

# North Dakota Agriculture in the Classroom



## Using the Calendar in Your Classroom



With its bright artwork and daily fun facts, this calendar is designed to engage people of all ages. Here are some ways to use the calendar in your classroom and share the joy of art and agriculture.

**Morning Circle Time:** Create a daily routine with students where everyone gathers on a rug or reading area. Together, the class checks the calendar for the day of the week, date and reads the daily fact. This is a wonderful way to build classroom community and teach a variety of academic and social skills. You can add a weather report or school news to the routine.

**Seasonal Units:** Many of the pictures and facts in the calendar follow the seasons. Use the calendar to kick off seasonal units and have students find additional facts on their own, then report back to the rest of the class.

**State Regions:** The calendar can be used to enrich geography lessons. The diverse geography of our state affects the weather, agriculture, economies and local culture.

## Bring Some Art to Your Class

The Ag in the Classroom(AITC) Calendar Art Contest is easy to enter and a great way to bring art into the classroom. The theme for the contest is **North Dakota agriculture**. Students in grades 3-5 are welcome to enter.

This year's winning artwork was chosen from among many entries submitted by North Dakota students.

Every winning student receives a personalized certificate. The artwork of the 13 winners is featured in the calendar and on AITC's website. Winners also receive a \$25 prize. Full contest details are sent each year to teachers receiving the Ag Mag.



### Cover Art Winner: Charley M., Grade 3

Fordville-Lankin Public School, Fordville

### Winners by Month, Artist, School, and Town

AUGUST: Haley K., Grade 5  
Ashley Public School, Ashley

FEBRUARY: Princess R., Grade 4  
Invitation Hill Adventist, Dickinson

SEPTEMBER: Sophia D., Grade 5  
Hebron Elementary, Hebron

MARCH: Josy T., Grade 4  
Bob Callies Elementary, Garrison

OCTOBER: Gabriella H., Grade 4  
Maple Valley School, Tower City

APRIL: Jacob R., Grade 3  
Invitation Hill Adventist, Dickinson

NOVEMBER: Jayme W., Grade 5  
Park River Area Elementary, Park River

MAY: Terran T., Grade 4  
Medina Public School, Medina

DECEMBER: Samantha A., Grade 5  
Park River Area Elementary, Park River

JUNE: Branson S., Grade 4  
Longfellow Elementary, Minot

JANUARY: Lucy R., Grade 5  
Clara Barton Elementary, Fargo

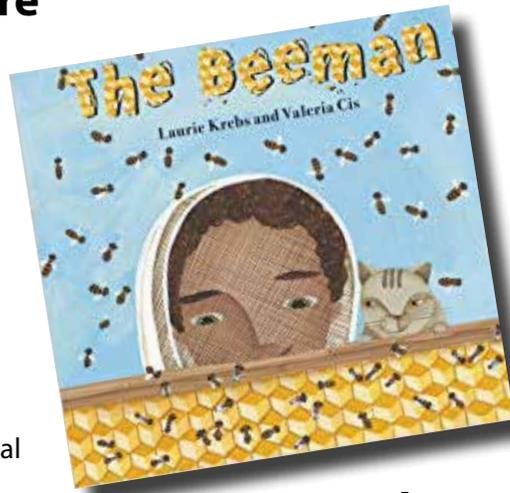
JULY: Marshall B., Grade 4  
Park River Area Elementary, Park River

## Ag in the Classroom Store

The National Ag in the Classroom Store gives you resources to grow. They offer low-cost products to provide students with a hands-on agriculture learning experience. Their offerings cover all areas of STEAM and cover both elementary and secondary levels.

Some subject areas that their materials cover are: animals, science, food and nutrition, heredity, microorganisms, natural resources, plants and gardening, simple machines, social studies and economics, soils and weather.

Visit the store at <https://agclassroomstore.com/>.



## Three Ways to Get Involved!

## National Read A Book Day

National Read A Book Day is September 6. Join us by bringing in a farmer, rancher, volunteer or anyone passionate about ag to read an accurate ag book to your class.

The purpose is to connect students to a real farmer and help them understand where their food comes from! Helping others understand the important role agriculture plays in their everyday lives is our goal. Find out more and check out other titles at [agfoundation.org/projects/national-read-a-book-day](http://agfoundation.org/projects/national-read-a-book-day).

### Become a Sponsor

AITC welcomes financial support for this valuable, wide-reaching project. Call us for details.

### Sign Up Your Class

Request a volunteer come to your classroom **plus** spread the word to fellow teachers.

### Volunteer

Training, supplies and materials are free. Contact ND AITC at 701-328-4764 to volunteer.

## We Train Teachers

Our goal is to encourage and support educators in teaching agriculture. One way we do this is by offering in-service training for teachers grades K-5.

At these in-service trainings you will learn how agriculture can easily be woven into science, math, history, geography, literature and art lessons.

**The training session are free** and CEU credits are available. A minimum of 12 teachers is required. Call for details.

## Classroom Visit

Bring an AITC speaker to your classroom. The presentations are 45 minutes to an hour long and include a "road trip" using the *Grown in North Dakota* map and learning about what local farmers grow in your area. Visits can also be set up by topic.

The visits are scheduled on a first-come, first-serve basis, with new classes receiving priority. There is no fee, but a minimum of three classes must participate. Call to schedule a visit.

## Resources

**FREE Loan Library:** AITC offers books, lessons on plants, animals, conservation, natural resources, food, nutrition and more. Check out is online and materials are mailed free of cost.

**Hands-On Lessons:** Download K-12 interactive lessons which meet state standards and essential skills.

**Online:** Follow us on Facebook at [facebook.com/NDaginclassroom/](https://facebook.com/NDaginclassroom/) for news on grants, teacher resources and interesting agricultural facts.

## Contact

### ND AITC

600 E Boulevard Ave.  
Dept. 602  
Bismarck, ND 58505

### Phone:

701-328-4764

**Email:** [mgaebe@nd.gov](mailto:mgaebe@nd.gov)

### Website:

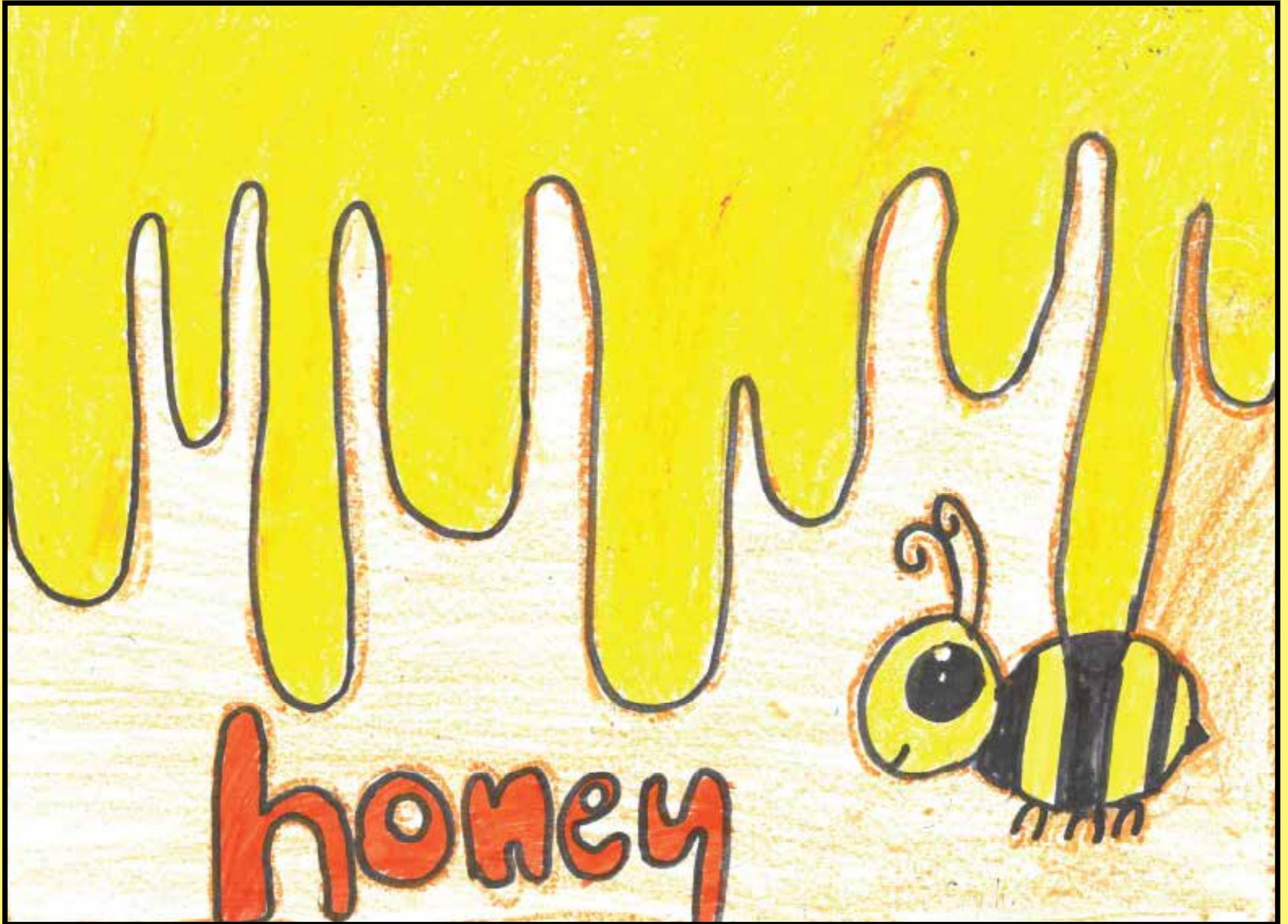
[www.nd.gov/ndda/ag-classroom](http://www.nd.gov/ndda/ag-classroom)



Haley K., Grade 5, Ashley Public School, Ashley

# AUGUST 2020

| Sunday  | Monday   | Tuesday   | Wednesday  | Thursday  | Friday   | Saturday  |
|---|--|---|--|---|--|---|
| <p><b>What Grows Where You Live?</b><br/>           North Dakota agriculture is vital to providing food, feed, fiber and fuel for citizens of the state, country and world. But you might not realize just how diverse North Dakota's industry is – the state produces at least 50 different types of agricultural commodities, and 90 percent of total land area is used for agriculture. Thanks to distinct regions with varying geographical benefits, North Dakota farmers and ranchers are able to grow and raise a wide variety of commodities.</p> |  |   |  |   |  | 1<br>ND farms and ranches occupy 39.1 million acres of land.    |
| 2<br>The western part of North Dakota has more grasslands which are better for raising cattle.  | 3<br>There are 53 counties in North Dakota and all of them participate in agriculture. | 4<br>The Red River Valley is region grows a lot of crops because of the fertile black soil. | 5<br>A 3,591 lb. hamburger was grilled in Rutland, ND, in 1982.                      | 6<br>Simplot produces over 400 million pounds of French fries per year.               | 7<br>North Dakota is the 5th largest producer of bison in the nation.                      | 8<br>North Dakota's Agriculture Commissioner is Doug Goehring.  |
| 9<br>Baby chickens are called chicks but baby turkeys are called poults.  | 10<br>Hens can "talk" to their unhatched chicks through the egg.                       | 11<br>The breed of hen determines the color of the egg shell.                               | 12<br>Domestic sheep are raised for the fleece, or coat, and meat.                   | 13<br>Sheep can see behind themselves without having to turn their head.              | 14<br>North Dakota ranchers raise more than cattle. They also raise sheep, elk, and bison. | 15<br>Individual turkeys have unique voices.                    |
| 16<br>ND farmland would cover over 24 million city blocks.  | 17<br>Male elk are called bulls, female elk are cows, and babies are called calves.    | 18<br>Only male elk have antlers which can grow up to 4 feet.                               | 19<br>Elk are bigger than deer but smaller than moose.                               | 20<br>A group of sheep is called a flock.   | 21<br>Sheep are herbivores which means they eat vegetation.                                | 22<br>Vikings used wool to make the sails for their ships.      |
| 23<br>There are around 1 million turkeys produced in North Dakota every year.   | 24<br>Agricultural land provides habitat for 75% of the nation's wildlife.             | 25<br>It takes a hen 24 to 26 hours to produce one egg.                                     | 26<br>Chickens are the closest living relative to the T-Rex.                         | 27<br>Lanolin, which comes from a sheep's fleece, is used to make lotion.             | 28<br>There are about 900 different breeds of sheep.                                       | 29<br>The first successfully cloned animal was Dolly the sheep. |
| 30<br>About 11% of U.S. farmers are serving or have served in the military.   | 31<br>One U.S. farm feeds 166 people annually in the U.S. and abroad.                  |          |  |  |       |   |



Sophia D., Grade 5, Hebron Elementary, Hebron

# SEPTEMBER 2020

| Sunday   | Monday   | Tuesday  | Wednesday   | Thursday  | Friday   | Saturday   |
|--|--|--|---|---|--|--|
|  <p style="text-align: right; font-size: small;">Photo by S. Brunner</p> |  | <p style="text-align: right;">1</p> <p>North Dakota is #1 in honey production in the nation.</p>   | <p style="text-align: right;">2</p> <p>The honey bee is the only insect that produces food eaten by man.</p>  | <p style="text-align: right;">3</p> <p>A honey bee can fly as fast as 15 miles per hour.</p>  | <p style="text-align: right;">4</p> <p>It takes one ounce of honey to fuel a bee's flight around the world.</p>  | <p style="text-align: right;">5</p> <p>Honey is 80% sugars and 20% water.</p>  |
|  | <p style="text-align: right;">6</p> <p>Honey bees produce beeswax from eight paired glands on the underside of their abdomen.</p>                                    | <p style="text-align: right;">7</p> <p>Honey bees must consume about 17-20 pounds of honey to be able to biochemically produce each pound of beeswax.</p>  | <p style="text-align: right;">8</p> <p>Bees maintain a temperature of 92-93 degrees Fahrenheit in their central brood nest regardless of the outside temperature.</p>                           | <p style="text-align: right;">9</p> <p>A populous colony may contain 40,000 to 60,000 bees during the late spring or early summer.</p>  | <p style="text-align: right;">10</p> <p>The queen bee lives for about 2-3 years. She is the busiest in the summer months, and lays up to 2,500 eggs per day.</p> | <p style="text-align: right;">11</p> <p>The queen may mate with up to 17 drones over a 1-2 day period of mating.</p>                                   |
| <p style="text-align: right;">13</p> <p>Worker honey bees live for about 4 weeks in the spring or summer but up to 6 months during the winter.</p>       | <p style="text-align: right;">14</p> <p>The average honey bee will actually make only one twelfth of a teaspoon of honey in its lifetime.</p>                        | <p style="text-align: right;">15</p> <p>The honey bee's wings stroke 11,400 times per minute, thus making their distinctive buzz.</p>  | <p style="text-align: right;">16</p> <p>A honey bee visits 50 to 100 flowers during a collection trip.</p>  | <p style="text-align: right;">17</p> <p>Honey bees, scientifically also known as <i>Apis Mellifera</i>, are environmentally friendly and are vital as pollinators.</p>  | <p style="text-align: right;">18</p> <p>Bees have two stomachs — one for eating and the other for storing honey.</p>   | <p style="text-align: right;">19</p> <p>Honey bees contribute \$20 billion to the value of U.S. crop production.</p>                                   |
| <p style="text-align: right;">20</p> <p>Bees cannot see the color red.</p>   | <p style="text-align: right;">21</p> <p>Honey bees work their best between 60 and 100 degrees Fahrenheit.</p>  | <p style="text-align: right;">22</p> <p>Bees being transported for agricultural purposes are usually hauled in loads of 408 to 412 hives and are driven across the country to various crops.</p> | <p style="text-align: right;">23</p> <p>Bees must visit 2 million flowers to make a one-pound jar of honey.</p>   | <p style="text-align: right;">24</p> <p>Honey bees can visit 5,000 flowers in one day.</p>  | <p style="text-align: right;">25</p> <p>It's estimated that there are about 2.7 million bee colonies in the U.S. today.</p>                                      | <p style="text-align: right;">26</p> <p>Two-thirds of bee colonies travel the country each year pollinating crops and producing honey and beeswax.</p> |
| <p style="text-align: right;">27</p> <p>Royal jelly is a protein-rich excretion from the glands of worker bees.</p>                                      | <p style="text-align: right;">28</p> <p>Royal jelly is fed to a queen bee her entire life, while larvae only receive the jelly for the first three days of life.</p> | <p style="text-align: right;">29</p> <p>Queen bees are up to 1.5 times the size of worker bees and live generations.</p>   | <p style="text-align: right;">30</p> <p>North Dakota had 670,660 registered bee colonies at the end of 2019.</p>  | <p><b>Pollinators</b></p> <p>North Dakota is home to many pollinators. The principal pollinators here are insects such as bees, butterflies and some moths. North Dakota has about 150 species of butterflies, more than 1,400 species of moths, and an unknown number of bee species. Honey bees are vital agricultural pollinators and the North Dakota Department of Agriculture developed the North Dakota Pollinator Plan to ensure pollinators and agriculture can both thrive.</p> |  |  |



Gabriella H., Grade 4, Maple Valley School, Tower City

# OCTOBER 2020

| Sunday   | Monday   | Tuesday   | Wednesday   | Thursday   | Friday  | Saturday   |
|--|--|---|---|--|---|--|
| <p><b>Geographical Regions</b><br/>There are three distinct geographical regions in North Dakota: the Missouri Plateau (which contains the Badlands and the Missouri Slope), the Drift Prairie and the Red River Valley. Each region is home to specific agricultural commodities.</p> |  |   |   | <p>1<br/>October is National Pork Month.</p>   | <p>2<br/>Pigs were the first animals to be domesticated. The first pigs came to America in 1539 with Spanish explorers.</p>   | <p>3<br/>Bacon is one of the world's oldest meats dating back to 1500 BC</p>   |
| <p>4<br/>Enteledonts were the pigs of the dinosaur world. They stood 7 feet tall at the shoulder and weighed about 1,000 pounds!</p>   | <p>5<br/>Pigs have been used in warfare. They have a keen sense of smell and can find buried land mines.</p>                         | <p>6<br/>Pigs are highly intelligent and can be taught tricks.</p>  | <p>7<br/>Pigs do not have sweat glands. Rolling in the mud keeps them cool.</p>   | <p>8<br/>Pigs are omnivores. They will eat anything from ice cream to cereal grains like corn.</p>   | <p>9<br/>Pigs can run a mile in 7 minutes.</p>  | <p>10<br/>Pigs are not messy animals. They are clean and organized and have separate areas in their pens for different activities.</p> |
| <p>11<br/>Pigs are pregnant for 3 months, 3 weeks, and 3 days or 114 days.</p>   | <p>12<br/>The average litter size in the US is more than 13 piglets.</p>   | <p>13<br/>Pigs have very bad eyesight but make up for it with one of the most powerful noses in the barnyard.</p>         | <p>14<br/>Pigs squeal louder than a jet engine! Pigs can squeal up to 130 decibels, jet engines are only at 120 decibels, and car engines are only 70 decibels!</p> | <p>15<br/>Pigs aren't just for bacon! We also use the hair from pigs to make high quality paintbrushes. Pigs also make gelatin which is used to make marshmallows!</p> | <p>16<br/>Pigs can save human lives. From heart valves to the pancreas, there are ways pigs can help treat or cure human diseases.</p>  | <p>17<br/>Thirty-six percent of meat eaten in the world is pork!</p>   |
| <p>18<br/>Pigs exist on every continent except for Antarctica!</p>   | <p>19<br/>Commercial pork production dates to the 1800s. Farmers used the Erie Canal system to ship pigs back to the East Coast.</p> | <p>20<br/>The largest pig in history was Big Bill. He was 5 feet at his shoulder and weighed 2,552 pounds!</p>            | <p>21<br/>Pigs can drink up to 14 gallons of water every day.</p>   | <p>22<br/>Pigskin, the traditional covering of a football, is one of the toughest animal hides.</p>  | <p>23<br/>No other animal provides a wider range of products than pigs. From medicine ingredients and chewing gum to pet food and linoleum, we use everything but the oink!</p> | <p>24<br/>Piglets weigh around 3.5 pounds at birth and double that weight in one week!</p>   |
| <p>25<br/>The largest litter of pigs ever born was 37 piglets!</p>   | <p>26<br/>Full grown boars (males) can weigh more than 500 pounds. Fully grown sows (females) can weigh 300-500 pounds.</p>          | <p>27<br/>Pigs eat 3 pounds of feed to gain 1 pound of weight. How much feed does it take to raise a full grown boar?</p> | <p>28<br/>Pigs can get sunburned.</p>   | <p>29<br/>There are about 142,000 pigs in North Dakota.</p>  | <p>30<br/>A group of pigs is called a sounder.</p>  | <p>31<br/>One pig will eat about 870 pounds of corn each year!</p>   |



Jayme W., Grade 5, Park River Area Elementary, Park River

# NOVEMBER 2020

| Sunday  | Monday   | Tuesday   | Wednesday  | Thursday  | Friday  | Saturday  |
|---|--|---|--|---|---|---|
| 1<br>The first Thanksgiving was held in 1621 and lasted three days.                                   | 2<br>Josepha Hale convinced President Lincoln to make Thanksgiving a national holiday in 1863.         | 3<br>The first Thanksgiving menu didn't include turkey. They ate venison, ducks, geese, lobster, eels, oysters, and fish.                                       | 4<br>The Macy's Thanksgiving Day Parade used to have animals from the Central Park Zoo instead of giant floats and balloons. | 5<br>TV dinners were inspired by a Thanksgiving mix-up in 1953 when an employee accidentally ordered 260 tons of turkey.  | 6<br>About 46 million turkeys are cooked for Thanksgiving each year.                                      | 7<br>The first turkey trot was held in Buffalo, NY over a century ago.            |
| 8<br>Only male turkeys actually gobble. Female turkeys cackle.  | 9<br>There is a hotline for cooking Thanksgiving dinner that answers almost 100,000 calls each season. | 10<br>About 50 million pumpkin pies are eaten on Thanksgiving.  | 11<br>President Harry Truman was the first president to receive a turkey from the National Turkey Federation.                | 12<br>The turkey pardon as we know it, started in 1989 when George H.W. Bush granted a Presidential pardon to the turkey.   | 13<br>Wild turkeys can run 20 miles per hour but domesticated turkeys are bred to heavy to run that fast. | 14<br>Benjamin Franklin wanted the turkey to be the national bird, not the eagle. |
| 15<br>Neil Armstrong and Buzz Aldrin ate foil packets of roasted turkey after walking on the moon.    | 16<br>The heaviest turkey on record weighed 86 pounds.   | 17<br>Campbell's soup created green bean casserole for an annual cookbook in 1955. Now there are about 40 million green bean casseroles served on Thanksgiving. | 18<br>There are about 1 million turkeys raised in ND every year.   | 19<br>The first Thanksgiving was held at Plymouth, MA.  | 20<br>Domesticated turkeys are too heavy to fly but they can hop up into trees to roost.                  | 21<br>The red piece of flesh on a turkey's beak is called the snood.              |
| 22<br>The Detroit Lions have played on Thanksgiving every year since 1934 except during World War II. | 23<br>The potato was the first vegetable grown in outer space.   | 24<br>The average American eats 140 pounds of potatoes every year.  | 25<br>ND is fifth in potato production in the United States.   | 26<br>Potatoes were not a part of the first Thanksgiving. There were no permanent potato patches in America until 1719.   | 27<br>A cranberry is at its ripest when it bounces.   | 28<br>Only 5% of cranberries grown are sold fresh.                                |
| 29<br>The largest pumpkin pie ever baked weighed over 2,000 pounds.                                   | 30<br>Early settlers used pumpkin for the crust of pies rather than the filling.                       |    |  | <p><b>Red River Valley</b></p> <p>Some of North Dakota's most prominent commodities are grown here, including soybeans, sugarbeets, spring wheat, dry edible beans and most of the corn for grain, though corn is grown in other parts of the state as well. The region also contains a high concentration of hog farms. Though the valley has very fertile soil, the Red River is also prone to spring flooding as snow melts and its waters flow north into Canada.</p> |   |   |

# Then and Now



Samantha A., Grade 5, Park River Area Elementary, Park River

# DECEMBER 2020

| Sunday   | Monday   | Tuesday  | Wednesday   | Thursday  | Friday  | Saturday   |
|--|--|--|---|---|---|--|
| <p><b>Badlands</b><br/>The Badlands are exposed surfaces of clay and stone that have been carved into beautiful formations due to erosion. The area's soil contains lots of clay, as well as steep slopes and a high probability of erosion. There is some honey bee production in the region.</p> |  | <p>1<br/>The Mandan Indians were the first people in ND to use farming as trade with other tribes.</p>                                   | <p>2<br/>Native Americans grouped crops that grow well together. The Three Sisters (corn, beans, and squash) are an example of this planting technique.</p> | <p>3<br/>Farming first began around 10,000 BC.</p>  | <p>4<br/>Barley is the oldest domesticated grain and has been cultivated for at least 10,000 years.</p>                 | <p>5<br/>George Washington was the first person to breed roses in the United States.</p>   |
| <p>6<br/>Corn is believed to be the first agricultural crop grown in North Dakota.</p>   | <p>7<br/>The first tractors were powered by steam.</p>   | <p>8<br/>In 1960, the average U.S. farmer could feed 25.8 people. Today, the average U.S. farmer can feed 155 people.</p>                | <p>9<br/>Before farmers used tractors, farm work was done using horses, mules, and oxen.</p>  | <p>10<br/>The first self-propelled combine was patented in 1886 and could harvest 100 acres a day.</p>      | <p>11<br/>The women of the Mandan, Hidatsa, and Arikara tribes were the first farmers of North Dakota.</p>              | <p>12<br/>The first tools used for farming were made from wood, antlers, or bison bones.</p>   |
| <p>13<br/>Corn was the major crop of the agricultural tribes in North Dakota.</p>  | <p>14<br/>Other crops grown by early farmers included squash, beans, pumpkins, gourds, melons, and tobacco.</p>  | <p>15<br/>The first bonanza farm in North Dakota was established in 1874 by George Cass and Benjamin Cheney in the Red River Valley.</p> | <p>16<br/>Bonanza farms were giant farms that were anywhere from 3,000 acres to over 75,000 acres.</p>  | <p>17<br/>Most of the bonanza farms in North Dakota were broken up into smaller tracts of land by 1900.</p> | <p>18<br/>Early settlers learned quickly that western North Dakota was much better suited to ranching than farming.</p> | <p>19<br/>At the same time that a wheat bonanza was taking place in eastern North Dakota in the late 1800s, a cattle bonanza was developing in western North Dakota.</p> |
| <p>20<br/>In 1876, one of the first herds of Texas Longhorns was brought to North Dakota.</p>  | <p>21<br/>Early ranchers would have been amazed to see an unmanned aerial vehicle being used to find cattle that were separated from the herd.</p>           | <p>22<br/>Congress passed the Homestead Act on May 20, 1862.</p>   | <p>23<br/>U.S. ag productivity has more than doubled in the past 50 years.</p>  | <p>24<br/>Today's combines can harvest 900 bushels of corn per hour.</p>                                    | <p>25<br/>The first electric lights on a family tree in the White House were used in 1894!</p>                          | <p>26<br/>Collars with GPS, RFID, and biometrics can relay vital information about livestock in real time.</p>   |
| <p>27<br/>Autonomous tractors have the ability to drive themselves.</p>  | <p>28<br/>Sprayers can be programmed to release a specific amount of chemical for any part of field so farmers can grow more crops with fewer chemicals.</p> | <p>29<br/>Plant biotechnology is a precise way to make seeds with special qualities. This can also be accomplished through breeding.</p> | <p>30<br/>Bobcat skid-steer loaders were invented in North Dakota in 1958.</p>  | <p>31<br/>Irrigation is one of the oldest forms of technology used in agriculture.</p>                      |                                    |  |



Lucy R., Grade 5, Clara Barton Elementary, Fargo

# JANUARY 2021

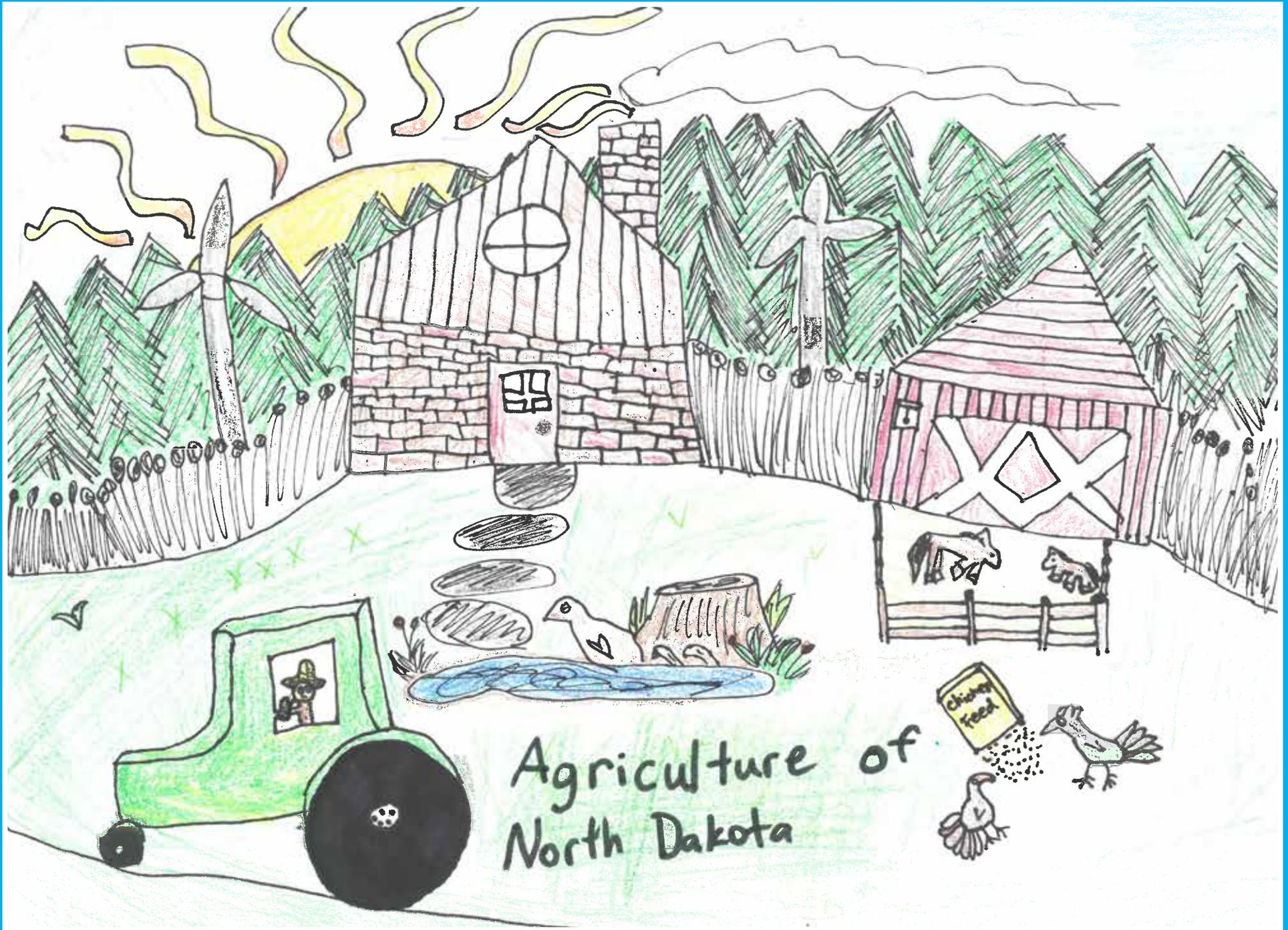
| Sunday  | Monday  | Tuesday   | Wednesday  | Thursday  | Friday   | Saturday  |
|---|---|---|--|---|--|---|
| <p><b>Missouri Slope</b><br/>Livestock grazing is dominant in the Missouri Slope region, which features buttes occasionally rising above the landscape. Beef cattle, dairy cattle and sheep are raised in the region. It also supports one of the state's most well-known crops – sunflowers. North Dakota is No. 2 in the U.S. for both oil and confection sunflower production, producing nearly 700 million pounds of sunflower seeds in 2017.</p> |   |   |  |  | 1<br>North Dakota is the second largest producer of sunflowers.  | 2<br>North Dakota is number one in canola production.                               |
| 3<br>North Dakota is number one in flax production.   | 4<br>Sunflowers aren't just yellow. They can also be red or purple.   | 5<br>Sunflowers only follow the sun when they are young. Mature sunflowers face east.                   | 6<br>Oilseed sunflowers are most commonly used for oil and bird feed.  | 7<br>Non-oilseed sunflowers (confectioner's) are the ones people eat.               | 8<br>The name "canola" is a contraction of "Canadian" (can) and "oil low acid" (ola).                  | 9<br>The primary use of canola is the oil which is primarily used for cooking.      |
| 10<br>Canola fields are bright yellow when the plants are flowering.  | 11<br>Canola oil is the number one vegetable oil in Canada and Japan, number two in Mexico and the United States, and number three worldwide. | 12<br>Oilseeds are seeds from crops that are grown primarily for the oil that can be pressed from them. | 13<br>Flax fields are light blue when the plants are flowering.  | 14<br>Sunflowers can grow over 7 feet tall.   | 15<br>The primary use of flax is the oil but the plant fibers can also be used to make linen or paper. | 16<br>Flaxseed can also be used as a nutritional supplement.                        |
| 17<br>Linseed meal, a by-product of processing flaxseed for oil, is used to feed livestock.   | 18<br>Canola meal is a rich source of proteins and is used as animal feed for cows, horses, sheep, pigs, and chickens.                        | 19<br>Canola is closely related to Brussels sprouts, broccoli, cauliflower, and cabbage.                | 20<br>Forty percent of the canola seed consists of oil.  | 21<br>Canola plants can reach 3 to 6 feet in height.                                | 22<br>North Dakota is number six in the nation in safflower production.                                | 23<br>Safflower oil is primarily used to fry French fries, chips, and other snacks. |
| 24<br>Safflower plants grow from 1 to 4 feet high.  | 25<br>Safflower can also be found in varnish and paint.   | 26<br>Safflower meal is used as a protein supplement for livestock.                                     | 27<br>The flowers of the safflower plant may be red, orange, yellow, or white and were once used to make red textile dye.  | 28<br>The ancient Greeks and Romans ate flaxseed.                                   | 29<br>North Dakota grows 86% of the nation's canola.   | 30<br>North Dakota grows 85% of the nation's flax.                                  |
| 31<br>Flaxseeds yield about 40% oil when processed.   |    |                      | <p>Find us on </p> <p><a href="https://facebook.com/NDaginclassroom/">facebook.com/NDaginclassroom/</a></p> |   |                   |   |



Princess R., Grade 4, Invitation Hill Adventist School, Dickinson

# FEBRUARY 2021

| Sunday  | Monday   | Tuesday  | Wednesday   | Thursday   | Friday  | Saturday  |
|---|--|--|---|--|---|---|
|   | Corn is also called maize. <sup>1</sup>  | Corn is usually yellow but can come in a wide variety of colors like green, red, and white. <sup>2</sup> | An average corn plant will grow up to 10 feet in height. <sup>3</sup>   | The average ear of corn has about 800 kernels in 16 rows. <sup>4</sup>                                     | An ear of corn has one silk strand for every kernel. <sup>5</sup>   | Corn is grown on every continent except Antarctica. <sup>6</sup>  |
| Corn is one of the primary sources of livestock feed and fodder. <sup>7</sup>   | Corn is used to sweeten food in the form of corn syrup. <sup>8</sup>   | One corn bushel can sweeten about 400 cans of pop. <sup>9</sup>  | Corn is grown in every U.S. state. <sup>10</sup>  | Popcorn can be cooked over a fire, on a stove, in a microwave, or in a popcorn machine. <sup>11</sup>      | The largest popcorn ball in the world weighed 3,432 pounds! <sup>12</sup>   | Sweet corn leaves were used as chewing gum by Native Americans. <sup>13</sup>   |
| Sweet corn plants are shorter than field corn. <sup>14</sup>  | Corn is a 100% whole grain. <sup>15</sup>  | Starch from corn kernels can be used to make ethanol. <sup>16</sup>                                      | A byproduct of making ethanol is either dried distillers grains (DDGs) or “wet cake” (wet distillers grain) that is used as feed. <sup>17</sup> | Each bushel of corn generates 2.8 gallons of ethanol. <sup>18</sup>  | Corn and its byproducts can be found in many non-food items such as fireworks, glue, paint, ink, cosmetics, and soap. <sup>19</sup> | The “Corn Belt” includes Iowa, Illinois, Nebraska, Minnesota, Indiana, Ohio, Wisconsin, South Dakota, Michigan, Missouri, Kansas, and Kentucky. <sup>20</sup> |
| Early settlers used corn as money and traded it for other products such as meat and furs. <sup>21</sup>                             | Corn is now a completely domesticated plant so you are unlikely to find it growing in the wild. <sup>22</sup>  | The top corn producing countries are the U.S., China, Brazil, Argentina, and Ukraine. <sup>23</sup>      | Corn is a good source of vitamin A, vitamin B, and vitamin E. <sup>24</sup>   | Corn was first domesticated by indigenous peoples in southern Mexico about 10,000 years ago. <sup>25</sup> | Corn is found in almost every dish in Mexican cuisine either as grain or cornmeal. <sup>26</sup>                                    | The first mechanical corn harvester was developed in 1930 by Gleaner Harvester Combine Corporation of Independence, MO. <sup>27</sup>                         |
| Sweet corn is the kind people eat on the cob. Field corn is also called cow corn because it is used to make cow feed. <sup>28</sup> | <p><b>North Dakota Ag Mag</b></p> <p>The Ag Mag is distributed three times per year. Subscriptions are free, but if you're not on the mailing list or if you know someone else who wants to be added, contact the North Dakota Department of Agriculture at 701-328-4764 or <a href="mailto:mgaebe@nd.gov">mgaebe@nd.gov</a>. Find it on the North Dakota Agriculture in the Classroom website at <a href="http://www.nd.gov/ndda/ag-classroom/ag-mag">www.nd.gov/ndda/ag-classroom/ag-mag</a> or at <a href="http://www.ag.ndsu.edu/agmag">www.ag.ndsu.edu/agmag</a>.</p> |  |   |  |    |    |



Josy T., Grade 4, Bob Callies Elementary, Garrison

# MARCH 2021

| Sunday   | Monday   | Tuesday  | Wednesday   | Thursday  | Friday  | Saturday   |
|--|--|--|---|---|---|--|
|        | 1<br>North Dakota is the number one producer of navy beans, pinto beans, and dry edible peas in the U.S.                   | 2<br>Beans are edible seeds that grow in long pods.  | 3<br>North Dakota is the second largest producer of black beans in the U.S.   | 4<br>Beans are a staple in many cultures.   | 5<br>Sweet peas are the small, round green vegetable you probably eat most often.   | 6<br>North Dakota produces enough pinto beans each year to make around 3 billion servings of refried beans.      |
| 7<br>Currently, the world genebanks hold about 40,000 bean varieties.                  | 8<br>Beans are planted between late spring and the end of summer. It takes 55 to 60 days before they are ready to harvest. | 9<br>Most bean varieties grow as a bush or as a climbing plant.  | 10<br>Beans are a very good source of fiber, protein, vitamins, and minerals. | 11<br>In ancient Greece, minor public officials were elected by drawing beans. The person who got the white bean got the job.   | 12<br>North Dakota has been the number one producer of dry edible beans in the U.S. since 1991.   | 13<br>Beans can be made into burgers, cakes, drinks, pies, muffins, jewelry, furniture, and musical instruments. |
| 14<br>The world's largest bean pods can grow up to 5 feet long!                        | 15<br>A pot containing 1,500 year old bean seeds was found in New Mexico in the 1980's. They grew!                         | 16<br>Dried peas, or field peas, are often made into split soup or roasted and salted to be eaten as snacks. | 17<br>Field peas are commonly used for both human food or livestock feed.     | 18<br>Thomas Jefferson grew more than 30 varieties of peas on his plantation.   | 19<br>Pulse crops are the dry seeds of legume plants. North Dakota grows many pulses such as dry beans, dry peas, chickpeas, and lentils. | 20<br>Pulse crops can be stored for months without losing their high nutritional value.                          |
| 21<br>Pulses are a key ingredient in foods like baked beans, chili, daal, and falafel. | 22<br>Pulse crops can improve soil fertility in a field which makes them very beneficial in a crop rotation.               | 23<br>Lentils were one of the first domestic crops.  | 24<br>Unlike beans, lentils don't need to be soaked before cooking.           | 25<br>There are many different varieties and colors of lentils including brown, yellow, black, orange, red, and green.  | 26<br>Chickpeas, or garbanzo beans, are used to make hummus.  | 27<br>North Dakota is second in the nation in lentil production.   |
| 28<br>Beans belong in two food groups - vegetable/fruit and protein/meat.              | 29<br>Lentils are eaten widely throughout India where they are known as daal.  | 30<br>Lentil plants only grow to be about 24 inches tall.  | 31<br>Gregor Johann Mendell used peas in genetic research.                    | <b>Drift Prairie</b><br>The Drift Prairie region's soil is actually called "drift," consisting of a mixture of clay, sand and gravel. Prominent commodities of this region include honey bees and honey, and grain farming including spring wheat, canola and barley, as well as soybeans, dry beans and corn. North Dakota ranks No. 1 in the nation for canola and honey production, as well as spring wheat. |   |  |



Jacob R., Grade 3, Invitation Hill Adventist School, Dickinson

# APRIL 2021

| Sunday  | Monday  | Tuesday  | Wednesday  | Thursday   | Friday  | Saturday   |
|---|---|--|--|--|---|--|
| <p><b>Lesson Plan Resources</b><br/>                     The National Agricultural Literacy Curriculum Matrix is an online, searchable, and standards-based curriculum map for K-12 teachers. The Matrix contextualizes national education standards in science, social studies, and nutrition education with relevant instructional resources. Search our instructional, classroom-ready resources now! Check it out at <a href="http://www.nd.gov/ndda/ag-classroom/curriculum-matrix">www.nd.gov/ndda/ag-classroom/curriculum-matrix</a></p> |   |  |  | 1<br>Wheat is grown on approximately 6.8 million acres in North Dakota. An acre is equal to 43,560 square feet.    | 2<br>North Dakota is the No. 1 durum-producing state in the nation.   | 3<br>The North Dakota Mill and Elevator Association is the only state-owned milling facility in the U.S. |
| 4<br>Wheat is milled to make flour which is the main ingredient used to make bread.   | 5<br>Spring wheat is planted in the spring and harvested in late summer.  | 6<br>Wheat is one of the world's most important food grains.   | 7<br>Grain is sold and measured in bushels.  | 8<br>There are about 50 kernels on one head of wheat and 15,000 to 17,000 kernels in a pound.                      | 9<br>Each American consumes an average of 53 pounds of bread per year.  | 10<br>A freight train full of one year's wheat crop would stretch around the world two and a half times. |
| 11<br>Barley is the oldest domesticated grain and has been cultivated for at least 10,000 years.  | 12<br>Barley is processed into malt, the same ingredient used in malted milk shakes.                            | 13<br>North Dakota durum produces 14 billion servings of spaghetti every year.                                 | 14<br>One bushel of wheat makes 73 loaves of bread.  | 15<br>Not all bread is made from wheat flour. Other types of flour used for bread are barley, corn, rice, and rye. | 16<br>Winter wheat is planted in the fall and harvested during the spring.  | 17<br>Some wheat grows as tall as 7 feet, but most are between 2 and 4 feet tall.                        |
| 18<br>It takes a combine nine seconds to harvest enough wheat to make 70 loaves of bread.   | 19<br>Foods like pasta, crackers, bagels, pancakes, pies, cookies, muffins, and cereal are all made with wheat. | 20<br>Wheat was first planted in the U.S. as a hobby crop in 1777.   | 21<br>North Dakota is the No. 1 producer of wheat in the U.S., producing nearly 20% of all wheat in the country. | 22<br>The color of wheat is where the line "amber waves of grain" comes from in America the Beautiful.             | 23<br>Over 70% of the wheat consumed in the U.S. is used for food products, 22% is used for animal feed, and the rest is used for seed. | 24<br>Wheat is ready to harvest when it is golden in color and completely dried out.                     |
| 25<br>Bread shouldn't be stored in the fridge because it will go stale faster. Leave bread on the counter or freeze it.   | 26<br>World trade in wheat is larger than for all other crops combined.   | 27<br>Wheat starch is used in the paper industry and to make glue, adhesives, plastic, and building materials. | 28<br>Wheat products can be found in hair conditioner, body lotions, and lip balms.                              | 29<br>Wheat is a rich source of proteins, sugar, B vitamins and minerals such as iron and zinc.                    | 30<br>Bread is considered one of the oldest man-made foods.   |                     |



Terran T., Grade 4, Medina Public School, Medina

# MAY 2021

| Sunday  | Monday   | Tuesday  | Wednesday   | Thursday  | Friday  | Saturday   |
|---|--|--|---|---|---|--|
| <p><b>Know North Dakota</b><br/>           May is an excellent time to study the people and events that make our state so unique. North Dakota Agriculture Studies is written for students in fourth grade. Students learn about the historical background of agriculture, the Mandan as the first farmers, homesteading and early ranching, as well as modern production agriculture and the role it plays in today's state economy. Check it out online at <a href="https://www.ndstudies.gov/gr4/north-dakota-agriculture">https://www.ndstudies.gov/gr4/north-dakota-agriculture</a>.</p> |  |  |   |                                        |   | <p>1<br/>           A popular cattle breed in North Dakota is angus, which can be solid black or red.</p>  |
| <p>2<br/>           There are three times as many cows as people in North Dakota.</p>   | <p>3<br/>           Cattle can only see in black and white.</p>  | <p>4<br/>           A beefalo is part-beef and part-bison.</p>   | <p>5<br/>           Disneyland, located in California, sells 4 million hamburgers per year.</p> | <p>6<br/>           Americans eat about 57 pounds of beef per person in a year.</p>                                       | <p>7<br/>           Males are called a bull or a steer. A female is called a heifer until she has a calf, then she is called a cow.</p> | <p>8<br/>           Cattle can see almost 360 degrees so they can watch for predators from all angles.</p> |
| <p>9<br/>           Cattle have a very good sense of smell and can detect odors up to six miles away.</p>   | <p>10<br/>           Cattle are herd animals so they don't like being alone.</p>   | <p>11<br/>           Cattle chew for up to 8 hours a day and can move their jaws about 40,000 times a day.</p> | <p>12<br/>           North Dakota is ranked ninth in beef cows in the U.S.</p>                  | <p>13<br/>           On average, a calf will be 70-80 pounds at birth.</p>  | <p>14<br/>           Beef is an excellent source of protein, B vitamins, and iron.</p>  | <p>15<br/>           North Dakota has enough beef cattle to make over two billion quarter-pounds.</p>      |
| <p>16<br/>           Although about 45% of the animal is used for beef, 98% of the animal is used total.</p>  | <p>17<br/>           Beef cattle are also used to make products like leather, cosmetics, paintbrushes, and perfumes.</p>                   | <p>18<br/>           Beef can be processed into popular snacks like beef jerky.</p>                            | <p>19<br/>           Cattle have one stomach with four chambers to properly digest grasses.</p> | <p>20<br/>           Cattle were once raised to do work on farms but are primarily used for food and by-products now.</p> | <p>21<br/>           Cattle provide natural fertilizer in the form of manure.</p>   | <p>22<br/>           Cattle are ready for market when they are about 1,200 pounds.</p>                     |
| <p>23<br/>           It takes 3,000 cows to supply the NFL with enough leather for a year's supply of footballs.</p>  | <p>24<br/>           The hide from one cow can make 144 baseballs, 20 footballs, or 12 basketballs.</p>                                    | <p>25<br/>           Bulls weigh between 1,700 and 1,800 pounds and can live for about 20-25 years.</p>        | <p>26<br/>           Bulls have more muscle, thicker bones, and larger feet than cows.</p>      | <p>27<br/>           If a bull drops his head and starts shaking it side to side, he is angry.</p>                        | <p>28<br/>           The average cow drinks 30-50 gallons of water every day.</p>   | <p>29<br/>           Cattle produce 15-20 gallons of saliva every day!</p>                                 |
| <p>30<br/>           The U.S. and Brazil produce the most beef in the world.</p>  | <p>31<br/>           Items that contain beef by-products include leather, soap, crayons, pet food, paintbrushes, candles, and perfume.</p> |                             |             |                                      |    |  |



**Branson S., Grade 4, Longfellow Elementary, Minot**

# JUNE 2021

| Sunday  | Monday  | Tuesday   | Wednesday  | Thursday  | Friday   | Saturday   |
|---|---|---|--|---|--|--|
|   |   | 1<br>June is National Dairy Month.  | 2<br>Milk comes from female mammals including cows, goats, and sheep.        | 3<br>The difference between whole milk, 2% milk, 1% milk, and skim milk is how much fat is in each serving.   | 4<br>Cheddar cheese is the most popular cheese in the U.S.   | 5<br>It takes 12 pounds of whole milk to make one gallon of ice cream.   |
| 6<br>To get the same amount of calcium in an 8 ounce glass of milk, you would have to eat seven oranges!                    | 7<br>A dairy cow produces an average of 7 gallons of milk a day.  | 8<br>A cow is usually milked 2 or 3 times a day.  | 9<br>The average American consumes almost 25 gallons of milk a year.         | 10<br>Farmers measure milk in pounds, not gallons.  | 11<br>The milk bottle was invented in 1884. Plastic milk containers were introduced in 1964.                   | 12<br>One cow can produce 350,000 glasses of milk in her life.   |
| 13<br>Chocolate milk's combination of fluids, carbohydrates, and protein help rehydrate and refuel muscles after a workout. | 14<br>There are 6 breeds of dairy cows: Holstein, Jersey, Guernsey, Brown Swiss, Ayrshire, and Milking Shorthorn. | 15<br>Holsteins are the most common dairy breed found in the U.S.   | 16<br>Milk travels from the farm to a store in just 48 hours.                | 17<br>A Holstein's spots are like fingerprints. No two cows have the exact same pattern of spots.   | 18<br>A cow can walk upstairs, but not downstairs. Their knees can't bend properly to walk downstairs.         | 19<br>The best sources of calcium are milk, yogurt, and cheese. About 72% of the calcium in the U.S. food supply comes from dairy foods. |
| 20<br>25 gallons of milk can make 9 gallons of ice cream, 25 pounds of cheese, or 11 pounds of butter.                      | 21<br>Vanilla is America's favorite ice cream flavor; chocolate is second.  | 22<br>Milk products contain casein, which is a protein that can calm burning taste buds so milk works better than water to cool your mouth after you eat spicy foods. | 23<br>The average Holstein calf is 100 pounds at birth.                      | 24<br>Wisconsin produces more than 25% of the cheese made in the U.S.   | 25<br>Mice don't actually like cheese. They are much more likely to eat breads and sweets if given the choice. | 26<br>Some cheese names are capitalized because they are named after a city or country. How many can you name?                           |
| 27<br>It takes about 50 licks to finish a single-scoop ice cream cone.  | 28<br>"Brain freeze" happens when ice cream touches the roof of your mouth.                                       | 29<br>1 in 5 people admit to sharing ice cream with their pet.  | 30<br>During World War II, crushed popcorn was used to make ice cream cones. | <p><b>June is Dairy Month!</b><br/>North Dakota has 56 dairies and 15,000 dairy cows that produce 326 million pounds of milk per year. That is nearly 38 million gallons of milk! Raise a glass of milk to the dairy farm families that provide safe, wholesome dairy foods for you to enjoy.</p> |  |  |

Don't chicken out on being a farmer. North Dakota  
Agriculture is the best.



Marshall B., Grade 4, Park River Area Elementary, Park River

# JULY 2021

| Sunday  | Monday   | Tuesday   | Wednesday  | Thursday  | Friday  | Saturday   |
|---|--|---|--|---|---|--|
| <p><b>Value-Added Agriculture</b><br/>Value-added agriculture refers to any activity adding economic value to farm-raised products by changing their state or form. For example, wheat can be ground into flour and then baked into bread. Corn can be grown and fed to livestock, which transforms the corn into animal protein or meat.</p> |  |   |                      | 1<br>The 2017 Census of Agriculture lists Cass County as the No. 1 soybean producing county in the U.S. | 2<br>North Dakota is the ninth largest soybean producer in the U.S.   | 3<br>Soybeans grow in pods similar to peas except soybean pods are fuzzy.                                  |
| 4<br>Soy ink is used to print textbooks and newspapers.   | 5<br>Soybeans are one of the most widely used seeds in the world.  | 6<br>One acre of soybeans can produce 82,368 crayons.   | 7<br>Soybeans are also known as soya beans.  | 8<br>Soybean oil can be used for food or biodiesel.   | 9<br>Soybeans are used to make adhesives, cleaners, paints, plastics, and textiles.   | 10<br>45% of the world's soybean acreage and 55% of production is in the United States.                    |
| 11<br>About half of U.S. soybeans are exported to major markets including Europe, Japan, Taiwan, Mexico, and South Korea.   | 12<br>Soybeans were first grown in the U.S. as cattle feed.  | 13<br>In 1935, Henry Ford's engineers developed a plastic that used soybeans. That plastic was used for the frames of his cars. | 14<br>During the Civil War, soybeans were used in place of coffee because real coffee was hard to get. | 15<br>The soybean is the highest natural source of dietary fiber.                                       | 16<br>The Chinese considered the soybean one of their essential Five Sacred Grains along with rice, wheat, barley, and millet.                | 17<br>Soybeans are the only vegetable that contains complete protein, just like the protein found in meat. |
| 18<br>Soybean oil is the most widely used vegetable oil. It is found in margarines, salad dressings, sauces, and processed fried foods.   | 19<br>One-half of all daily U.S. newspapers are printed with soybean oil-based ink.  | 20<br>Soybeans were first introduced to North America from China in 1765 by sailor Samuel Bowen.                                | 21<br>The U.S., Brazil, and Argentina are the top three soybean growing countries in the world.        | 22<br>Mature soybean plants are generally between 20 and 50 inches in height.                           | 23<br>Soybean meal is a by-product of crushing soybeans for oil.  | 24<br>About 97% of soybean meal production globally is used as livestock feed.                             |
| 25<br>As well as being high in protein, soybeans are an excellent source of vitamins and minerals.  | 26<br>Soybeans come in a wide variety of sizes and colors. Seeds can be black, brown, blue, yellow, green, or even have stripes. | 27<br>Elevators in the Statue of Liberty are lubricated by soybean oil.   | 28<br>Soy foams are used in refrigeration, insulation, and even shoes.                                 | 29<br>Soy products are used in carpet fabrication, furniture coverings, and car upholstery.             | 30<br>Soybeans for shelling or fresh use are ready for harvest 45 to 65 days after planting. Dry soybeans require about 100 days for harvest. | 31<br>Soybeans are part of the legume family.  |

# North Dakota Agriculture in the Classroom

## AITC's Mission

To develop and conduct programs for K-12 agriculture education, and training of teachers and students in agricultural curriculum activities.



August



September



October



November



December



January



February



March



April



May



June



July



**Agriculture in the Classroom**  
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Agriculture Commissioner Doug Goehring

