Ag Soccer – First Grade

Purpose

To enhance student appreciate for North Carolina farmers and the important role farmers play in their lives.

Subject Area: Math

Essential Files/Links:
- Farmer's Market Challenge *(Student Motivator)*
  https://www.agfoundation.org/ag-lit-catalog/view/farmers-market-challenge
- List of farm income cash receipts from farming by commodity *(Activity 1)*
  http://www.ncagr.gov/stats/AgStat/NCHighlights.pdf

Vocabulary

Commodity: an agricultural product produced by a farmer or rancher. Examples include: sweetpotatoes, broilers, turkeys, corn, etc.

Receipts: monies brought into North Carolina from the sales of various farm commodities.

Rank: the order of importance.

Background Knowledge

North Carolina is a major producer of broilers. Broilers are chickens from which we get meat. North Carolina also produces many turkeys.

North Carolina is also a major producer of hogs. We get meat and many byproducts from hogs that help to make many products, such as paint brushes, ice cream, insulin, candles, soap, candy, dog snacks, shampoo, and much more. *For more information, North Carolina now has a Pork Ag Mag: https://www.ncfb.org/wp-content/uploads/2020/05/REVISED2-WEB-FINAL-ag-mag-pork.pdf*

North Carolina is also home to a booming ornamental plant industry, also called the Green Industry. Over 2,000 certified and registered nurseries are spread throughout all 100 North Carolina counties. Growing conditions that range from a sub-tropical zone 8 along the southeastern coast, to a sub-alpine zone 5 (or colder) at high elevations in the western mountains allow North Carolina nurseries to produce virtually every ornamental plant used in the Eastern United States. Whether it be greenhouse, container, bare-root, or balled and burlapped, North Carolina is able to fill plant needs. Over 2,000 varieties of woody ornamentals are grown in North Carolina. North Carolina produces over 12% of the real Christmas trees in the United States. North Carolina has over 1,600 Christmas Tree growers. The North Carolina Christmas

Tree industry is ranked second in the nation, behind Oregon in the number of trees harvested; and first in the nation in terms of dollars made per tree. Ninety-six percent (96%) of the Christmas Trees produced in North Carolina are Fraser fir. Ashe, Avery, Alleghany, Watauga, and Jackson counties produce 88% of North Carolina's Christmas trees. It takes as long as 12 years to grow a tree to an average retail height of 6-7 ft. The average 6-7 foot Fraser fir Christmas tree has been visited by the grower more than 100 times during its life.

Soybeans are processed into oil and high protein meal used in enhancing feed rations for farm animals and pet foods such as dog, cat and fish foods. Soybeans are also roasted and eaten as a snack, used in salad dressing, crayons, ink and diesel fuel.

Corn is grown by North Carolina farmers for two basic reasons. One is for human consumption – corn on the cob or off the cob, cornbread, taco shells, corn chips and many other corn products. A second use is feed for animals – hogs, chickens, turkeys, cows, etc. This corn is after the corn plant has dried in the field and the kernels are hardened. After the corn is harvested it is ground to make it easier for the animals to consume. Some corn raised for animals is made into silage. This corn is harvested when the corn plant is fully developed but is still green. The farmer uses a machine to cut the whole corn plant and chop it into small pieces – including the cobs of corn – which is then stored and later fed to the animals. Silage is mainly fed to cattle and calves.

North Carolina ranks first in production of sweetpotatoes. *For more information, North Carolin now has a Sweetpotato Ag Mag:* https://www.ncfb.org/wp-content/uploads/2020/03/WEB-FINAL-ag-mag-sweetpotato.pdf

You can research other top North Carolina commodities by using the Statistics page on North Carolina Department of Agriculture's website (see **Essential Files/Links**). These can be used for the activity. This information is updated each year, so statistics and rankings may change.

Student Motivator
Introduce students to the game, [Farmer's Market Challenge](). This game helps build math skills by asking students to solve word problems. Each word problem also has a fact about an agricultural product grown in the United States. After playing several rounds of the game, discuss the types of agricultural products grown in North Carolina.

Procedures
Activity 1
Standards: NC.1.MD.4
Materials:
- Soccer ball
- Permanent marker

Essential Files/Links:
- List of farm income cash receipts from farming by commodity
  http://www.ncagr.gov/stats/AgStat/NCHighlights.pdf

1. Using a soccer ball, and permanent markers, write one of the following words on each of the hexagonal blocks on the surface of the ball: Hogs, Broilers, Turkeys, Horticulutre/Nursery, Soybeans, Corn, Christmas Trees, and Sweetpotatoes. Randomly write the numerals 1-15 in the pentagonal blocks. If there are not enough blocks for all words and numbers, eliminate as you see fit.
2. Display the *Highlights* table from the NCDA Statistics webpage on the SMART board.
3. Thoroughly discuss the information provided, showing studetns how they can use a table to quickly obtain facts they may need. Read and point to the title *Farm Income: Cash Receipts from Farming by Commodity*. Make sure the students understand the words **receipts** and **commodity**.
4. Discuss the fact that commodities include different plants and animals raised and grown by farmers and ranchers. Point out and explain what is meant by **rank**. Explain to students that this table shows the top 20 crops and animals raised by farmers and ranchers in North Carolina, and the order of importance based upon the amount of money each commodity brings to our state's economy.
5. Place students in groups of two. Pair students so that students with different reading levels can help one another. Students can work in pairs to interpret and read the graph *Farm Income: Receipts from Farming by Commodity*.
6. Once students are familiar with the graph, have them form a circle in a central area of the classroom.
7. Tell students to gently toss the ball to one another.
8. As they catch the ball, tell them to hold it, and look at his/her left thumb. Ask, "What word or number is your finger closest to?" If the student responds with a number, ask them to look on the commodity list and tell you which commodity is ranked with that matching number. If the student responds with the name of a commodity, ask them to tell you the ranking of that commodity.
9. If the student answers correctly, the toss the ball to another student, and sit down. If they answer incorrectly, they toss the ball to another student, and remain standing.
10. Repeat the process until all the students are seated.

Companion Resources
- NC Sweetpotato Ag Mag
  https://www.ncfb.org/wp-content/uploads/2020/03/WEB-FINAL-ag-mag-sweetpotato.pdf
- NC Pork Ag Mag
  https://www.ncfb.org/wp-content/uploads/2020/05/REVISED2-WEB-FINAL-ag-mag-pork.pdf

National Agricultural Literacy Outcomes

Culture Society, Economy and Geography

> **d.** Identify plants and animals grown or raised locally that are used for food, clothing, shelter, and landscapes.

NC Standard Course of Study

Math

NC.1.MD.4 Organize, represent, and interpret data with up to three categories:

> Ask and answer questions about the total number of data points.
> Ask and answer questions about how many in each category.
> Ask and answer questions about how many more or less are in one category than in another.