In this guide, you will find several activities that accompany articles from the Winter 2016-17 issue of FFA New Horizons. Additionally, the purpose of the first page is to showcase ways in which agriculture educators can enhance literacy and technology integration within the agricultural education classroom.

CONTENT WITHIN THIS GUIDE IS ALIGNED WITH THE FOLLOWING:

- FFA Precepts
- Agriculture Food and Natural Resources (AFNR)
- Common Career Technical Core
- National Association of State Directors of Career Technical Education Consortium (NASDCTEc)
- Common Core - Reading: Informational Text
- Common Core - Writing
- Common Core - Language
- Common Core - Speaking and Listening
- Common Core - Science & Technical Subjects
- Common Core - Literacy in Science & Technical Subjects: Writing
- Common Core - History/Social Studies
- Common Core - Math Practices
- Common Core - Math (Specific)
- Next Generation Science Standards (NextGen)
- Green/Sustainability/Knowledge and Skill Statements
- National Standards for Financial Literacy
- AFNR Career Ready Practices
- Partnership for 21st Century Skills (P21 Skills)
- National Association of State Directors of Career Technical Education Consortium (NASDCTEc)
- National Standards for Financial Literacy
- AFNR Career Ready Practices
- Partnership for 21st Century Skills (P21 Skills)
- Career Pathways

SCHOLARS SAY...

A compiled list of discipline-specific or academic vocabulary found throughout this issue of FFA New Horizons:

- estimate
- skilled
- diverse
- requirement
- fulfilling
- advocacy
- outreach
- trifecta
- endorse
- initiative
- asset
- phenomenal
- resource
- awareness
- protein
- sector
- endorsing
- enhancing
- valuable
- philosophy
- parallels
- coincide
- enterprise

VOCABULARY ACTIVITY:

Fly Swatter
Place words on the board or wall. Divide the class into relay teams for a race. Give a clue. The student in front of each line Acquire and use a range of general academic and domain-specific words and phrases.

STANDARDS COVERED:

L.9-10.6, L.11-12.6

Acquire and use accurately a range of general academic and domain-specific words and phrases.

TECHNOLOGY INTEGRATION:

“The new 21st century learners must master more than the core curriculum to succeed in secondary and postsecondary institutions, as well as in the workplace,” says Nancye Blair in an article for NAESP (National Association of Elementary School Principals) about technology integration for the new 21st century learner.

LITERACY TIP:

Give each student a small dry erase board and a marker (if not available, you can use plain computer paper and slip in a page protector so students are still able to write responses and erase). Choose a story or an article for the class. At strategic points during the story or article, stop and ask a question. Instruct students to write their answers on their dry erase board (or paper). When all are finished, tell everyone to hold their boards (papers) in the air. You can also go row-by-row. Other options include students writing their own question or comment, writing a one-sentence summary of a particular passage, or drawing a specific scene. Check out this article for more in-depth detail about each area and how to infuse them in your lessons.

COMMON CORE TIP:

In the article, “5 Things Every Teacher Should Be Doing to Meet the Common Core State Standards,” it highlights five ways to ensure that you are meeting the Common Core State Standards in your daily teaching. The five areas that are highlighted include: lead high-level, text-based discussions; focus on process, not just content; create assignments for real audiences and with real purpose; teach argument, not persuasion; and increase text complexity. Check out the article for more in-depth detail about each area and how to infuse them in your lessons.

LITERACY QUOTES:

“The Journey of a Lifetime starts with the turning of a Page.” (Rachel Anders)

“The more that you READ, the more THINGS you will KNOW. The MORE that you LEARN, the more PLACES you’ll GO!” (Dr. Seuss)

“WE ARE FFA” TIP:

Have the students answer in pairs or individually the following question:

1. What action can you take to transform the lives of others? Once ample time is given for the students to respond, discuss their answers as a class.

REFERENCES:


APPENDICES:

1. Advocacy for Agriculture
2. Interview A Farmer
3. 3 This School is a Zoo!
4. Get Involved in the Community!
5. Growing a Movement
6. Find Your Future in Agriculture

WWW.BRIGHTHUBEDUCATION.COM
ARTICLE SUMMARY:
**Advocacy for Agriculture**
This article discusses a major global agricultural company, Monsanto, and how it has launched three major grant programs under its America’s Farmers initiative, the company’s community outreach program for eligible school and community groups.

DISCUSSION QUESTIONS:
1. What are the three grant programs offered by Monsanto?
2. What is one common thread among all three of these programs?
3. If you were awarded one of the Grow Communities grants, how would you use the monies in your community?

ACTIVITY:
**Activity #1:** Students will use information from the article, “Advocacy for Agriculture,” to complete the worksheet (Appendix #1) “Advocacy for Agriculture.” No Internet access is required to complete this activity.

**Activity #2:** Students will use information from the article, “Advocacy for Agriculture,” to complete the worksheet (Appendix #2) “Interview A Farmer.” No Internet access is required to complete this activity.

FFA TIP:
Use the information in this article with your FFA members to help introduce them to various grants available to eligible school and community groups. You can start a discussion on what projects/community activities your chapter could start with funds from various grants.

SAE TIP:
The National FFA Organization offers a supervised agricultural experience grant to eligible members around the fall each year. Even though the deadline has passed for this year, have students visit the SAE Grants webpage on the FFA website to practice filling out an application. This will also help students think where they could use the funds in their SAE project.

STANDARDS ALIGNMENT:
- **FDA Precept**
  - FFA-PL-A: Action: Assume responsibility and take the necessary steps to achieve the desired results, no matter what the goal or task at hand.
  - FFA-PL-C: Vision: Visualize the future and how to get there.
  - FFA-PL-F: Continuous Improvement: Accept responsibility for learning and personal growth.
  - FFA-PL-I: Professional Growth: Assume responsibility for attaining and improving upon the skills needed for career success.
  - FFA-PS-L: Communication: Effectively interact with others in personal and professional settings.
- FFA-CS-P: Technical/Function Skills in Agriculture: Obtain knowledge and skills needed for a career in agriculture and related industries.
- AFNR
  - CS-02: Evaluate the nature and scope of the Agriculture, Food, and Natural Resources Career Cluster and the role of agriculture, food, and natural resources (AFNR) in society and the economy.
  - Common Career Technical Core
    - CS-05: Describe career opportunities and means to achieve those opportunities in each of the Agriculture, Food & Natural Resources career pathways.
  - Common Core - Reading
    - Informational Text
      - CCSS-ELA-Literacy.RI.9-10.2: Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
      - CCSS-ELA-Literacy.RI.9-10.4: Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).
- **Common Core - Writing**
  - CCSS-ELA-Literacy.W.9-10.2: Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
  - CCSS-ELA-Literacy.W.9-10.3: Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.
- **Common Core - Speaking and Listening**
  - CCSS-ELA-Literacy.SL.9-10.2: Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.
  - CS-02: Evaluate the nature and scope of the Agriculture, Food, and Natural Resources Career Cluster and the role of agriculture, food, and natural resources (AFNR) in society and the economy.
- **AFNR**
  - CS-02: Evaluate the nature and scope of the Agriculture, Food, and Natural Resources Career Cluster and the role of agriculture, food, and natural resources (AFNR) in society and the economy.
- **AFNR**
  - CS-02: Evaluate the nature and scope of the Agriculture, Food, and Natural Resources Career Cluster and the role of agriculture, food, and natural resources (AFNR) in society and the economy.

VOCABULARY:
- **Endorse**
  - Presence
  - Communities
  - Sustainable
  - Initiative

CAREER PATHWAY:
- **Agricultural Business**
- **Agricultural Business**

RELATABLE BOOKS,
MOVIES AND LINKS:

APPENDICES:
- Appendix 1 – Advocacy for Agriculture
- Appendix 1 KEY – Advocacy for Agriculture
- Appendix 2 – Interview A Farmer
- Appendix 2 KEY – Interview a Farmer

academic and technical skills. Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive.
- CRP04: Communicate clearly, effectively, and with reason. Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods.
- CRP06: Demonstrate creativity and innovation. Career-ready individuals regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization.
- P21 Skills
  - Communication
  - Flexibility and Adaptability
  - Initiative and Self-direction
  - Leadership and Responsibility
  - Think Creatively
Advocacy for Agriculture

Directions: Read the article, “Advocacy for Agriculture,” in the Winter 2017 issue of FFA New Horizons and answer the following questions:

1. What are the three outreach programs created by Monsanto?

2. How much has been awarded by these programs to local communities?

3. Explain the Grow Communities campaign (what is it and how to apply):

4. Explain the Grow Rural Education campaign (what is it and how to apply):

5. Explain the Grow Ag Leaders campaign (what is it and how to apply):

6. If you were awarded a Grow Ag Leaders scholarship, how would you utilize the funds?

7. If your school were awarded a Grow Rural Education grant, how would your FFA chapter utilize those funds for the agriculture students and the school-wide student body?

Appendix 1
Aligned to the following standards:
FFA.PL-A.Action; FFA.PL-C.Vision; FFA.CS-P.Technical/Function Skills in Agriculture; CS.05; CCSS.ELA.RI.9-10.2; CCSS.RL.9-10.4; CCSS.W.9-10.2.
Advocacy for Agriculture – KEY

Directions: Read the article, “Advocacy for Agriculture,” in the Winter 2017 issue of *FFA New Horizons* and answer the following questions:

1. What are the three outreach programs created by Monsanto?

   Grow Communities, Grow Rural Education, Grow Ag Leaders

2. How much has been awarded by these programs to local communities?
   Combined, all three programs have given $36 million to local communities since 2010.

3. Explain the Grow Communities campaign (what is it and how to apply):
   This was the first program launched by Monsanto. With this campaign, a farmer selects the nonprofit organization that he or she wishes to support.

4. Explain the Grow Rural Education campaign (what is it and how to apply):
   This was the second program launched by Monsanto. The main focus of this campaign is on strengthening rural education. Farmers in the local community nominate their local school districts to compete for merit-based grants of either $10,000 or $25,000. Once nominated, the schools design a project that would enhance math and/or science education in their district. A panel of teachers and farmer leaders choose the winning school districts.

5. Explain the Grow Ag Leaders campaign (what is it and how to apply):
   This is a scholarship fund administered through the National FFA Scholarship Program. This campaign awards rural youth $1,500 scholarships to support post-high school studies in ag-related fields. Farmers, just as with the other campaigns, nominate (or are asked by the student to nominate) the student. This specific campaign is currently open through Feb. 1.

6. If you were awarded a Grow Ag Leaders scholarship, how would you utilize the funds?

   Answers will vary.

7. If your school were awarded a Grow Rural Education grant, how would your FFA chapter utilize those funds for the agricultural students and the school-wide student body?

   Answers will vary.
Interview a Local Farmer

Directions: Read the article, “Advocacy for Agriculture,” in the Winter 2017 issue of FFA New Horizons and answer the following questions.

The grant programs launched by Monsanto require farmers to nominate local school groups or community groups for the grants. According to the article, Monsanto want farmers to help them determine the best ways to award the grants. The article goes on to say that the programs also help farmers strengthen their role and presence in their own local communities.

To help you get to know your local farmers and their daily duties and responsibilities, choose one in your community to interview.

1. How long have you been in production agriculture?

2. What are some of your daily duties and responsibilities?

3. What are some of the joys of being a farmer in this community?
4. What are some of the struggles of being a farmer in today’s society?

5. Describe how you got into production agriculture:

6. What advice would you give to the younger generation today?
The word “grow” is extremely important to agriculture. It represents, of course, the growing cycles for plants and animals, as well as the ever-increasing importance of agriculture.

To global agricultural company Monsanto, “grow” also references the growth of rural America, the growth and development of future ag leaders, and the growing importance of serving the communities around us.

In recent years, the Monsanto Fund has launched three community outreach programs under its America’s Farmers Initiative, the company’s community outreach platform. The three programs are called Grow Communities, Grow Rural Education and Grow Ag Leaders – each focusing on strengthening rural America. Since 2010, the three programs have given a combined $36 million to rural communities.

“Strengthening and supporting farming communities is extremely important to our company,” says Brian Leake, advocacy and communications manager for Monsanto. “We’ve heard loud and clear that there are significant needs in rural areas. This trifecta of programs is meant to address different audiences and community needs.”

One common thread among all three of these programs is local farmer involvement. Farmers enroll, nominate or endorse nonprofits, schools, and youth in their communities to receive the grants or donation and can then witness firsthand the impact in their areas.

“That’s by design,” Leake says. “We want farmers to help us determine the best ways to award these grants and scholarships. Plus, it helps strengthen their role and presence in their own communities.”

GROW COMMUNITIES

The first program Monsanto launched was the Grow Communities campaign. Eligible farmers enroll to win a $2,500 donation to direct to their favorite eligible local nonprofit organization. Since 2010, Grow
Monsanto is a sustainable agricultural company, headquartered in St. Louis, Mo., with facilities in 33 states and 66 countries. The company’s focus is on empowering farmers – large and small – to produce more from their land while conserving more of our world’s natural resources such as water and energy. Monsanto does this with its leading seed brands in crops like corn, cotton, oilseeds, and fruits and vegetables. The company also produces in-the-seed trait technologies for farmers. With a growing population and a demand to feed 9 billion people by 2050, Monsanto knows that agriculture needs talented, driven and passionate youth willing to make a commitment to the industry. That’s why the company has invested in FFA for more than 60 years and is a platinum sponsor of the National FFA Foundation. Monsanto and the Monsanto Fund support FFA through the America’s Farmers campaigns, including scholarships, and sponsorship of leadership conferences, career development events and ag advocacy efforts. Thank you, Monsanto!

GROW RURAL EDUCATION

The second program launched by the Monsanto Fund focuses on strengthening rural education. Since 2011, the program has partnered with farmers to support rural public school districts through math and science learning grants. As with Grow Communities, farmers can nominate their local school districts to compete for merit-based grants of $10,000 or $25,000.

Once nominated, school districts submit a grant application supporting a project that enhances math and/or science education. Panels of teachers and farmer leaders choose the winning school districts. Winning applications have included projects focused on aquaponics, greenhouses, updating technology, robotics and more.

GROW AG LEADERS

The initiative probably most familiar to FFA members is Grow Ag Leaders, a scholarship fund administered through the National FFA Scholarship Program. Grow Ag Leaders awards rural youth $1,500 scholarships to support post-high school studies in ag-related fields. In 2016, more than $500,000 in scholarships was awarded.

As part of the application process, students ask farmers to endorse them. Leake says Monsanto finds it important for farmers to endorse students whom they believe will contribute to the future success of the industry.

The Grow Ag Leaders application process is currently open (through Feb. 1), and Leake recommends all eligible high school students apply. “We want students to think about agriculture as a future path,” he says. “There are so many careers in agriculture to consider.”

Communities has awarded more than $22 million to rural communities across the country. Farmers have chosen to donate to local 4-H clubs, FFA chapters, fire departments, charities, schools, community centers, food pantries and more.

“A key component to this initiative is that the farmer directs the donation to the organization that he or she wishes to support,” Leake explains. “The farmer is as much a part of this donation as the Monsanto Fund is.”

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WINTER 2016-17 Teaching Guide

ARTICLE SUMMARY: The School at a Zoo

This article features a unique FFA chapter — one that is headquartered at a zoo! Check out this article about how the chapter got its start and the unique, hands-on learning opportunities.

DISCUSSION QUESTIONS:
1. How did the Asheboro Zoo FFA Chapter get its start?
2. Besides being based in a zoo, what are the unique qualities about this chapter?
3. How can you implement or adapt some of these unique qualities in your chapter?

ACTIVITY:
Activity #1: Students will use the information from the article, “The School at a Zoo,” to complete the worksheet (Appendix 3) “The School at a Zoo.” No Internet access is required to complete this activity.

Activity #2: Students will use the information from the article, “The School at a Zoo,” to complete the worksheet (Appendix 4) “Get Involved in the Community!” Internet access is required to complete this activity.

SAE TIP:
Take a field trip with your agriculture students to visit some of those same local community organizations and pose the question, “How can this relate or fit in to your SAE project?”

STANDARDS ALIGNMENT:
FFA Precept
FFA PL-A:Action: Assume responsibility and take the necessary steps to achieve the desired results, no matter what the goal or task at hand.
FFA PL-C:Vision: Visualize the future and how to get there.
FFA PL-E:Awareness: Understand personal vision, mission and goals.
FFA PL-F:Continuous Improvement: Accept responsibility for learning and personal growth.
FFA PG-I:Professional Growth: Assume responsibility for attaining and improving upon the skills needed for career success.
FFA CS-M:Communication: Effectively interact with others in personal and professional settings.
FFA CS-N:Decision Making: Analyze a situation and execute an appropriate course of action.
AFNR CS-D1: Analyze how issues, trends, technologies and public policies impact systems in the Agriculture, Food & Natural Resources Career Cluster.
CS-D5: Describe career opportunities and means to achieve those opportunities in each of the Agriculture, Food & Natural Resources career pathways.
AGS: Describe career opportunities and means to achieve those opportunities in each of the Agriculture, Food & Natural Resources Career Pathways.
Common Core - Reading:
Informational Text
CCSS ELA-Literacy RI 9-10.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
CCSS ELA-Literacy RI 9-10.2 Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
CCSS ELA-Literacy RI 9-10.4 Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).
Common Core - Writing
CCSS ELA-Literacy W 9-10.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
Common Core - Speaking and Listening
CCSS ELA-Literacy SL 9-10.4 Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.
Common Core - Math Practices
CCSS.MATH.PRACTICE MP1 Make sense of problems and persevere in solving them.
NextGen
HE-ETS1-3 Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.

VOCABULARY:
Reusable
Recycling
Rehabilitation
Resource

CAREER PATHWAY:
Plant Science

RELATABLE ARTICLES:
Students Develop Green Thumbs at Monmouth County Career Center
http://www.ffanewhorizons.org/students-develop-green-thumbs-monmouth-county-career-center/

Career Overview:
Plant Systems
http://www.ffanewhorizons.org/career-overview-plant-systems/

APPENDICES:
Appendix 3 – The School at a Zoo!
Appendix 4 – Get Involved in the Community!
Appendix 4 KEY – Get Involved in the Community!
The School at a Zoo

Directions: Read the article, “The School at a Zoo,” in the Winter 2017 issue of FFA New Horizons and answer the following questions:

1. Explain the unique agricultural education program at Asheboro High School:

2. When was this unique FFA chapter chartered?

3. How can a student apply for zoo school?

4. How can you apply some of these unique principles in your chapter?

5. What businesses or local community groups could your FFA chapter partner with and on what projects?

6. Identify and explain three ways you would encourage an agriculture student to join FFA:
Get Involved in the Community!

Directions: Read the article, “The School at a Zoo,” in the Winter 2017 issue of *FFA New Horizons* and answer the following questions.

As you read in the article, the Asheboro Zoo FFA Chapter is fairly new. Work with a partner to brainstorm ways new FFA chapters can become involved in the community.

1) Identify three community organizations that a new FFA chapter could work with:

2. Identify one way the FFA chapter could work with each community organization (*How can the FFA chapter help them out?*):

3. Using the Internet, find the web address and phone number for each community organization.
Get Involved in the Community!

*Directions:* Read the article “The School at a Zoo,” in the Winter 2017 issue of *FFA New Horizons* and answer the following questions.

As you read in the article, the Asheboro Zoo FFA Chapter is fairly new. Work with a partner to brainstorm ways new FFA chapters can become involved in the community.

1) Identify three community organizations that a new FFA chapter could work with:

   Answers will vary depending on community.

   Answers will vary depending on community.

   Answers will vary depending on community.

2. Identify one way the FFA chapter could work with each community organization (*How can the FFA chapter help them out?):*

   Answers will vary.

   Answers will vary.

   Answers will vary.

3. Using the Internet, find the web address and phone number for each community organization.

   Answers will vary depending on organization.

   Answers will vary depending on organization.

   Answers will vary depending on organization.
Asheboro Zoo FFA Chapter members pose for a quick photo before a walk through the zoo and greenhouses to look at plants.
Most high school students would jump at the chance to spend half their school day at the local zoo. That’s certainly the case at Asheboro High School (AHS), in North Carolina, where students are participating in a new agricultural education program at the nearby North Carolina Zoo.

For the past 10 years, AHS has partnered with the North Carolina Zoo to give students unique learning experiences through the AHS Zoo School. Students in 10th, 11th and 12th grades can apply for the zoo school, and those who are accepted travel to a classroom and lab facility at the zoo for classes in science, technology, engineering and math.

Teachers and zoo staff work together to create lessons that allow students to observe animals and sometimes go behind the scenes with zookeepers for a closer look. The zoo school has about 130 students enrolled.

“The zoo school has long been a great asset for STEM learning. Last year, we brought our agricultural program on board,” says Elizabeth Pack, agriculture teacher and FFA advisor for the AHS Zoo School program.

In July 2015, AHS launched the Asheboro Zoo FFA Chapter, the only FFA chapter in the National FFA Organization that is headquartered at a zoo. “We had a chartering ceremony in September 2015, and about 100 people came, including students, parents and school officials,” Pack says. “It has surpassed all my expectations. Most of our members are urban kids with not much agriculture exposure. We’ve had a phenomenal response from students and our community.”

The Asheboro Zoo FFA Chapter started with 53 members in the 2015-16 school year. Their goal is to reach 75 members for the 2016-17 school year.

Students in the zoo school agricultural education program spend half their day at AHS and then take buses to the zoo. There, they take classes such as agriscience applications, horticulture, and environmental and natural resources. Students get hands-on, project-based learning experiences in the zoo’s greenhouses and other green spaces, including a community garden.

“Ag students learn how agriculture impacts their everyday life. The first horticulture class is about plant care, and the second course teaches skills needed in the greenhouse or landscaping industry,” Pack says. “The natural resources class teaches them about things like water and soil quality. They test samples in real-world applications. In our first year, our intro to horticulture team placed fifth at the state level.”

The zoo school is basically a satellite campus of AHS, with a giant mobile unit consisting of five classrooms and a lunchroom.

“Any student can apply for zoo school. In the application process, we look at whether they are motivated to learn, since a lot of what we do is hands-on and student-driven,” Pack says. “It has been rewarding to build relationships with the zoo staff, which allows students to have amazing experiences. We are introducing agriculture to students who never knew about it before. It’s preparing the next generation of people taking care of our environment and managing our food supply.”

Junior Edwin Garcia is president of the Asheboro Zoo FFA Chapter. “In the beginning, I didn’t know how much I would like FFA since I live in the city,” Garcia says. “But I fell in love with it. The meetings and officer interaction feels like home to me. I have always been interested..."
While most people think of a zoo as a place for exotic animals, it’s also a great habitat for native plant varieties, providing a perfect hands-on tool for horticulture classes.

Junior Carlee Cagle enjoys the leadership aspect of FFA. “I was super excited about our new FFA chapter because I had heard good things about FFA,” Cagle says. “From our first meeting, it felt like family.”

Cagle had dreams of becoming a vet or a pediatrician, but now she is considering becoming an ag teacher. “I want to make a difference in the lives of students,” she says. “One of our area middle schools is starting FFA, and we are planning to do workshops and mentor them.”

Students at the Zoo School don’t work hands-on with animals due to liability reasons, but they do grow plants for the animals to eat. “A lot of horticulture happens at a zoo, so we find lots of ways to help,” Pack says. “We hope to include classes in small animal care and zoology in the future as our ag program grows. We also hope to work with wildlife rehabilitation.”

Pack says she is so proud of her students’ willingness to serve others. “We use the zoo and its employees as a resource, so it’s important to us to show appreciation and give back,” she says. “We have helped them with Earth Day and highway cleanups.”

— Jessica Mozo
ARTICLE SUMMARY:

Growing a Movement

The “Growing a Movement” article is about the Tractor Supply Company’s grant program with FFA chapters. The article describes two ways that chapters are currently implementing grant money and details the impacts those chapters are making. There is also information on obtaining a grant and why the grants are being offered.

DISCUSSION QUESTIONS:

1. How could you justify a need for a Tractor Supply Company grant within your chapter?  
2. What are areas of your agriculture program that could be improved with a grant?  
3. What new idea would you implement within the agriculture program if you were awarded the grant?

ACTIVITY:

Activity #1: Students will use the information from the article, “Growing a Movement,” to complete the “Growing a Movement” (Appendix 5) worksheet. No Internet access is required to complete this activity.

FFA TIP:

This article will get students thinking about ways to implement a grant within their own community or agriculture program. Interested members have the ability to mastermind a project and build it from the ground up.

SAE TIP:

For students in need of an SAE, this activity sparks ideas that can lead to an SAE. This article can also spark thoughts for service activities within the agriculture program or community.

STANDARDS ALIGNMENT:

FFA Precept

FFA PL-A-ACTION: Assume responsibility and take the necessary steps to achieve the desired results, no matter what the goal or task at hand.

FFA CS-M-Communication: Effectively interact with others in personal and professional settings.

FFA CS-N-Decision Making: Analyze a situation and execute an appropriate course of action.

AFNR

CS.02. Evaluate the nature and scope of the Agriculture, Food & Natural Resources Career Cluster and the role of agriculture, food and natural resources (AFNR) in society and the economy.

CS.03. Examine and summarize the importance of health, safety and environmental management systems in AFNR workplaces.

Common Core - Reading: Informational Text

CCSS.ELA-Literacy.RI.9-10.4 Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).

Common Core - Writing

CCSS.ELA-Literacy.W.9-10.1 Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

CCSS.ELA-Literacy.W.9-10.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

Common Core - Speaking and Listening

CCSS.ELA-Literacy.SL.9-10.4 Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.

NextGen

HS-ETS1-3 Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics as well as possible social, cultural, and environmental impacts.

AFNR Career Ready Practices

CRP.02. Apply appropriate academic and technical skills. Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive.

CRP.04. Communicate clearly, effectively, and with reason. Career-ready individuals can communicate thoughts, ideas and action plans with clarity, whether using written, verbal and/or visual methods.

CRP.05. Consider the environmental, social and economic impact of decisions. Career-ready individuals understand the interrelated nature of their actions and regularly make decisions that positively impact and/or mitigate negative impact on other people, organizations and the environment.

CRP.06. Demonstrate creativity and innovation. Career-ready individuals regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization.

CRP.07. Employ valid and reliable research strategies. Career-ready individuals are discerning in accepting and using new information to make decisions, change practices or inform strategies.

CRP.08. Utilize critical thinking to make sense of problems and persevere in solving them. Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem.

P21 Skills

Communication

Critical Thinking and Problem Solving

Financial, Economic, Business, and Entrepreneurial Literacy

Global Awareness

Information, Communications, and Technology Literacy

Think Creatively

VOCABULARY:

Outreach

Community

Pilot Program

Grants

Sustainment

Impact

Habitat

CAREER PATHWAY:

Agriculture Business

RELATABLE BOOKS, MOVIES AND LINKS:

FFA.org/grantsforgrowing

TractorSupply.com

APPENDICES:

Appendix 5 – Growing a Movement

Appendix 5 KEY – Growing a Movement
Growing a Movement

Directions: Read the article, “Growing a Movement,” in the Winter issue of FFA New Horizons and answer the following questions:

1. According to the article, what types of projects does Tractor Supply Company want to give grant money to and what does that mean?

2. Given the above information, what type of project would you like to implement in your community or agriculture program if you were awarded a grant by Tractor Supply Company?

3. Below, give a detailed explanation of what this project would look like.

Aligned to the following standards:
FFA.PL-A; FFA.CS-M; FFA.CS-N; CS.02; CS.03; CCSS.ELA-Literacy.RI.9-10.2; CCSS.ELA-Literacy.RI.9-10.4; CCSS.ELA-Literacy.W.9-10.1; CCSS.ELA-Literacy.W.9-10.2; HS-ETS1-3; CRP.02.; CRP.04.; CRP.05; CRP.06.; CRP.07.; CRP.08.; CRP.11.
Growing a Movement KEY

Directions: Read the article, “Growing a Movement,” in the Winter issue of FFA New Horizons and answer the following questions:

1. According to the article, what types of projects does Tractor Supply Company want to give grant money to and what does that mean?

Projects that can help build and sustain existing agricultural education programs.
This means that the project should add something that is missing or improve a project that is in existence so it can last longer.

2. Given the above information, what type of project would you like to implement in your community or agriculture program if you were awarded a grant by Tractor Supply Company?

This answer will vary depending on the student.

3. Below, give a detailed explanation of what this project would look like.

This answer will vary depending on the student.

Aligned to the following standards:
FFA.PL-A; FFA-CS-M; FFA-CS-N; CS.02; CS.03; CCSS.ELA-Literacy.RI.9-10.2; CCSS.ELA-Literacy.RI.9-10.4; CCSS.ELA-Literacy.W.9-10.1; CCSS.ELA-Literacy.W.9-10.2; HS-ETS1-3; CRP.02.; CRP.04.; CRP.05; CRP.06.; CRP.07.; CRP.08.; CRP.11.
More than 370 high school agriculture programs and FFA chapters are now better equipped for community outreach, thanks to Tractor Supply Company’s Grants for Growing. The program, launched in two pilot states in 2015 and available to all FFA chapters in 2016, awards grants to be used to boost current or launch new agricultural education projects.

The grant funding is raised through the sale of paper emblems in TSC stores during National FFA Week. In its first year, that campaign raised more than $700,000 to be awarded as grants.

“Agriculture is so important in our communities and to our customers, and agricultural education is critical to the growth and sustainment of the ag industry,” explains Lisa White, director of store marketing for Tractor Supply Company. “With budget cuts these days, ag education programs are more and more challenged. We wanted to make a difference there and make grants available that could be used to help build and sustain existing ag education programs.”

White says this year’s recipients used the funds in a variety of ways, from enhancing their community gardens to purchasing new tools or technology for school farms. White adds that emphasis was placed on applications that showed how the project would be sustaining, meaning that it wouldn’t have just a one-year impact, but will live on to benefit future FFA members.

Elkins High School in West Virginia, for example, used their grant to build a fence around their local community garden to protect future harvests from wildlife.

“Three years ago, we started a garden behind our greenhouse. It was fantastic to see huge zucchini plants grow and tomato plants spilling out of their cages,” explains FFA advisor Wendy Thurston. “We donated our first harvest to the local food pantry.”

Thurston says that she and her FFA members saw how little fresh
produce was available through the food bank. This realization fueled their determination to grow more vegetables to donate. But the wildlife soon found their garden.

“The critters liked the new leaves of zucchini and squash plants. Tomatoes and peppers fared no better,” Thurston laments. “We felt helpless, looking at our garden, remembering the people standing in line just to get enough food for their families. Our chapter didn’t have the funds to build a fence, which we knew we needed.”

The Grants for Growing program came just in time. It’s made a huge difference, Thurston says, both in the community and in her FFA members.

“Sometimes you have to work hard for others,” says Elkins FFA sentinel Logan Rowan, “because they’re not able to do it. But I can.”

In Indiana, the Sullivan FFA Chapter received a grant to create a habitat for monarch butterflies.

“Similar to birds, monarch butterflies participate in an annual migration,” says Kevin Cross, Sullivan FFA advisor. “They travel from their overwintering grounds in Mexico to their summer breeding habitats in the Eastern U.S. and Southern Canada. During their migration both ways, the monarchs lay their eggs on milkweed plants.”

Milkweed plants are required for monarch survival, as they are the only plants that monarch caterpillars eat before entering the chrysalis stage and emerging as an adult butterfly.

Using their grant from TSC, the Sullivan FFA chapter purchased nearly 700 nectar and milkweed plants, and started the habitat. They anticipate seeing more butterflies every year, with full plant maturity expected in 2018.

“Once the habitat is fully mature, we hope to get elementary and middle school science classes out there,” Cross says. “Our vision is for this to be educational for all students and the community.”

He adds that this butterfly project would have never happened without the grant and encourages other chapters to apply in 2017.

The 2017 Grants for Growing application period will open Jan. 15. The paper emblem fundraiser campaign in TSC stores will align with National FFA Week in February. Learn more at FFA.org/grantsforgrowing.
WINTER 2016-17 Teaching Guide

STANDARDS ALIGNMENT:

**ARTICLE SUMMARY:**

**Find Your Future in Agriculture**

This article discusses the career exploration tool AgExplorer. This project is the result of a partnership with the National FFA Organization, Discovery Education and AgCareers.com to create a tool that will help students find careers that are suited to them within the agricultural realm.

**DISCUSSION QUESTIONS:**

1. What is AgExplorer?
2. Why is AgExplorer important and innovative?
3. What are some careers that fall into the agricultural pathways that don’t come to mind when thinking about working in agriculture?
4. What is the justification for having a tool like this for student exploration?

**ACTIVITY:**

Activity #1: Students will use the information from the article to complete the “Find Your Future in Agriculture Scavenger Hunt” (Appendix 6) worksheet. Internet access is required to complete this activity.

**FFA TIP:**

Use this article and activity to get FFA members thinking about what they would like to do with their future careers. You can use this information to get students thinking about what FFA activities they should be participating/competing in to strengthen their skills in their career focus areas.

**SAE TIP:**

For students struggling to come up with ideas for their SAE, AgExplorer can be a great starting point. Have students take the career assessment and then brainstorm SAE ideas within their careers of interest.

**VOCABULARY:**

**Job Outlook:**

**Exploration**

**Education Requirements**

**Salary**

**Agribusiness Systems**

**Animal Systems**

**Biotechnology Systems**

**Environmental Service Systems**

**Food Products and Processing Systems**

**Natural Resources Systems**

**Plant Systems**

**Power, Structural and Technical Systems**

**CAREER PATHWAY:**

**Agribusiness Systems**

**Animal Systems**

**Biotechnology Systems**

**Environmental Service Systems**

**Food Products and Processing Systems**

**Natural Resources Systems**

**Plant Systems**

**Power, Structural and Technical Systems**

**RELATABLE BOOKS, MOVIES AND LINKS:**

- www.agexplorer.com
- https://www.ffa.org/my-journey/advisor-explore
- https://www.ffa.org/MyJourneyArchiveDocuments/myjourney_AgExplorerplementationguide.pdf

**APPENDICES:**

- Appendix 6 – Find Your Future in Agriculture
- Appendix 6 KEY – Find Your Future in Agriculture

**STANDARDS ALIGNMENT:**

**FFA Precept**

FFA PL-A: Action: Assume responsibility and take the necessary steps to achieve the desired results, no matter what the goal or task at hand.

FFA PL-E: Awareness: Understand personal vision, mission and goals.

FFA.CS-N: Decision Making: Analyze a situation and execute an appropriate course of action.

AFNR

CS.02: Evaluate the nature and scope of the Agriculture, Food & Natural Resources Career Cluster and the role of agriculture, food, and natural resources (AFNR) in society and the economy.

CS.03: Examine and summarize the importance of health, safety and environmental management systems in AFNR workplaces.

CS.05: Describe career opportunities and means to achieve those opportunities in each of the Agriculture, Food & Natural Resources career pathways.

Common Career Technical Core

AG2 Evaluate the nature and scope of the Agriculture, Food & Natural Resources Career Cluster and the role of agriculture, food, and natural resources (AFNR) in society and the economy.

AG5 Describe career opportunities and means to achieve those opportunities in each of the Agriculture, Food & Natural Resources Career Pathways.

NASDCTEc

AGC09.02 Select, research and examine critical aspects of career opportunities in one or more AFNR career pathways in order to gain an understanding of the breadth of occupations within this cluster.

Common Core - Reading:

CCSS ELA-Literacy.R.1.9-10.4

Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).

National Standards for Financial Literacy

Earning Income: Benchmarks: Grade 12

Statement 1 People choose jobs or careers for which they are qualified based on income factors, such as job satisfaction, health insurance coverage or retirement plan, that they expect to receive.

Earning Income: Benchmarks: Grade 12

Statement 2 People choose jobs or careers for which they are qualified based on income factors, such as job satisfaction, health insurance coverage or retirement plan, that they expect to receive.

Earning Income: Benchmarks: Grade 12

Statement 4 People can make more informed career decisions based on their understanding of both income factors and their personal values, interests, abilities and needs.

P21 Skills

Communication

Critical Thinking and Problem Solving

Financial, Economic, Business, and Entrepreneurial Literacy

Flexibility and Adaptability

Global Literacy

Information, Communications, and Technology Literacy

Initiative and Self-direction

Leadership and Responsibility

Think Creatively
Name: __________________________

Find Your Future in Agriculture Scavenger Hunt

(Directions: Read the article, “Find Your Future in Agriculture,” in the Winter 2016 issue of FFA New Horizons and visit www.agexplorer.com to complete the scavenger hunt.

**Locate the box that contains jobs linked to the business world.**

What is it?

List two careers within this pathway:

**Locate the box that contains jobs linked to preparing students.**

What is it?

List two careers within this pathway:

**Locate the box that contains jobs linked to understanding plants.**

What is it?

List two careers within this pathway:

**Locate the box that contains jobs linked to the environment.**

What is it?

List two careers within this pathway:

**Locate the box that contains jobs linked to applying science and technology.**

What is it?

List two careers within this pathway:

**Locate the box that contains jobs linked to combining science and engineering.**

What is it?

List two careers within this pathway:

**Locate the box that contains jobs linked to enhancing agriculture.**

What is it?

List two careers within this pathway:

**Locate the box that contains jobs linked to careers with animals.**

What is it?

List two careers within this pathway:

**Locate the career assessment on AgExplorer.**

Take the assessment. What four careers were you matched with?

According to the article, how many career openings are there in agriculture annually?

According to the article, what three entities came together to create AgExplorer?

According to the article, what three entities came together to create AgExplorer?

Aligned to the following standards: FFA.PL-A; FFA.PL-E; FFA.CS-N; CS.02; CS.03; CS.05; AG2; AG5; AGC09.02; CCSS.ELA-Literacy.RI.9-10.4; Earning Income: Benchmarks: Grade 12, Statement 1, 2, 4; CRP.10;
Find Your Future in Agriculture Scavenger Hunt KEY

**Directions:** Read the article, “Find Your Future in Agriculture,” in the Winter 2016 issue of *FFA New Horizons* and visit [www.agexplorer.com](http://www.agexplorer.com) to complete the scavenger hunt.

1. Locate the box that contains jobs linked to the business world. What is it? *Agribusiness Systems* List two careers within this pathway: Any within the pathway

2. Locate the box that contains jobs linked to preparing students. What is it? *Agricultural Education* List two careers within this pathway: Any within the pathway

3. According to the article, how many career openings are there in agriculture annually? 60,000

4. According to the article, what three entities came together to create *AgExplorer*? *National FFA, Discovery Education, AgCareers.com*

5. Locate the box that contains jobs linked to understanding plants. What is it? *Plant Systems* List two careers within this pathway: Any within the pathway

6. Locate the box that contains jobs linked to applying science and technology. What is it? *Power, Structural & Technical Systems* List two careers within this pathway: Any within the pathway

7. Locate the box that contains jobs linked to combining science and engineering. What is it? *Environmental Service Systems* List two careers within this pathway: Any within the pathway

8. Locate the box that contains jobs linked to the environment. What is it? *Natural Resources Systems* List two careers within this pathway: Any within the pathway

9. Locate the box that contains jobs linked to enhancing agriculture. What is it? *Biotechnology Systems* List two careers within this pathway: Any within the pathway

10. Locate the box that contains jobs linked to careers with animals. What is it? *Animal Systems* List two careers within this pathway: Any within the pathway

11. Locate the career assessment on *AgExplorer*. Take the assessment. What four careers were you matched with? Answers will vary depending on students.

Aligned to the following standards: FFA.PL-A; FFA.PL-E; FFA.CS-N; CS.02; CS.03; CS.05; AG2; AG5; AGC09.02; CCSS.ELA-Literacy.RI.9-10.4; Earning Income: Benchmarks: Grade 12, Statement 1, 2, 4; CRP.10;
FIND YOUR FUTURE
New AgExplorer website puts a world of agricultural careers at your fingertips.

If you thought a career in agriculture was just for farmers and ranchers, think again. Hundreds of diverse careers exist in agriculture, and contrary to popular belief, few involve driving a tractor. You can discover your future career in agriculture with the help of a new online career portal, AgExplorer.com. With the click of a button, the website allows you to learn about 235 unique careers in agriculture, watch videos, find jobs that match your interests and even take virtual field trips. Career profiles include a job description, typical responsibilities, job outlook, education requirements, average salary, link to a college/university database and jobs currently available.

AgExplorer.com is a joint project...
launched by the National FFA Organization, Discovery Education and AgCareers.com.

“Introducing young people to the wide variety of STEM career paths that power the agriculture industry is so important,” says Lori McFarling, senior vice president for Discovery Education. “Discovery Education is proud to partner with the National FFA Organization to introduce AgExplorer, a dynamic digital program that connects academic skills and interests to real-world careers, helping students find their future in agriculture.”

The U.S. Department of Agriculture estimates agriculture will have more than 60,000 job openings annually. Highly skilled graduates will be needed to fill many of them.

“So often, students are told if they want to work in agriculture, they need to be a farmer or a rancher. But those of us in the industry know agriculture is so much more,” says Haley Hampton, senior educational consultant in the National FFA Organization’s Leadership, Education, Assessment & Development Division. “Farmers and ranchers are the backbone of agriculture, but to get the food from the farm to the table, it takes a wide range of businesses and careers. There are careers in agriculture beyond what most people see. Students can have a fulfilling career in agriculture, whether they want to work in business, politics, manufacturing, environmental management, or in the plant, animal and food sciences.”

In 2015, AgCareers.com had nearly 78,000 jobs posted on its website in the United States alone – further proof that agricultural careers are plentiful.

“Our team at AgCareers.com hopes the AgExplorer website broadens students’ awareness of the wide variety of careers we have available in our industry. Then students can connect to real-time careers on our website for additional exploration,” says Ashley Collins, AgCareers.com education and marketing manager. “We need to get awareness of these career opportunities to more young people so they can plan their professional path in agriculture. I hope students are surprised that there are so many careers profiled. This industry is so broad, there is literally something for everyone when you consider all the allied careers that exist.”

Most students don’t think careers such as graphic designers, social media strategists, electricians and merchandisers are agricultural careers. But ag businesses need people with all those skills and more to be successful.

“When a person already has an understanding of what agriculture is, it makes it much easier for them to do those jobs for an agricultural business,” Hampton explains. “Because there aren’t enough students graduating college with degrees related to agricultural businesses have to hire people without agricultural knowledge to fill these careers. It takes extra training to get those individuals

AgExplorer.com, a new online portal, introduces FFA members to the many careers in agriculture, including meat science, veterinary medicine and food science research.
to a level where they can do the job competently.”

If you have a specific interest, such as horses, law, bees or teaching, you can search AgExplorer.com to find related careers. If you aren’t sure what you’d like to do, you can complete the Career Finder assessment, a short 13-question survey that helps match your interests to careers in agriculture.

“We have already received feedback from users, and it has been overwhelmingly positive,” Hampton says. “Before AgExplorer, there wasn’t an agricultural career exploration website that had a national focus, so AgExplorer is making it easier for people everywhere to learn about careers in agriculture. We hope students will see they can be involved in agriculture and still have their dream career.”

~ Jessica Mozo

MORE ONLINE
Ready to find out what career in agriculture is the best fit for you? Visit AgExplorer.com to get started.