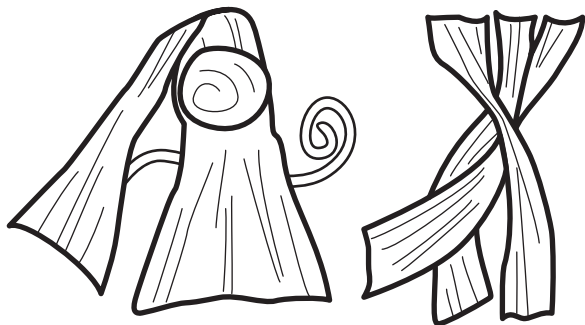
Step 1:

Soak corn husks in water until soft



Step 2:

Lay each sheet out flat and begin by tearing equal size strips to be braided into the arms of the doll. Thinner strips can be used as pieces of hair. This is where you can use the corn silk if available.

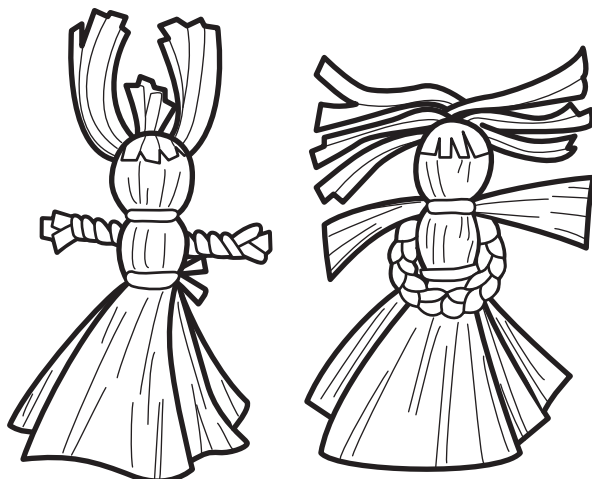


Step 3:

Place a cotton ball or similar-sized object in the middle of a section of husk. Fold it, twist it, and tie it with a piece of string to make a head.

Step 4:

Braid three strips to make the arms of the doll. Tie a knot at both ends to form hands.



Step 5:

Insert the arms and tie off at waist. Insert the hair, either corn husk strips or corn silk. Tie a few thin strips together and cut short to form bangs.

Step 6:

Now braid hair on each side of head and tie ends. Wrap a half strip of husk around neck and down front to form shawl. Pull arms together and tie. Let the doll dry thoroughly and have fun.

Make Your Own Biodegradable Corn Plastic

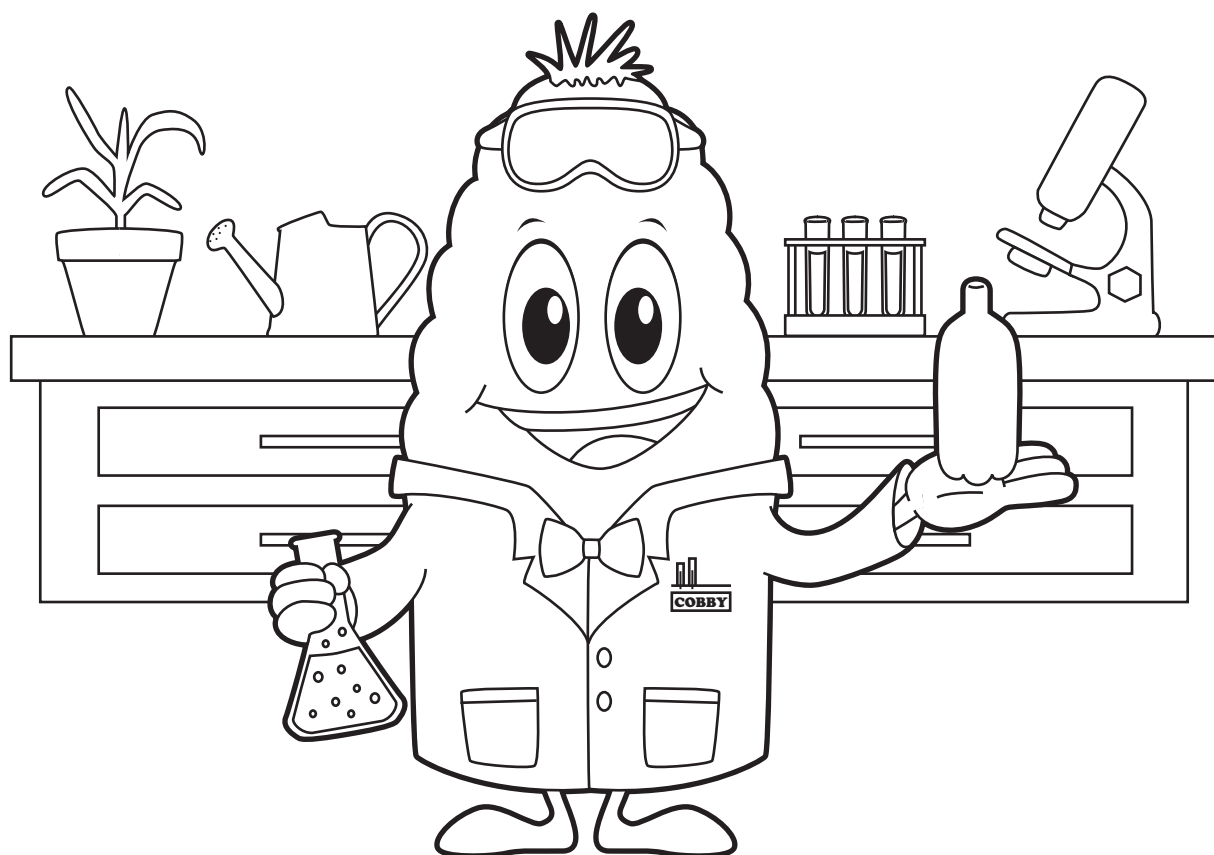
The development of new products using safe ingredients like corn is usually done in a laboratory. This experiment allows you to create your own biodegradable plastic. Remember to use the scientific process: follow the procedures and record your observations.

Materials and Equipment

- cornstarch
- water
- tablespoon
- microwave oven
- corn oil
- paper cup
- stirrer
- food coloring (optional)

Procedure

1. Place a tablespoon of cornstarch in a paper cup.
2. Add two drops of corn oil to the cornstarch.
3. Add a tablespoon of water to the corn oil and cornstarch.
4. Stir the mixture.
5. Add two drops of your favorite food coloring to the mixture and stir well.
6. Microwave for 25 seconds on high. [MAY BE HOT!]
7. When it is cool enough to handle, CAREFULLY remove the material from the cup.
8. Mold into an ear of corn or any other fun shape!



Make Corn Putty

Play with it like clay, then watch it become liquid again!

- You'll Need:**
- 1 cup cornstarch
 - 1/4 cup + 1 tablespoon water
 - Food coloring

Blend mixture with a fork. It should flow when the bowl is tipped, but feel solid when you touch it. If it's too thick, add a little water. If it's too runny, add a little cornstarch.



Popcorn Necklace

Chief Massosoit, a Native American, and his tribe presented popcorn necklaces to the Pilgrims at the first Thanksgiving. You can make one to keep this tradition alive.



- You'll Need:**
- A needle
 - Thread or fishing line
 - Popped popcorn (day old popcorn isn't as brittle and will string easier.)

Just string the popped kernels onto the thread or fishing line. You may add acorns, dried flowers, fall leaves, or even candy corn and gum drops for more interest.

Note: Younger children may need an adult's help with the sharp needle.

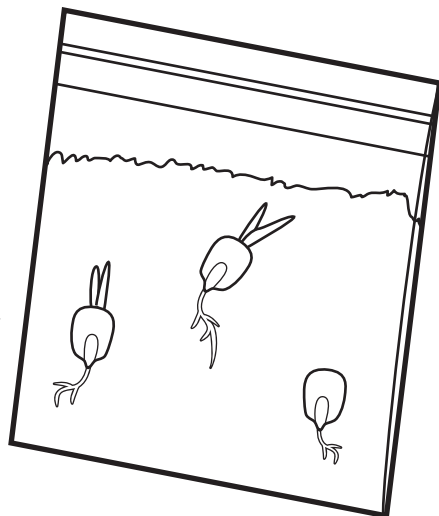
Growing Your Own Corn

This project is really very easy to do.

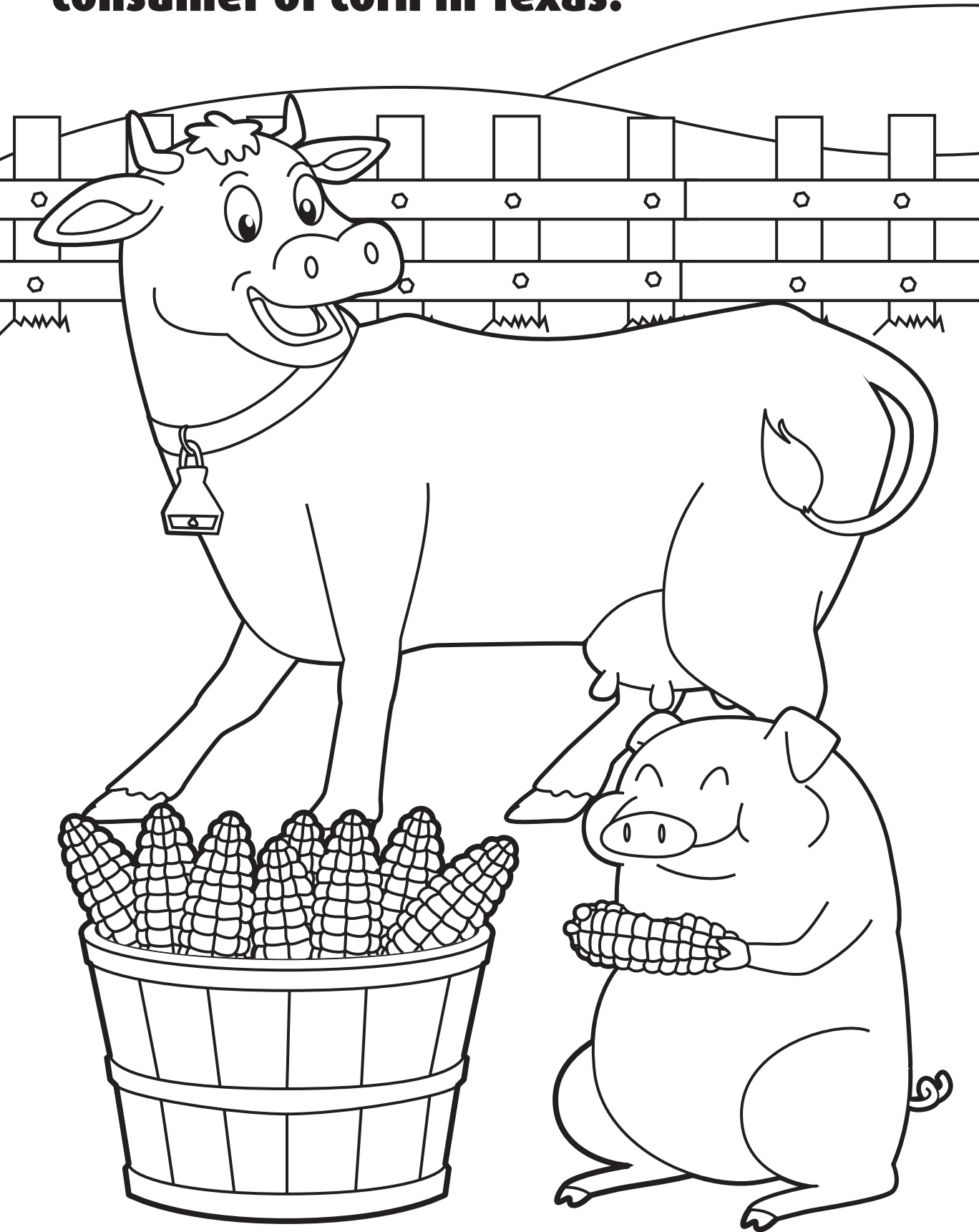
- You'll need:**
- A few kernels of popcorn
 - A zipper bag
 - Soil
 - Water

Place some soil in the zipper bag, add some water and a few kernels of popcorn. Seal the bag and place in a sunny window. You should see growth within a week. After the corn grows too tall for the bag, it can be transplanted to a pot or garden.

Note: Place kernels so at least a few are visible from the side so viewing is easier.

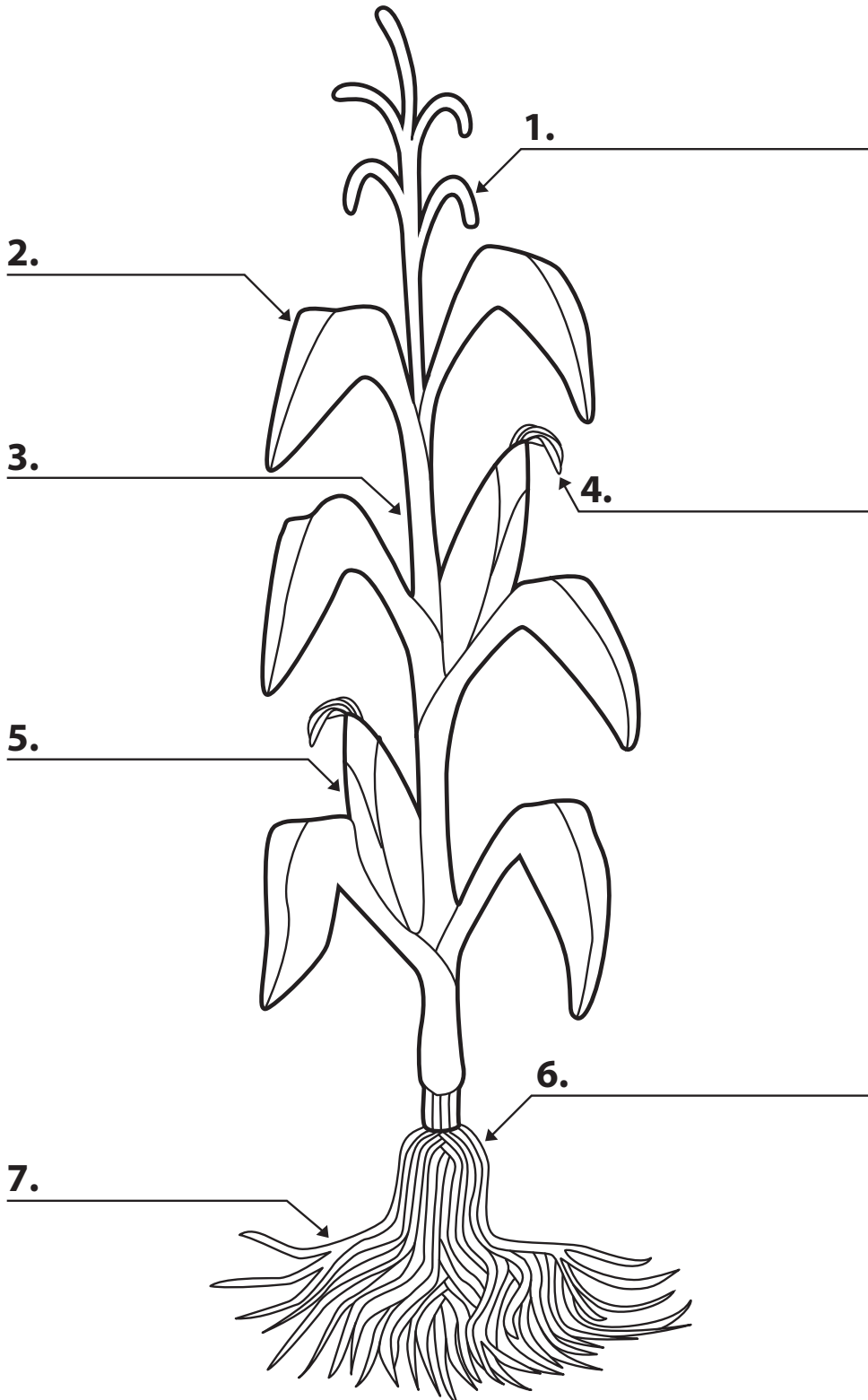


**Livestock is the largest
consumer of corn in Texas.**



All About Corn

Fill in the blanks with:
stalk, leaf, tassel, silks, ear, prop roots and roots.



CORNY EXPERIMENT

Explanation

All seeds contain a tiny bit of water whose job is to keep cells alive until sprouting. This small amount of moisture makes the popping of popcorn possible. When a kernel of popcorn is heated, the water inside becomes a gas (steam) that exerts a strong enough pressure to burst the seed covering. The expansion of the gas allows the soft material from the kernel to puff. This experiment is designed to determine if the amount of water in the kernel affects the popping ability of the seed.

Materials & Equipment

- Fresh popping corn
- Shallow pan
- Pot with cover
- Tablespoon
- Measuring cup
- A six inch ruler
- Pencil and paper
- Oven
- Corn oil

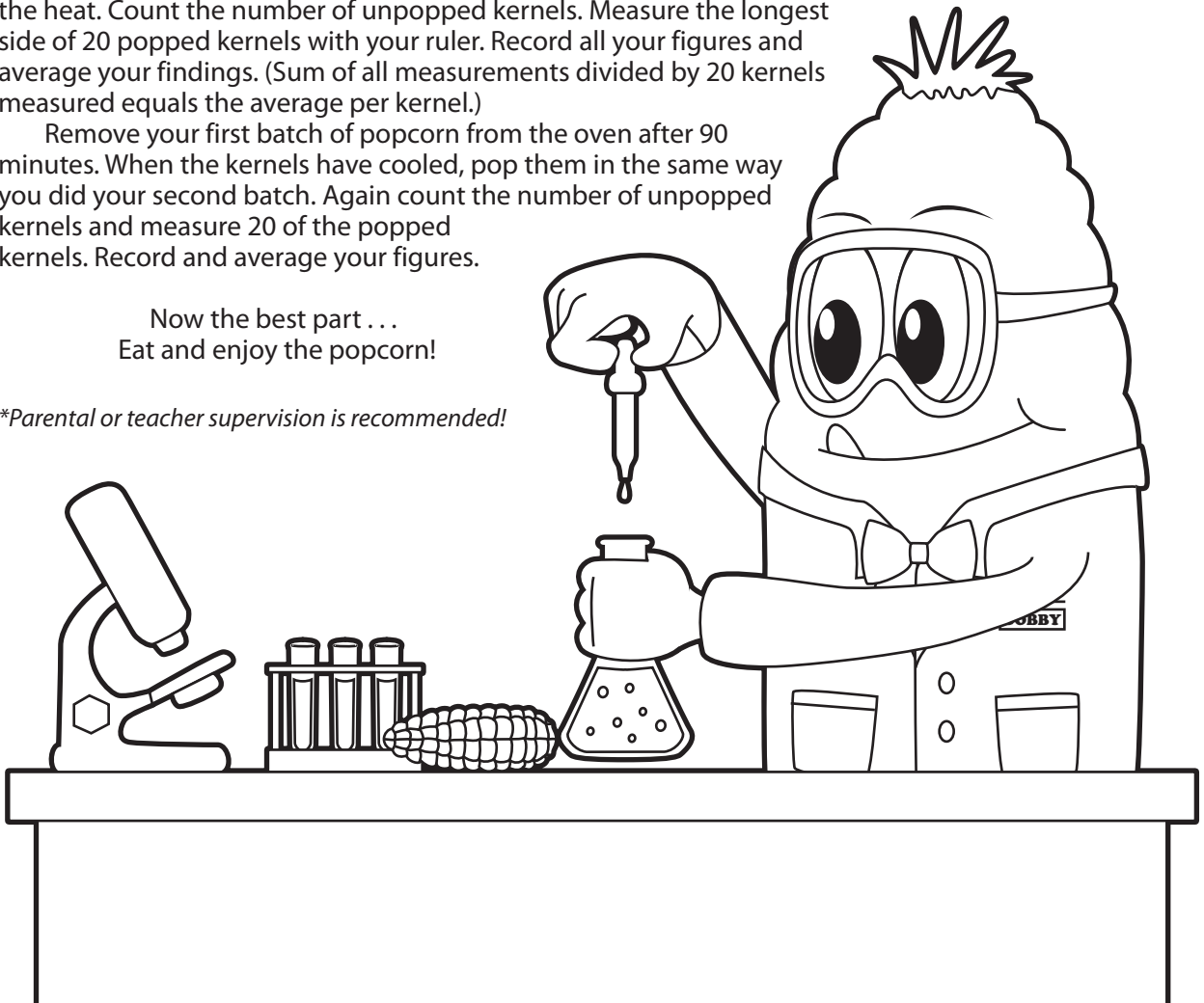
Procedure*

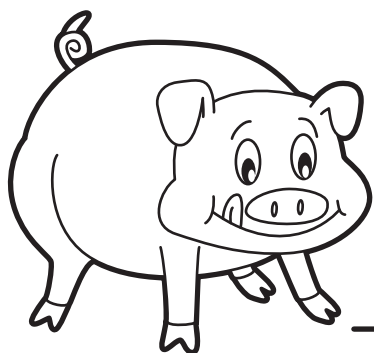
Preheat your oven to 200 degrees F. Count the number of kernels in $\frac{1}{4}$ cup of popcorn. Spread the corn in a single layer in the shallow pan and bake in your preheated oven for approximately 90 minutes. Next, count out the same number of kernels. Place three tablespoons of corn oil in the pot. Heat the oil until it starts to smoke. Carefully add your second amount of popcorn (not the popcorn baked in the oven). Cover and shake over reduced heat until popping stops. Remove the popcorn from the heat. Count the number of unpopped kernels. Measure the longest side of 20 popped kernels with your ruler. Record all your figures and average your findings. (Sum of all measurements divided by 20 kernels measured equals the average per kernel.)

Remove your first batch of popcorn from the oven after 90 minutes. When the kernels have cooled, pop them in the same way you did your second batch. Again count the number of unpopped kernels and measure 20 of the popped kernels. Record and average your figures.

Now the best part . . .
Eat and enjoy the popcorn!

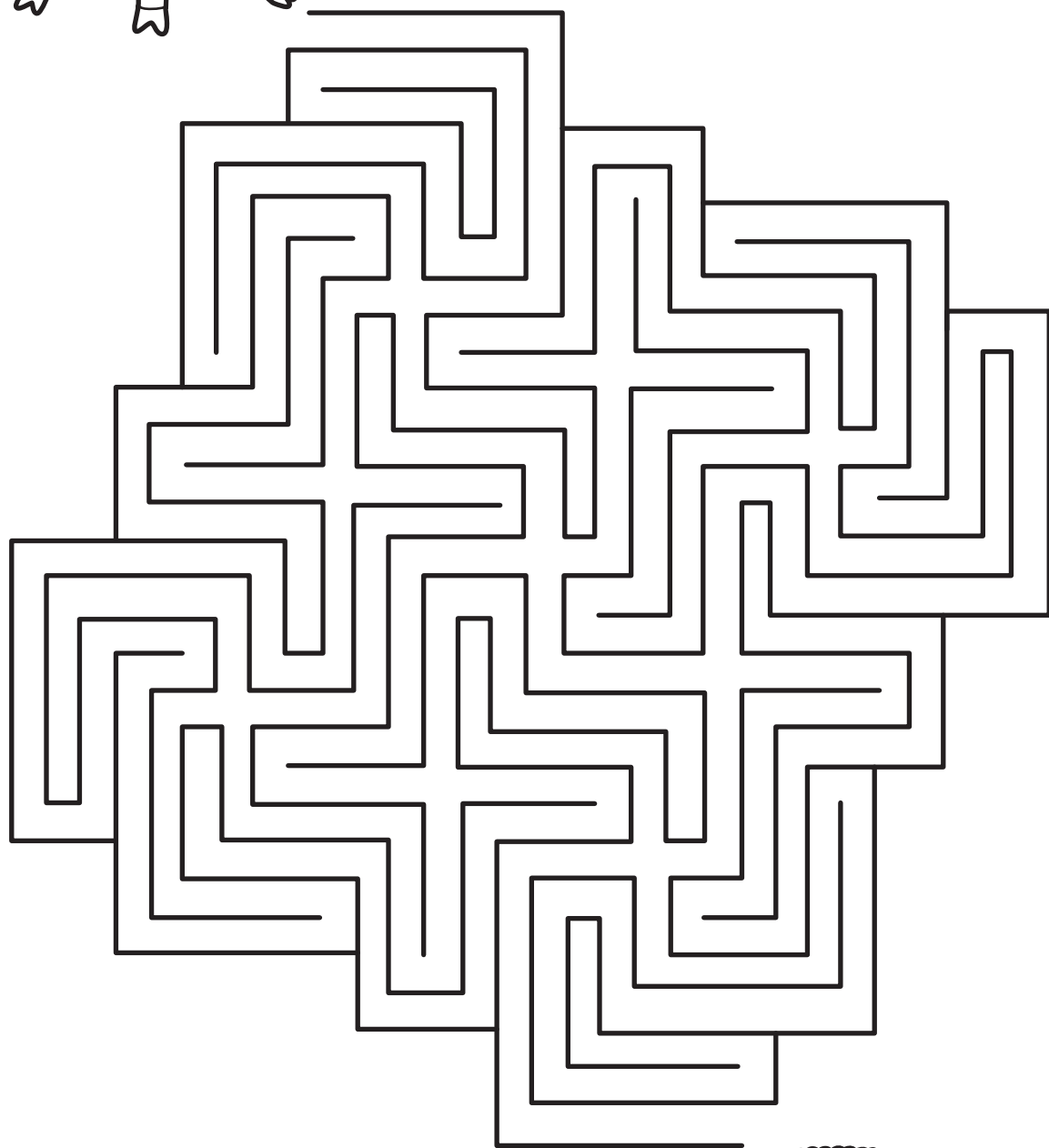
**Parental or teacher supervision is recommended!*



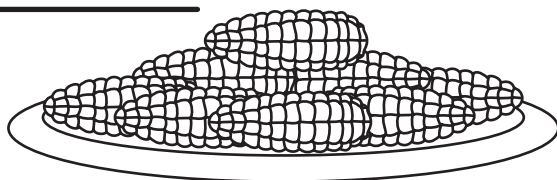


*This little pig is hungry . . .
But he has to find his way through the*

Maize Maze



. . . Will You Help?



Sharpen your problem solving skills with this puzzle.

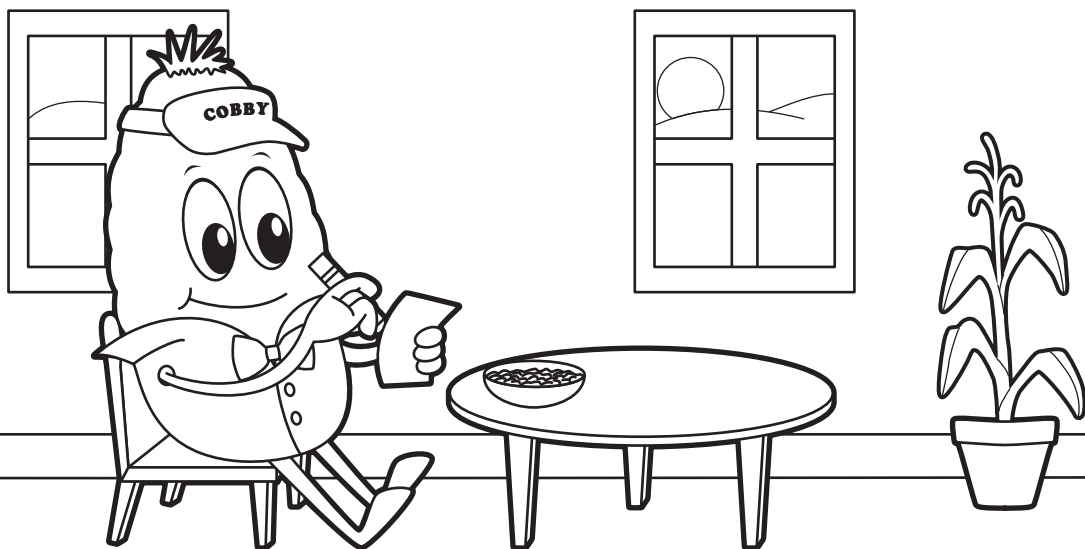
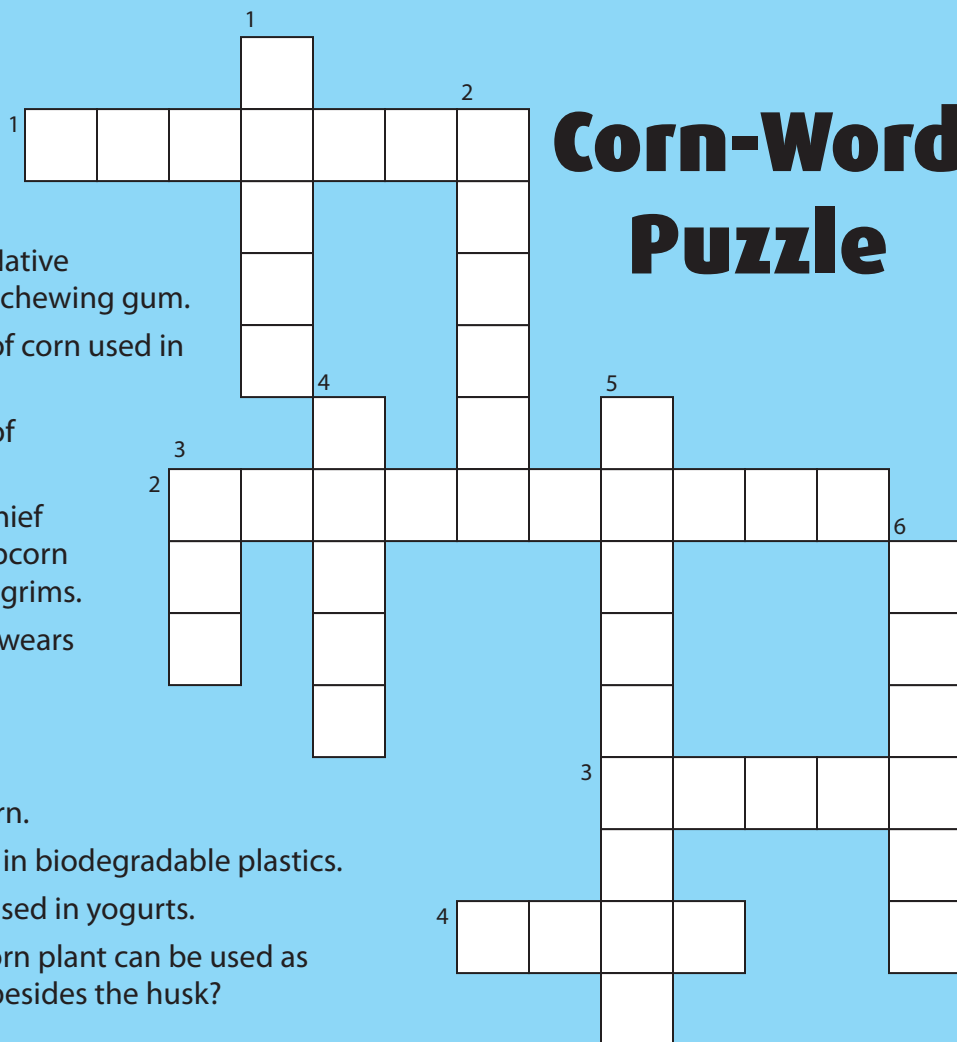
DOWN

1. Sweet to eat.
2. Part of corn plant Native Americans used as chewing gum.
3. The part of an ear of corn used in cosmetics.
4. Corn is a member of what plant family?
5. Native American Chief who presented popcorn necklaces to the Pilgrims.
6. Something a baby wears on its bottom.

ACROSS

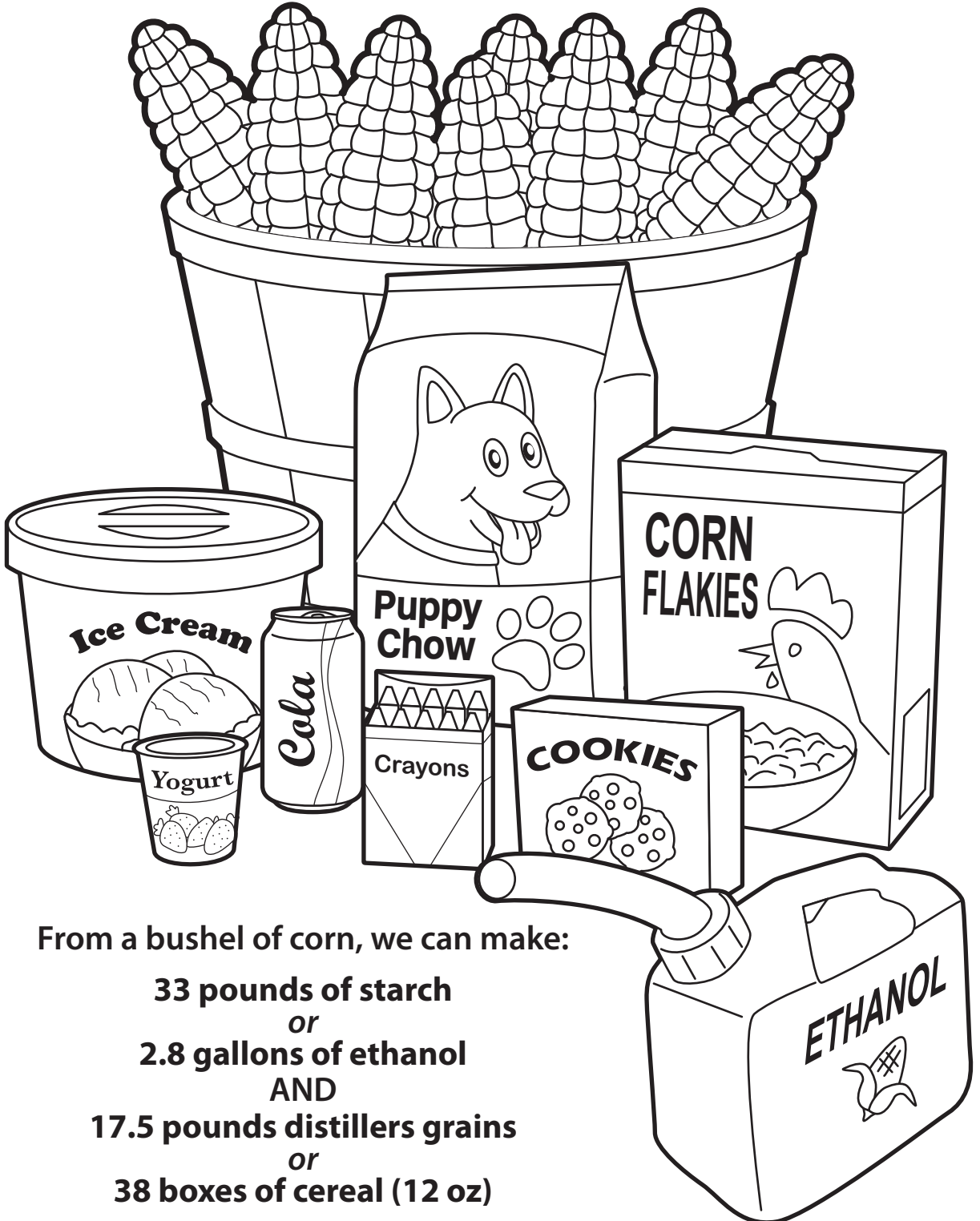
1. Fuel made from corn.
2. Corn product used in biodegradable plastics.
3. The corn product used in yogurts.
4. What part of the corn plant can be used as hair on husk dolls besides the husk?

Corn-Word Puzzle



What's in a Bushel?

Originally, a bushel was a measure of volume containing 2,152.42 cubic inches, but now the accepted standard for a bushel of shelled corn is measured by weight: 56 pounds - approximately the size of a large bag of pet food.



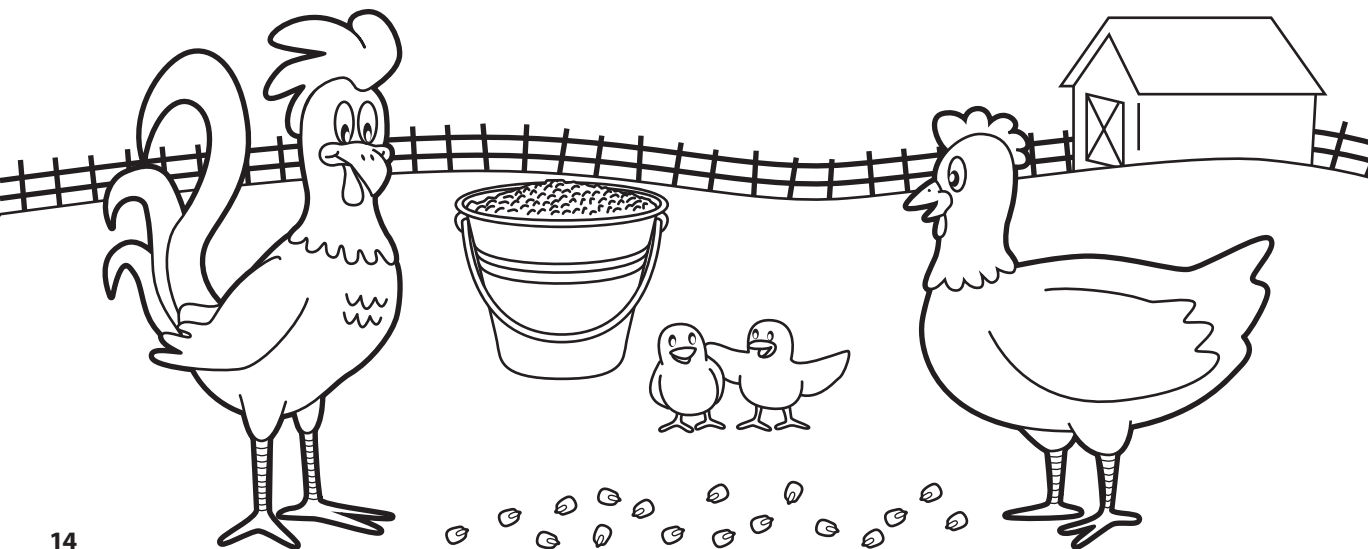
From a bushel of corn, we can make:

33 pounds of starch
or
2.8 gallons of ethanol
AND
17.5 pounds distillers grains
or
38 boxes of cereal (12 oz)

More than Chicken Feed

Scientific researchers have found many ways of using corn as more than popcorn and chicken feed. In the word search are just a few of these products. Find the corn products listed below and circle them on the puzzle.

ASPIRIN
BABY FOOD
CANDY
CEREAL
COSMETICS
CRAYONS
DIAPERS
ETHANOL
FIREWORKS
GLUE
ICE CREAM
INK
JELLY
JUICE
KETCHUP
LIPSTICK
LOTION
MEDICINE
PAINT
RUBBER
SNACKS
SOAP
SOFT DRINKS
SOUP
SYRUPS
TOOTHPASTE
TORTILLAS
VINEGAR
VITAMINS
YOGURT



Why do they call some jokes Corny?

Because they are sweet to the ears!

Q: Which vegetable has the best hearing in the field?

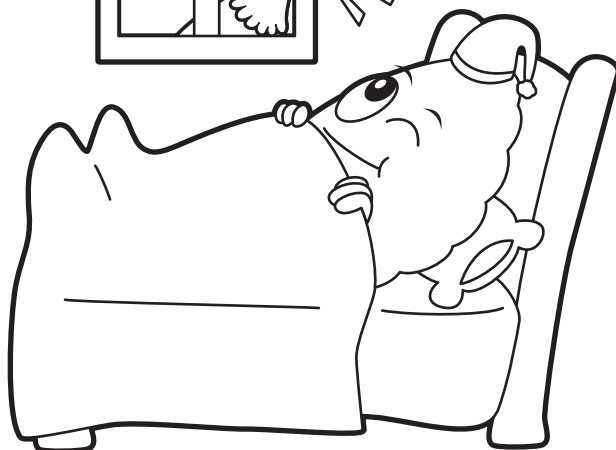
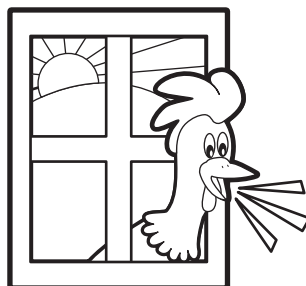
A: An ear of corn!

Q: What does Cobby call his silly friends?

A: Corn flakes!

Q: What does the rooster say to wake up Cobby Corn?

A: Cob - a - doodle - do!



Q: What rank was Cobby in the all corn army?

A: Kernel!

Q: What's a corn farmer's favorite breed of dog?

A: A HUSKY!

Q: What did the salt shaker say to the popcorn?

A: Season's Greetings!



ANSWER KEY

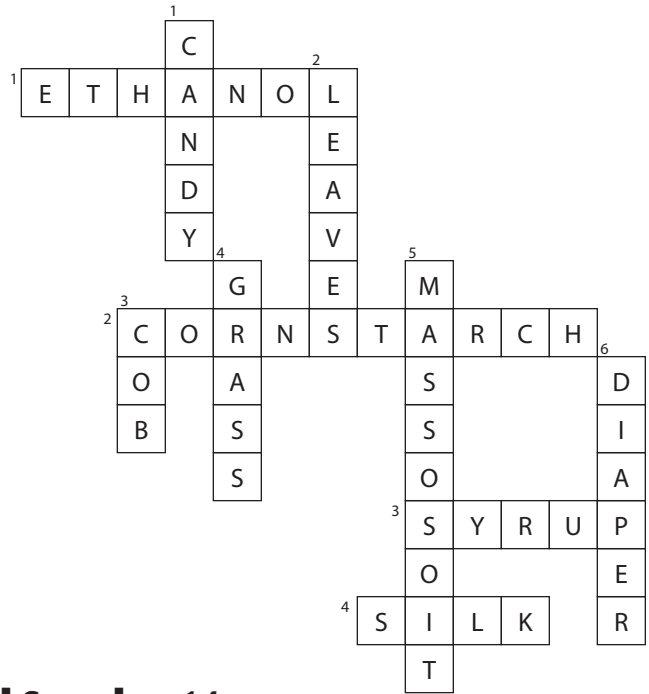
Corn By-Products Word Scramble p.1

1. elacsnkofr is corn flakes.
2. meracice is ice cream.
3. eetpabturunt is peanut butter.
4. raconys is crayons.
5. istaeetr is batteries.
6. atgrhbsa is trash bag.
7. lssddsrgrainea is salad dressing.
8. sowlmmsaralh is marshmallows.
9. sisfotkrnd is soft drinks.
10. eolcaotch is chocolate.

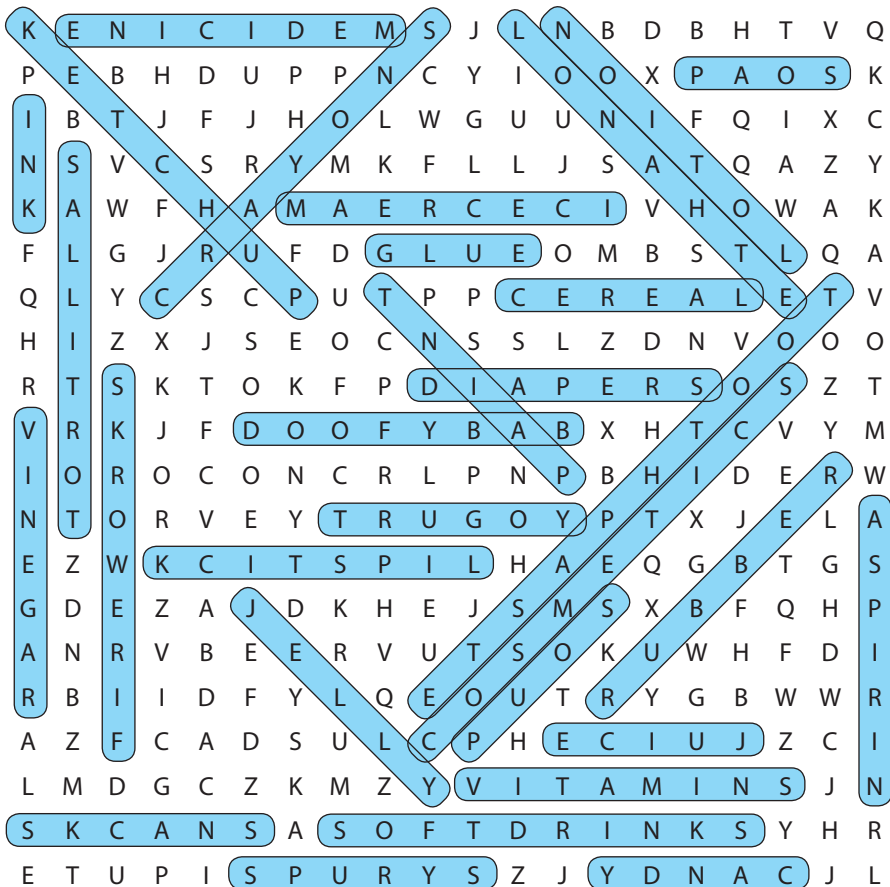
All About Corn p.9

- | | |
|-----------|---------------|
| 1. Tassel | 5. Ear |
| 2. Leaf | 6. Prop Roots |
| 3. Stalk | 7. Roots |
| 4. Silks | |

Corn-Word Puzzle p.11



Word Search p.14





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