**The relationship between agriculture and technology**

**Pillar 5 A. Identify how new technology is currently being used in agriculture**

(9th – 12th Grade)

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| **Website**: <http://www.nation.co.ke/business/seedsofgold/ICT-in-agriculture-farming/2301238-3332292-rx75s0/index.html>,  **App**: DairyLive  **YouTube video**: <https://www.youtube.com/watch?v=C3UAMXBZAzE>  **Website listing apps:** <http://aged.illinois.edu/sites/aged.illinois.edu/files/resources/Apps-for-Ag-Revised.pdf>  **Hands On**: <http://www.agclassroom.org/teacher/matrix/lessonplan.cfm?lpid=71&author_state=0&grade=9&search_term_lp=technology> |

**Feeding a Digital World: From Farm to Fork**

**Purpose**

Using an interest-based approach in teams, students will create a video using a smart phone or tablet application to educate consumers about where their food comes from.

**Materials**

* *Farm to Fork Movie Rubric*
* Image Software (i.e. iPhoto, Paint, or PowerPoint)
* Screen Flow Software (i.e. iMovie, Camtasia, Aurasma, or Animoto)
* Smart phone, iPad, or other tablet, for each group of students

**Essential Files (maps, charts, pictures, or documents)**

* [Farm to Fork Movie Rubric](http://naitc-api.usu.edu/media/uploads/2016/04/27/Farm_to_Fork_Movie.pdf)
* [Instructions for using Aurasma application (optional)](http://naitc-api.usu.edu/media/uploads/2016/04/27/Aurasma_Instructions.pdf)

**Vocabulary**

**Farm:** an area of land used for growing crops or rearing animals

**Food label:** a panel found on the package of food that contains information such as the ingredients and nutritional value of the food

**Did you know? (Ag Facts)**

* Most Americans are three generations removed from the farm.1
* In a 2011 survey, 72 percent of consumers reported to know nothing or very little about farming or ranching2
* Despite food prices being higher, organic food sales are growing in popularity. 3

**Background Agricultural Connections**

Most Americans are three to four generations removed from the **farm**, which means they are less likely to have first-hand experience with a farm. Consequently, people are less likely to understand how their food is produced. For example, milk doesn't magically appear in the grocery store without consideration of the dairy cow, processing, and transportation. Egg production is not possible without the chicken hen, the process of candling, transportation, and refrigeration. Each food has its own story for its journey from the farm to our fork. In a 2016 report from Sullivan Higdon & Sink involving the food industry, 65% of consumers feel it is 'somewhat' or 'very important' to be knowledgeable in the area of food production.4 More consumers are seeking out information about the production of their food, who produced it, and what's in it.

**Interest Approach – Engagement**

1. Display the images (found on website) of various sections of a grocery store.
2. Ask your students, "Where did these foods come from before they were purchased at the grocery store?" *(They were produced by plants or animals on a farm, harvested, processed, packaged and labeled, then transported to the grocery store).* This should lead to a discussion relating to who, what, when, and how these items are available for consumers to purchase.
3. Next, tell your students that a local grocery store has conducted a survey of their customers and found that customers want to know where their food comes from. The store has hired your team to create a video that will be triggered by an image at the grocery store to tell the story of where that food product came from.

**Procedures**

1. After completing the *Interest Approach*, students should know that they will be creating a video about the production of food. Set the context and help students understand the "why" for the assignment by using the information found in the *Background Agricultural Connections* section of the lesson.
2. As an example, show the video, [*Frozen Foods: The Story from Farm to Fork*](https://www.youtube.com/watch?v=EFV2TdJjVFA)*.*
3. Teach your students the basic use of the video application they will be using.
   * **Note:** Numerous free video applications exist. Depending on your school and student resources, choose the best option for your class. Examples include iMovie, Animoto, or Aurasma.
4. Break the class into teams of two. Have each team select a grocery store food to highlight for their project such as syrup, tomato juice, chicken, cheese, bread, pasta, eggs, or milk.
5. Organize the selection of food items to provide a variety and to avoid duplication. This could be done by assigning each team a food group from which their item was selected such as; dairy, fruits, grains, protein, and vegetables.
6. Hand out the *Farm to Fork Movie Rubric* found in the *Essential Files.* Outline expectations and answer questions.
7. Allow students class time to work on their movies and/or assign it as homework. After completing the videos, have each group share them with the class.
8. Follow up with a discussion to check for understanding, possible questions could include:
   * "Why is it important for consumers to understand where their food comes from?"
   * "For one of the selected grocery store items, how many jobs and/or careers where involved from farm to table?"
   * "What other ideas could grocery store chains initiate to help improve customer knowledge?"
   * "What governmental policies or laws are in place that farmers and producers must follow for selling their food products?"

**Concept Elaboration and Evaluation:**

At the conclusion of this activity, review and summarize the following key concepts:

* Consumers have questions and concerns for how and where their food is grown. Information should be sought from valid resources.
* Farm to table production on any food item consists of several professional careers and/or jobs.
* Agriculture is an industry that touches everyone's life; therefore food production practices must be transparent by which the policies and laws are developed by governmental agencies.
* Grocery store chains can play an important role for educating its consumers through technology that supports the efforts of food companies.

**Essential Links**

* [Frozen Foods: The Story from Farm to Fork](https://www.youtube.com/watch?v=EFV2TdJjVFA)

**Enriching Activities**

* Use screen flow software and allow students to edit their videos, splice different pieces together and make a more professional looking video. This would likely take more time and would be suggested as a homework assignment.

**Suggested Companion Resources**

* [40 Maps that Explain Food in America](http://www.agclassroom.org/teacher/matrix/resources.cfm?rid=536) (Poster, Map, Infographic)
* [Quiz: Can you name a food by looking at where it comes from?](http://www.agclassroom.org/teacher/matrix/resources.cfm?rid=550) (Poster, Map, Infographic)
* [Food Machine](http://www.agclassroom.org/teacher/matrix/resources.cfm?rid=475) (Multimedia)
* [How Does it Grow? Video Series](http://www.agclassroom.org/teacher/matrix/resources.cfm?rid=472) (Multimedia)
* [How Farming Planted Seeds for the Internet](http://www.agclassroom.org/teacher/matrix/resources.cfm?rid=594) (Multimedia)
* [Modern Marvels: Supermarkets](http://www.agclassroom.org/teacher/matrix/resources.cfm?rid=525) (Multimedia)
* [10 Global Gleanings](http://www.agclassroom.org/teacher/matrix/resources.cfm?rid=535) (Website)
* [Digesting the Global Food System](http://www.agclassroom.org/teacher/matrix/resources.cfm?rid=553) (Website)
* [Food Dialogues](http://www.agclassroom.org/teacher/matrix/resources.cfm?rid=523) (Website)

**Sources/Credits**

This lesson was adapted by National Agriculture in the Classroom.

1. <http://www.fb.org/programs/ourfoodlink/>
2. <http://www.prnewswire.com/news-releases/nationwide-surveys-reveal-disconnect-between-americans-and-their-food-130336143.html>
3. <http://www.realnatural.org/u-s-organic-food-sales-continue-their-rise-despite-challenges/>
4. <http://www.hoards.com/sites/default/files/Evolving-TrustInFoodIndustry.pdf>
5. <http://www.shsfoodthink.com/wp-content/uploads/2014/07/shsfoodthink-feeding-a-digital-world.pdf>