



Katherine Koudele

# How the “BLUEPRINT”

## for Agriculture in Adventist Education Can Be Relevant in the 21st Century

Seventh-day Adventists can be justifiably proud of their educational system. It is one of the largest Protestant educational systems in the world, with 9,489 schools at all levels as of December 2020.<sup>1</sup> Its scope is impressive, ranging from preschool through college and graduate school with Master’s and doctoral degree programs that include human medicine and dentistry.

Adventists have been overachievers with their school system; however, the membership of the Adventist Church in the United States comprises only 0.41 percent of the population,<sup>2</sup> it operates 2.2 percent of the religiously affiliated schools.<sup>3</sup> In contrast, those who identify with the largest Protestant group, the Baptist tradition, make up 10.7 percent<sup>4</sup> of the U.S. population, and their schools account for 5.3 percent of religious schools.<sup>5</sup> This disproportionately extensive Adventist educational system has been made possible by dedicated faculty, staff, and school administrators who often work for missionary wages because of their

firm belief in the church’s mission, church subsidies, and parents who support tuition-based education. Church leaders at all levels, along with parents, alumni, and constituents, have also treasured the vision of such education and supported efforts to develop and expand it.

### Seventh-day Adventists’ Long-standing Dedication to Education

However, education was not highly prized initially; early Adventists in the 1840s did not value educating their children since they believed Christ’s second coming was imminent. But by the 1850s, they were advised by church co-founder and visionary Ellen White that their children needed basic skills to cope with the secular world around them, and they also needed to be shielded from ridicule expressed by classmates toward their peculiar religious beliefs, which could result in their leaving the faith.<sup>6</sup>

Homeschooling seemed to be the answer initially, but

this endeavor proved insufficient to meet all students' educational needs. Martha Byington taught the first-known Adventist school in Buck's Bridge, New York, in 1852.<sup>7</sup> James White attempted to begin an Adventist school in Battle Creek, Michigan, in 1858. It was finally organized in 1872 under the leadership of Goodloe Harper Bell and officially sponsored by the then nine-year-old denomination. This followed Ellen White's first comprehensive essay about education in January of that year.<sup>8</sup> In "Proper Education" (1872), later included in *Testimonies for the Church*, she described a "proper education" that in modern parlance would be termed "wholistic." In it, "moral, intellectual, and physical culture should be combined to have well-developed, well-balanced men and women."<sup>9</sup> This combination should include agriculture and manufacturing enterprises at the schools to allow the students' weary minds to rest. At the same time, their bodies worked, and their health improved. The opening sentence in her book *Education*, adapted in *True Education*, summarized her philosophy:

"True education means more than pursuing a certain course of study. It has to do with the whole person, and with the whole period of existence possible to human beings. It is the harmonious development of the physical, the mental, and the spiritual powers."<sup>10</sup>

This idea is reiterated in the North American Division's *Working Policy, Philosophy of Education*.<sup>11</sup>

Although Ellen White never used the term herself, this wholistic approach was termed "the blueprint" by subsequent writers and became a hallmark of Adventist education.<sup>12</sup> Yet, as Floyd Greenleaf wrote in his definitive treatment of the history of this metaphor, there have been many varieties of its definition.

"If we choose to call Ellen White's instruction about education *the blueprint*, the breadth of her understanding of education dictates that we must define the term clearly enough to ensure meaningful discourse. The apt metaphor that appeared in Advent-ese a century ago has lost much of its meaning because writers and speakers have too often twisted it to suit their purposes. Sometimes it has become a weapon to separate supposed educational goats from supposed sheep. For some, it has been a kind of imprimatur to authenticate a given program, institution, or even a person as 'traditionally Adventist.'<sup>13</sup>

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### **How Agriculture Has Changed in the United States Since 1900**

I do not intend to wade into all the components of "the blueprint" in the following discussion. Still, I will focus on the component considered essential in almost all definitions: agriculture—a discipline I have been involved with professionally and personally for the past 36 years. I will also confine my remarks to agriculture in Adventist education in the North American Division.

In the last decade of the 19th century, when Ellen White wrote extensively about what

should comprise Adventist education, 40 percent of the United States population was actively engaged in agriculture as an occupation. Simultaneously, those living in rural areas comprised 60 percent of the total population.<sup>14</sup> These numbers began to decrease in the years that followed. By 2000, less than 10 percent of the U.S. population actively engaged in agriculture as an occupation, and the population of rural areas dwindled to 30 percent as more and more people chose to live in urban areas and pursued non-agricultural careers. By 2020, those living in rural areas comprised 14 percent of the U.S. population.<sup>15</sup>

Therefore, in the late 19th century, the students who attended Adventist schools likely had a farm background or farming experience in a rural area. Church historian George Knight described that "agricultural education was relevant and useful for almost everyone at this time. In many places, land was almost free, and all a person needed to begin was a horse and a plow. Success resulted from putting as much land under cultivation as possible."<sup>16</sup> "As a result of Ellen White's counsel, Adventist colleges and secondary schools settled on large tracts of land where they established dairy herds and cultivated extensive acreage—often in single crops such as corn or wheat for a cash market."<sup>17</sup> One exception to this was Emmanuel Missionary College [now Andrews University], the location of which was chosen based on the excellent fruit and vegetable production found in southwestern Michigan.<sup>18</sup> EMC also developed a dairy and had a large flock of chickens. Produce raised by the students not only provided food for the school kitchen,<sup>19</sup> it also gave the students practical knowledge and manual culture. It allowed them to sell their produce to the Chicago markets to defray the cost of their tuition.<sup>20</sup>

"In other words, Adventist agriculture programs in

the late 19th century and the early 20th century were inherently practical. Since these procedures fulfilled and harmonized with Ellen White's counsels, Adventist schools have often felt obliged to continue the same programs into the last quarter of the 20th century,"<sup>21</sup> Knight wrote in 1988. But as he pointed out, modern agriculture is expensive and in many cases is no longer relevant to furthering the church's goals for practical training or mission work.<sup>22</sup> "Rather than 'faithfully' and unthinkingly standing by past methods, Adventist leaders need to extract the timeless principles from inspired guidance. They should creatively seek to develop methodologies that will apply the intent of those counsels in current contexts."<sup>23</sup>

Much has changed in agriculture and agriculture education since 1900. First, in 2019, the percentage of the U.S. population working on farms and producing food dropped to 1.4 percent.<sup>24</sup> The percentage of those living in rural areas has decreased as well. Second, due to technological advances, agriculture in the United States has become very specialized, mechanized, and efficient, so fewer people are needed. Third, college-age students are not convinced that a career in agriculture and related fields is for them.<sup>25</sup> They do not see it as rel-

evant. In Adventist circles, the message is sometimes subliminally presented that the primary professions that should be pursued are preacher, teacher, doctor, or nurse.

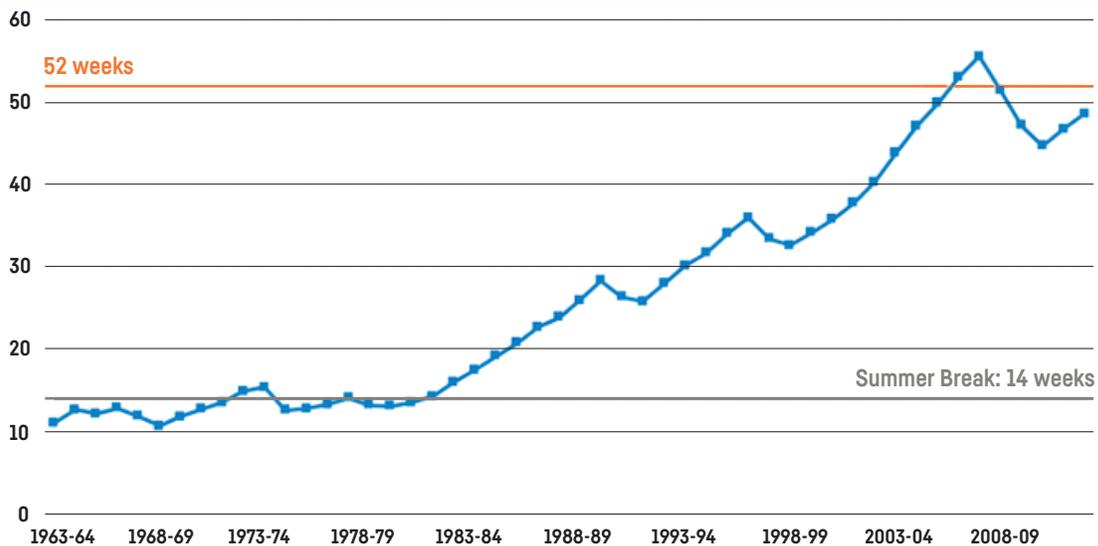
### Updating the Timeless Principles of the Blueprint for the 21st Century

Now that we are well into the 21st century, how can agriculture programs be made relevant using the "timeless principles" in Adventist education of a spiritual and whole-person education centered on service? Let's consider some ideas to *abandon*:

1. *Students can work their way through school.* Tuition costs for secondary and tertiary students have greatly exceeded the rate of inflation in recent decades. As a result, it is now impossible for college students to study and work to pay their way through school. (See Figure 1).<sup>26</sup> While this chart shows the costs for college students in public institutions, it also represents the situation for students in private schools.

2. *All that is needed is arable land.* Indeed, large tracts of land, significant infrastructure, and time commitments are needed for students to learn the "timeless principles." However, more is required to sustain

**Figure 1. Number of full-time weeks of minimum-wage work needed to pay for the average tuition of a four-year public institution.**



Graph by Jarrett Moreno, "How Much You Need to Work to Cover Tuition 1978-2014," (n. d.): <https://archive.attn.com/stories/197/how-much-you-need-work-cover-tuition-1978-vs-2014>, and compiled from data taken from National Center for Education Statistics (2013): [https://nces.ed.gov/programs/digest/tables/d13\\_330.10.asp](https://nces.ed.gov/programs/digest/tables/d13_330.10.asp).

such programs. A few years ago, a colleague and I toured several Adventist academies that once had thriving agriculture programs. We interviewed current and former faculty members about what had happened to this program. The reasons they cited can be divided into three categories:

- *Lack of leadership:* A significant challenge was finding a leader for the school and for these programs, both of whom had a good understanding of the discipline, would champion these programs, and would stay at the school for a significant number of years. Many schools seemed to have a too-frequent turnover of administrators who each brought new ideas about what to do with the agriculture infrastructure. When there were frequent changes in administration at the conference level, this also impacted the level of support for these programs.

- *Viewing agriculture programs as income sources.* Another challenge comes when schools attempt to make the agriculture program a source of income. Lack of funds at most private schools is a perennial problem, and anyone involved in agriculture knows that there will inevitably be lean years; therefore, it should not be relied upon for a steady source of funding at the scale it is conducted at most schools. Most of the academies had remnants of some donor's good idea about reviving the agriculture program that now is little more than abandoned hydroponics projects or neglected greenhouses. The sight of this decaying infrastructure has a demoralizing effect on the faculty and staff, parents of potential students, and the community. Furthermore, reliable labor is difficult to find. Students often return home in the summer during most of the growing/harvesting season; thus, the school must employ others to do the work. Ironically, the whole reason the school year was set up the way it is in the United States with summers off was to allow students to be at home and help out on the family farm.

- *Lack of connection to the overall curriculum.* Expecting the agriculture program to flourish when there is no curriculum connected to it is also a drawback. We noticed that, with one exception, the schools did not have any classes connected with the agriculture program. In the case of the one exception, a check of that academy's webpage in late December 2021 showed that the academic portion of the agriculture

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program no longer existed. The faculty member leading it when we visited had moved to another school. In many cases, students wouldn't know why they were asked to enroll in the program, and so they would participate without an understanding of the underlying principles. This could contribute to a decrease in interest and ownership of the program by the students, constituents, and conference administrators.

There are, however, ideas that should be *embraced*. Here are a few to consider:

- *Education is our product.*

We need to remember that, first and foremost, we are in the education business, and education is the product we sell. But not just any education! We offer education that points to redemption in Christ by which students can cultivate a growing relationship with Jesus that transforms their lives and impacts humanity. Since students can no longer work their way through school, adding a strictly business model to a school's agriculture program only serves to dilute the main product of the school, which is education. However, as educational institutions, we can use agriculture as a teaching tool to illustrate timeless principles of life found in other subjects.

Agriculture can be an applied-STEM discipline. For example, students use math, chemistry, biology, physics, and engineering to accomplish their goals in agriculture. They need to understand what they are doing as they apply what is learned in their science classes to agriculture. They need assignments that challenge their creativity and ingenuity. Working with professors and mentors lets them engage in research projects that pair agriculture with what they learn in other classes.

- *Broaden the definition of agriculture.* We need to broaden the definition of agriculture to include environmental stewardship. Farmers consider themselves stewards of the land, so this concept is appropriate.<sup>27</sup> During Ellen White's lifetime, the idea of environmental stewardship was in its infancy<sup>28</sup>; therefore, she did not write about it explicitly.<sup>29</sup> But she did write many times about the importance of clean air and water to human health,<sup>30</sup> and these are also the goals of the environmental movement. This concept resonates with our students. The "Letters to the Future President Project," which involved more than 11,000 high school students from 321 schools across 47 states, was conducted by

Gracia et al. at Stanford University.<sup>31</sup> When the content of these letters was analyzed, the topic of care for the environment ranked eighth out of 69 topics the students wrote about, and animal welfare ranked 12th.

### How to Apply and Update the Original “Blueprint” for Adventist Schools in the 21st Century

How, then, can Adventist schools apply and update the original principles of the “blueprint” in the 21st century? Below are recommendations that can be implemented at all levels, along with organizations that offer resources that can be used to support projects:

#### *Composting and Recycling*

- One project that engages the entire school is setting up and maintaining a composting and recycling system. This appeals to students’ sense of caring about the environment and likely raises their estimation of their school. Such programs can also teach students how to implement what they learn in their current and future homes.

Composting and recycling projects take extra time and effort on the part of the faculty and staff to set up and maintain, so they need to involve the students as much as possible to help them understand why these projects are assigned and their importance, and so that they share some responsibility for the program. To have the most impact on learning, these projects need to be seen as part of the larger educational curriculum and have the buy-in of all employees at the school as well as the school board. And there is biblical support for caring for the Earth which God created for us.<sup>32</sup>

Another project that can benefit students long after they leave school is learning how to plant gardens, either on plots of land or in containers. Learning how to plant and maintain a garden that can help feed their families and minimize the expenditure on produce from commercial vendors will serve students well throughout their lifetime. They can learn how to plant and harvest vegetables, herbs, flowers, and even fruits.



In addition, gardening is an excellent form of exercise, results in healthful foods, and can help sustain the environment by providing plants for pollinators (for example, butterfly gardens). One example of this is the Moab Seventh-day Adventist Church's collaboration with Castle Valley Academy to provide potatoes for the community. Read more about this initiative here: <https://utahstories.com/2022/09/the-seventh-day-adventist-faith-based-high-school-in-castle-valley-utah-will-produce-half-a-million-pounds-of-potatoes-this-year/>.

Another example is "The Edge"—a community flower and vegetable garden on the Walla Walla University campus (College Place, Washington, U.S.A.) created to be a gift to the community. Initiated by Troy Fitzgerald, outreach pastor for the university church, the garden is designed to be a place where community members can freely "gather, collect, and share" (see <https://www.wallawalla.edu/news/detail/news/gifting-the-edge/>). And Andrews University offers an example with its venture into sustainable agriculture: <https://adventistreview.org/news/andrews-university-invests-in-sustainable-agriculture/>. Research on the value of school gardens continues to grow, a sampling of the benefits is available here: <https://www.gse.harvard.edu/news/uk/18/07/let-it-grow>.

In addition, some organizations offer resources that can be used to help implement various projects or generate new project ideas. These include the following:

- The Cornell University Institute of Waste Management has produced a helpful guide on how to start a composting program in schools.<sup>33</sup> The composting process involves chemistry and biology, while the bins involve engineering. The composted material can then be used for mulching around the plants in the school's landscaping, incorporated into the soil of a raised-bed kitchen garden for the cafeteria, or shared with parents and church members for their own gardens.

- CleanRiver Recycling Solutions has developed a step-by-step process for starting and maintaining a recycling system for a school.<sup>34</sup> This project raises the students' awareness of what happens to the waste they generate every day. They become partners in caring for this planet entrusted to humanity.

- *The National 4-H Council*. The National 4-H Council has a wealth of well-designed curricula and materials involving STEM in agriculture, animal husbandry, veterinary science, pet care, and gardening.<sup>35</sup> There are plenty of options from which to choose. The materials are arranged by grade level. I have used their materials and found them accurate

and engaging for the students. There is a modest charge for most of their materials.

- *The American Farm Bureau Foundation*. Consider checking out the American Farm Bureau Foundation and its educational programs for a broad overview of producing food.<sup>36</sup> Their Foundation for Agriculture contains ideas and materials arranged by grade.<sup>37</sup> Some resources include education in human nutrition and healthful eating, which are greatly needed today. Their materials are free to download since agriculture industry groups support them. Educators should be aware that some materials might contain bias and should be used cautiously.

- The American Farm Bureau Foundation also has two STEM units that explore genetics (high school level) and the ecosystem (middle school level).<sup>38</sup> The organization supports raising animals for meat; however, raising awareness of animal husbandry and using animals to illustrate the scientific method is not the same as promoting meat-eating.

### Summary

Seventh-day Adventists have established a worldwide, robust, and wholistic educational system following the principles (also known as the "blueprint") expressed by church co-founder and visionary Ellen G. White. To remain relevant in the 21st century, updates and modifications need to be made to the applications of the agricultural portion of the "blueprint" to maintain the timeless principles found in it. Faculty, staff, and administrators of Adventist schools who wish to adhere to these principles should examine cost-effective ways of delivering that content that engage the minds and imaginations of their students. ✍

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## NOTES AND REFERENCES

1. Seventh-day Adventist Church World Statistics (2021): <https://www.adventist.org/statistics/seventh-day-adventist-world-church-statistics-2020/>.
2. Pew Research Center, “Summary Table: Religious Composition of U.S. Adults” (2014): <https://assets.pewresearch.org/wp-content/uploads/sites/11/2015/05/Religious-Composition-of-U.S.-Adults.pdf>.
3. U.S. Department of Education, National Center for Education Statistics, “Private School Universe Survey (PSS) (2017-2018)”: <https://nces.ed.gov/surveys/pss/tables/TABLE02fl1718.asp>.
4. Pew Research Center, “Summary Table: Religious Composition of U.S. Adults.”
5. U.S. Department of Education, National Center for Education Statistics, “Private School Universe Survey (PSS) (2017-2018).”
6. Richard W. Schwarz and Floyd Greenleaf, *Light Bearers: A History of the Seventh-day Adventist Church*, rev. ed. (Nampa, Idaho: Pacific Press, 2015), 115.
7. *Ibid.*, 118.
8. Ellen G. White, “Proper Education” (1872) included in *Testimonies for the Church* (Mountain View, Calif.: Pacific Press, 1948), 3:157.
9. *Ibid.*
10. Ellen G. White, *True Education* (Nampa, Idaho: Pacific Press, 2000), 9.
11. North American Division of Seventh-day Adventists, *Working Policy, Philosophy of Education* (2018-2019), 365.
12. Floyd Greenleaf, “The Blueprint: A Colorful History of an Adventist Metaphor,” *The Journal of Adventist Education* 74:4 (April/May 2012): 16-23: <http://circle.adventist.org/files/download/jae201274041608.pdf>.
13. *Ibid.*, 22.
14. Carolyn Dimitri, Anne Efland, and Neilson Conklin, *The 20th Century Transformation of U.S. Agriculture and Farm Policy, Economic Information Bulletin No. 3*, Economic Research Service, United States Department of Agriculture (2005): [https://www.ers.usda.gov/webdocs/publications/44197/13566\\_eib3\\_1\\_.pdf](https://www.ers.usda.gov/webdocs/publications/44197/13566_eib3_1_.pdf).
15. Elizabeth A. Dobis et al., “Rural America at a Glance” *United States Department of Agriculture* (2021), 2: <https://www.ers.usda.gov/webdocs/publications/102576/eib-230.pdf>; Kim Parker et al., “Demographic and Economic Trends in Urban, Suburban and Rural Communities,” Pew Research Center (2018): <https://www.pewresearch.org/social-trends/2018/05/22/demographic-and-economic-trends-in-urban-suburban-and-rural-communities/>.
16. George R. Knight, “SDA Agricultural Programs: Symbols of Corporate Guilt or Unlimited Opportunities?” *The Journal of Adventist Education* 50:3 (February/March 1988): 22, 40-43: <http://circle.adventist.org/files/jae/en/jae198850032205.pdf>.
17. *Ibid.*, 41.
18. Meredith Jones Gray, *As We Set Forth: Battle Creek College and Emmanuel Missionary College* (Berrien Springs, Mich.: Andrews University Press, 2002), 89, 173.
19. *Ibid.*, 130, 131.
20. *Ibid.*, 157.
21. Knight, “SDA Agricultural Programs: Symbols of Corporate Guilt or Unlimited Opportunities?” 41.
22. *Ibid.*, 42.
23. *Ibid.*
24. U.S. Department of Agriculture Economic Research Service, “Ag and Food Sectors and the Economy” (2022): <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/ag-and-food-sectors-and-the-economy/>.
25. Lauri M. Baker et al., “Recruiting Strategically: Increasing Enrollment in Academic Programs of Agriculture,” *Journal of Agriculture Education* 54:3 (2013): 54-66.
26. Noa Maltzman, “Keeping Up With Modern Society: Rising Cost of Higher Education” (2017): [https://medium.com/@noa\\_maltzman/keeping-up-with-modern-society-rising-cost-of-higher-education-ce451f052428](https://medium.com/@noa_maltzman/keeping-up-with-modern-society-rising-cost-of-higher-education-ce451f052428); Jarrett Moreno, “How Much You Need to Work to Cover Tuition 1978-2014” (n.d.): <https://archive.atn.com/stories/197/how-much-you-need-work-cover-tuition-1978-vs-2014>. Statistics used to compile this graph were taken from the National Center for Education Statistics 2013 tables titled “Average Undergraduate Tuition, Fees, Room, and Board Rates Charged for Full-time Students in Degree-granting Postsecondary Institutions, by Level and Control of Institution: Selected Years, 1963-1964 Through 2020-2021” (2013): [https://nces.ed.gov/programs/digest/d13/tables/dt13\\_330.10.asp](https://nces.ed.gov/programs/digest/d13/tables/dt13_330.10.asp). Updated information for 2020-2021 is available here: [https://nces.ed.gov/programs/digest/d21/tables/dt21\\_330.10.asp?current=yes](https://nces.ed.gov/programs/digest/d21/tables/dt21_330.10.asp?current=yes).
27. Anonymous, “Farmers and Ranchers: The Original Stewards of the Land” (2022): <https://protecttheharvest.com/what-you-need-to-know/farmers-and-ranchers-are-stewards-of-the-land/>.
28. Lorraine Elliott, “Environmentalism,” *Encyclopedia Britannica* (September 9, 2020): <https://www.britannica.com/topic/environmentalism>.
29. Cindy Tusch, “Ellen White and the Environment,” *Adventist World* (January 1, 2018): <https://www.adventistworld.org/ellen-white-and-the-environment/>.
30. Examples of Ellen G. White’s writings on this topic can be found in “Disease and Its Causes,” *Selected Messages* (Washington, D.C.: Review and Herald, 1958), 2:456; and “In Contact With Nature,” *The Ministry of Healing* (Mountain View, Calif.: Pacific Press, 1909), 261-268.
31. Antero Gracia, Amber Marie Levinson, and Emma Carene Gargroetzi, “‘Dear Future President of the United States’: Analyzing Youth Civic Writing Within the 2016 Letters to the Next President Project,” *American Educational Research Journal* 57:3 (2020): 1,159-1,202.
32. See examples in Genesis 1:31; Genesis 2:15; Job 12:7-10; and Revelation 11:18.
33. Institute of Waste Management, Cornell University, “School Composting—Let’s Get Growing!” (2017): <http://compost.css.cornell.edu/SchoolCompostingLetsGetGrowing.pdf>.
34. CleanRiver Recycling Solutions, “5 Step Checklist to Start a Successful School Recycling Program” (n.d.): <https://cleanriver.com/checklist-start-school-recycling-program/>.
35. National 4-H Council, “STEM and Agriculture” (2021): <https://4-h.org/parents/stem-agriculture/>.
36. American Farm Bureau, “Connecting to Agriculture—Bridging the Gap Between Field and Fork Online Resources” (2022): <https://www.fb.org/viewpoints/bridging-the-farmer-consumer-gap>.
37. American Farm Bureau, Foundation for Agriculture, “Growing Agriculture Literacy” (2022): <https://www.agfoundation.org/>.
38. American Farm Bureau, “On the Farm STEM” (n.d.): <https://www.onthefarmstem.com/about>. Click on the Resources tab for instructions and materials for teachers and students.