

## Real Food and Real Facts in the Classroom

As the Real Food frame gained momentum, friction over “good food” and the power to define it erupted all over the place. As noted earlier, many tussles took place on the internet, where Food Babe and SciBabe argued about dyes, colors, and credentials and James Kennedy took on “chemophobia” with the ingredients of an all-natural banana. At the same time, some tussles involved the food industry contesting the claims of Real Food frame proponents and defending its own power to define good food. While I explore industry efforts that took place largely outside of the public’s view in later chapters, this chapter focuses on a campaign that was aimed directly at the public itself. The Real Food frame taught the public to ask where their food came from and question whether the processed products of industrial production were healthy, safe, and sustainable. One of the most powerful food industry trade associations in the world, the International Food Information Council, responded with a grade school curriculum that focused on explaining and celebrating the benefits of processed food.

According to its president, IFIC's foray into the classroom was prompted by the threat posed by the Oscar-nominated documentary *Food, Inc.* and the Discussion Guide that had been distributed, along with DVDs of the film, to high schools nationwide.<sup>1</sup> *Food, Inc.* was an explosion of Real Food challenges to corporate narratives about food and the food system, vividly articulating concerns about the health and safety of the food supply, negative side effects of science and technology, and power and secrecy in an increasingly consolidated food system. Released in June 2009 and then broadcast on PBS and released on DVD in 2010, the film described itself as "an unflattering look inside America's corporate controlled food industry," promising audiences, "You'll never look at dinner the same way again." A *Variety* review described it as both cheery and politically urgent, a "civilized horror movie" that did "for the supermarket what *Jaws* did for the beach."<sup>2</sup> The film featured interviews with Michael Pollan, who was also a "special consultant," and Eric Schlosser, author of *Fast Food Nation*, who was also a coproducer. The Discussion Guide that IFIC was so concerned about was released in 2011 by Participant Media, an entertainment company focused on social action content, in collaboration with the Center for Ecoliteracy, known for its work integrating sustainability into school curricula.<sup>3</sup> It was made up of nine chapters, each designed to be used alongside a chapter of the film, and Participant Media distributed the guide along with free DVDs of *Food, Inc.* to three thousand schools nationwide, in addition to making it available online.<sup>4</sup>

The same year, IFIC launched the Alliance to Feed the Future, whose signature initiative was a K–8 curriculum.<sup>5</sup> The president of IFIC described the curriculum as an effort to push back against "misleading perceptions of food and agriculture" in the movie *Food, Inc.* and the *Food, Inc.* Discussion Guide. He explained that IFIC formed the Alliance, a collaboration with hundreds of

other organizations, to “provide balanced public dialogue about how modern agriculture and food production benefits society.”<sup>6</sup> According to a press release, the aim of the Alliance was “to tell the real story of modern food production” in the face of increasingly common misperceptions. At its inception, the organization had 105 members, which it described as including “professional societies and universities, educational organizations, and industry and commodity groups.”<sup>7</sup> However, its membership was primarily composed of trade associations, for example, the American Meat Institute, International Dairy Foods Association, American Frozen Food Institute, Canned Food Alliance, International Food Additives Council, Snack Foods Association, American Soybean Association, Biotechnology Industry Association, Shelf Stable Food Processors Association, and many more. Members also included educational organizations that represented industry and commodity groups, such as American Farmers for the Advancement and Conservation of Technology (AFACT), Council for Biotechnology Information, American Society of Nutrition, Calorie Control Council, and Council for Responsible Nutrition. A handful of academic entities, including several colleges of agriculture and departments of food science and technology, were also among the members.<sup>8</sup>

The Alliance launched its first set of educational materials in summer 2012. “Lunch Box Lessons: Professor G. U. Eatwell and the Journey from Farm to Fork” was a downloadable K–8 curriculum of around fifteen lesson plans for each of three grade ranges (K–2, 3–5, 6–8), as well as classroom posters and parent take-home pages.<sup>9</sup> In November 2013 the Alliance issued an additional set of lessons called “The Science of Feeding the World,” which had one lesson per grade level geared to Next Generation Science Standards. The curricula were funded by Farm Credit, the nation’s largest agricultural lender, and designed by the Education

Center of Greensboro, North Carolina, a producer of ready-to-use classroom materials.<sup>10</sup> In 2014, IFIC president David Schmidt announced that the materials had already reached 750,000 teachers and 4.5 million students in the US.<sup>11</sup>

The Alliance lessons taught kids that processed foods provided healthy choices and that technologies of “modern agriculture” were necessary to feed a growing population, but they didn’t just contest the facts that *Food, Inc.* presented. The stakes of this encounter were much greater, having to do with how the public was imagined in relation to the food system and the role students were being prepared to play in it. While *Food, Inc.* imagined students as citizens having the skills, capacity, and agency to shape the food system, the Alliance imagined them solely as future consumers, whose role was to willingly accept the products of the food system.

As Regula Valérie Burri found in her comparative analysis of how policy makers approached communication about nanotechnology in the US and Germany, “tacit assumptions” about the “ideal form of the science-society relationship” shape how communicators understand the purpose of information and education.<sup>12</sup> This includes different understandings and projections of the skills and capabilities of the public and the role people are expected to play in relation to the assessment and governance of technology. Burri found, for example, that German nanotechnology imaginaries were “intrinsically political.”<sup>13</sup> Similarly, the *Food, Inc.* Discussion Guide was shaped by an intrinsically political imaginary, in which the public was perceived and projected as responsible, engaged, and able to acquire new knowledge to participate in dialogue and decision making about the food system. In contrast, the lessons designed by the Alliance to Feed the Future were shaped by a commercial imaginary. Their purpose was to prepare students to act as informed and willing future consumers.

These contrasting imaginaries shaped which facts mattered within the curricula and who had the agency to act in relation to them. The rest of this chapter looks at how the tacit assumptions of the Real Food and Real Facts frames about the ideal form of the science-society relationship and the role of the public in the food system shaped the aims and content of the *Food, Inc.* Discussion Guide and the lessons created by the Alliance to Feed the Future.

It may be surprising that I take the claims in both sets of lessons at face value. The purpose of this chapter is not to take exception to *Food, Inc.*'s claims about the problems with corn in the food system, the Alliance's contention that frozen broccoli is better than fresh, or any of the other claims presented in these lessons. On the contrary, while conflicts between these two educational campaigns and between the Real Food and Real Facts frames more broadly may appear to be over the facts, or what is true about the food system, Gussow reminds us to look beyond this to understand what is really at stake. What really matters is the kind of questions that are deemed important to ask and thus the kinds of information and expertise that are considered relevant.<sup>14</sup> Inspired by Gussow, I seek primarily to understand the questions the Alliance deemed important to ask and the information and forms of expertise it considered relevant in preparing students for their future role in the food system.

#### PREPARING ACTIVE CITIZENS FOR THE FOOD SYSTEM

The goal of the *Food, Inc.* Discussion Guide was to prepare students to actively participate in dialogue about the food system and play a role in shaping it. This was clear from the very first pages of the Discussion Guide, which opened with a letter from Zenobia Barlow, cofounder and executive director of the Center for Eco-literacy. In it, she described the role of educators as challenging

students to “think critically and to grapple with complex questions,” inspiring them to “become engaged citizens” and helping them “gain the knowledge and skills they need in order to develop sustainable solutions.”<sup>15</sup> The letter was followed by a brief section called “Using This Guide” that ended with learning objectives, which included helping students “think through their own perceptions, ideas, and solutions so that they are better prepared to make thoughtful choices about food,” “develop the knowledge and skills they need to participate in a meaningful public dialogue about food and the food system,” and “take action to address food-related issues in their own lives.”<sup>16</sup> In other words, the aim of the *Food, Inc.* Discussion Guide was to produce thoughtful, knowledgeable, active citizens of the food system.

The Discussion Guide’s approach to achieving these objectives centered on Socratic discussions. A five-page section, “About Socratic Discussions,” described the value of this approach as well as how to facilitate and assess the discussions. It explained, “Socrates believed that helping students to think was more important than filling their minds with facts, and that questions—not answers—are the driving force behind learning.” The section then explained that Socratic discussions allow students to “explore issues, ideas, and values in a meaningful way[.] . . . face conflicting viewpoints, test their ideas against their peers, and explore possible solutions.”<sup>17</sup> Instructions noted that Socratic discussions required a significant shift in the teacher’s role, from teaching content to facilitating students’ exploration of their own thinking. After showing a *Food, Inc.* chapter, they suggested “Setting the Stage” by arranging chairs in a circle and reviewing discussion guidelines. The next phase, “Opening the Discussion,” began with asking the “Focus Question” the Guide provided for each chapter of the film and allowing time for students to “think

and then respond freely to the question.” Teachers were to make it very clear that they were not looking for specific answers and that “in fact there is no right or wrong answer.” Their role was to ask questions, “accept students’ responses,” help them clarify their thinking, and encourage participation by all. The next phase, “Deepening the Discussion,” used “deepening questions” to “help students probe further into the topic and clarify their thinking.”<sup>18</sup>

Connections between learning about the food system, engaging in debate and dialogue, and acting to shape the food system were built into the lesson plans. Each chapter of the Discussion Guide ended with “Ideas for Action,” suggested activities in which students could express their opinions and practice acting in their role as engaged citizens.<sup>19</sup> These included writing letters to people who have responsibility for making change in the food system, learning more about advocacy groups, designing posters or brochures to share learning with others, debating positive and negative impacts of specific technologies, researching laws, exploring what it would take to make changes to rules in their schools, talking to farmers to get their views on issues raised in the film, and so on.

The Discussion Guide’s lessons reflected the Real Food frame’s view that many forms of knowledge and expertise, not just science, were important to understanding the food system. A section titled “National Standards Correlations” included a long, varied list of standards that the Guide was designed to meet across English, geography, science, and social studies. Together, they acknowledged social, economic, cultural, and political aspects of the food system and sought to prepare students to understand and act in relationship to this complexity. English standards focused on critiquing texts and gathering information to create and communicate knowledge. A geography standard called “Environment

and Society” supported students in knowing and understanding how resource development and use changes over time and the results of policies and programs for resource use and management. Several social studies standards emphasized social relations and power dynamics. “Individuals, Groups and Institutions,” for example, focused on evaluating the role of institutions in continuity and change and analyzing the extent to which groups and institutions meet individual needs and promote the common good. “Power, Authority and Governance” examined the rights, roles, and status of the individual in relation to general welfare. “Production, Distribution, and Consumption” helped students analyze the role supply, demand, price, incentives, and profits play in determining what is produced in a market system.<sup>20</sup>

The National Standards Correlations also included some related to science, but they situated scientific knowledge as part of, not separate from, economic, social, cultural, and political contexts. For example, a social studies standard called “Science, Technology and Society” aimed for students to be able to analyze how science and technology influence the core values, beliefs, and attitudes of a society, and vice versa, and evaluate policies that have been proposed to deal with social change resulting from new technologies, such as genetically engineered plants and animals. One “National Science Educational Standard” was also listed: “Science in Personal and Social Perspectives.” The objective was for students to develop an understanding of “personal and community health; natural resources; environmental quality; natural and human-induced hazards; [and] science and technology in local, national, and global challenges.”<sup>21</sup>

While the National Standards Correlations implicitly reflected the questions about the food system that the Discussion Guide deemed it important to ask, and thus the forms of knowledge

and expertise that its authors considered relevant, the lessons themselves addressed knowledge politics explicitly. The official synopsis of *Food, Inc.* described it as a film that “lifts the veil on our nation’s food industry, exposing the highly mechanized underbelly that’s been hidden from the American consumers with the consent of our government’s regulatory agencies, USDA and FDA.”<sup>22</sup> The film thus reflected the assumption, advanced by Pollan and other Real Food advocates, that giving the public access to knowledge and information about the food system could be the basis for a large-scale social movement to reshape it in the public’s interest.<sup>23</sup> The Discussion Guide aimed to bring this information to classrooms, where high school students could learn about both hidden parts of the food system and the politics of knowledge in the course of becoming active citizens of the food system.

The film began with Schlosser describing a “world deliberately hidden from us” and talking about his quest as an investigative journalist to “lift the veil.” The first chapter included, among other things, his visit to a Tyson chicken farm where a farmer explains that he would have liked to show the film crew the chicken house, but Tyson forbids him from doing so. Another farmer, breaking the rules, provides a grim look into what she derides as her “chicken factory.”<sup>24</sup> Deepening Questions in the Discussion Guide include, “As consumers, do we have the right to know how the chickens we eat are being raised? Do we want to know?” A handout showed those involved in raising chickens: a chicken, a farmer, a farmworker, a consumer, and a president of a poultry company. Students were instructed to draw lines between those who are directly connected and put a star next to the individual who was most valued and an X next to the one who was least valued, then rank all of them in order of who has the most and least rights.<sup>25</sup>

The next chapter began with Pollan also discussing the politics of information: “It seems to me that we are entitled to know about our food, who owns it, how they are making it. . . . [C]an I have a look in the kitchen?”<sup>26</sup> The Focus Question in the Discussion Guide was, “Do people have a right to know what is in their food?” and the lesson led students to explore the limits of the information available on food labels. Deepening Questions explored why people tend to be surprised when they learn how much corn is in their diet, asking, “Do you think the government and food producers kept it a secret?” and “How do you feel about ingredients being included without your knowledge?” Then students were prompted to consider whose job it is to inform the public: “Is it our responsibility to find out, the producer’s responsibility to make it more clear, or both?”<sup>27</sup>

Chapter 8, “The Veil,” was pointedly about power dynamics that constrained the information about food the public had access to and the political stakes of that knowledge. The film described a revolving door between corporations such as Monsanto, the government, and the judicial bodies that are supposed to be regulating them and shows how this dynamic forecloses public debate about the use of technologies in food production. Schlosser describes “power, centralized power” as being used to deliberately “keep consumers in the dark about what they are eating, where it comes from and what it’s doing to their bodies.” He describes companies fighting “tooth and nail” against labeling and pursuing legislation making it against the law to criticize their products through libel laws. Pollan asserts that “one of the most important battles for consumers to fight is the right to know what is in their food and how it was grown.”<sup>28</sup> The Discussion Guide’s Focus Question was, “Should a company have the power to decide what information to give consumers about the food it produces?”<sup>29</sup>

The final chapter, “Shocks to the System,” also made the Discussion Guide’s assumptions about the politics of information and the role of the public in the food system explicit. It engaged viewers and students as agents in the food system with the power to shape it through both consumer choices and individual and collective actions outside of the marketplace.<sup>30</sup> A synopsis of the film chapter noted, “While the average consumer may feel powerless in the face of these issues and vastness of the food system, the system does respond to consumer demand.” The film looked at the role consumer pressure played in Walmart switching to rBST-free milk and drew parallels with the fight against tobacco, which Schlosser describes as a “perfect model” of how an industry’s irresponsible behavior can be changed. The Discussion Guide described the chapter as offering “hope that individual and collective actions can make a difference and move us toward creating a more sustainable food system.”<sup>31</sup> The Focus Question was, “What individual or collective actions are you willing to take to improve our food system, and what would be their impact?”<sup>32</sup>

A Deepening Question for this final chapter asked, “Aside from the supermarket, in what other arenas can individuals and groups make an impact on our food system?” Another asked students to reflect on Pollan’s argument in the film that “we need changes at the policy level so that the carrots are a better deal than the chips” and to discuss whether “changing policy or informing the public about health benefits and environmental impacts” would be more effective at changing people’s food choices. An “Idea for Action” suggested students should agree on actions to pursue, develop action plans, identify which steps they need to take are collective and which are individual, follow through with the support of the teacher, and report their results to the class.

Another suggested they identify key representatives involved in farm or food policy and write to them, advocating for specific changes in current policies. The chapter ended with a “Things you can do” handout, with the subheading, “You can vote to change the system. Three times a day.” The list that followed included actions students could take in the market (“Buy from companies that treat workers, animals, and the environment with respect”) and outside the market (“Make sure your local farmers market takes food stamps. Ask your school board to provide healthy school lunches,” “Tell Congress to enforce food safety laws”).<sup>33</sup>

The *Food, Inc.* Discussion Guide was shaped by and pursued an intrinsically political imaginary of the public. Its approach to education and the facts that it considered relevant reflected tacit assumptions about “the ideal form of the science-society relationship,” the skill and capacities of the public, and the role that students would play in the food system.<sup>34</sup> It assumed that students were learning about the food system so that they could engage in dialogue about it and play a role in shaping it through their own actions. The way the learning process was structured, through film screenings followed by “rigorously thoughtful Socratic discussions,” assumed that students were capable of reflecting critically on the way things were and forming legitimate opinions about how they should be. Prompts at the end of each lesson explicitly guided students outside of the classroom, where it was assumed they could and should take action to make changes they deemed important. The emphasis on social science knowledge and expertise reflected an understanding that the food system was shaped by a complex set of conditions—including power dynamics and politics—that required more than scientific knowledge to understand. The chapters explicitly politicized knowledge about the food system and clearly prepared students to engage in

a critical challenge to the food system, starting with a refusal of the way things were.

#### PREPARING WILLING CONSUMERS

The creators of the Alliance lessons assumed that the Real Food frame's concerns about the food system, including those expressed in *Food, Inc.*, were the result of lack of knowledge and understanding. A press release announcing the formation of the Alliance explained that its members "share the common goal of building understanding and promoting the benefits of modern food production, processing and technology."<sup>35</sup> When the first lessons were released in July 2012, IFIC president David Schmidt described them as responding to ignorance and misinformation: "More than ever, Americans are separated from farming and distribution of the foods we all enjoy and are exposed to misinformation and myths about modern food and agricultural production." Alliance members, he went on, "believe it is crucial that accurate and straightforward information be made available to teachers, students and parents to demystify the process by which food is produced." Another press release explained, "The more consumers understand how their food is produced, the more they can appreciate the role modern agriculture plays in providing safe, affordable, and nutritious food."<sup>36</sup> In contrast to the Discussion Guide, then, the Alliance imagined that it was preparing students to play the role of willing consumers rather than active citizens. The way it approached educating students, the skills it assumed students needed, and the facts it deemed relevant were all shaped by this commercial imaginary of the public and the ideal form of the science-society relationship that it reflected.

The pedagogical approach of the Alliance lessons was not explained up front as it was in the Discussion Guide, but, reflecting the Real Facts frame's emphasis on expert knowledge, the lessons were structured around a didactic transfer of information from the lesson plans to teachers and from teachers to students. Each lesson plan provided introductory text about the topic the lesson covered as well as instructions and materials for one or more activities. There were detailed scripts telling teachers how to lead students through the activities, including questions to ask with the correct answers provided in italics. Exactly what students were to take away from various activities was explicit in each lesson plan; results of activities and experiments were carefully framed to support the core message of the curriculum about the benefits of modern food technologies.

The Alliance lessons pushed back against *Food, Inc.*'s embrace of dialogue, critical thinking, and personal opinions, as well as its insistence that the questions worth asking about the food system had to do with the social, economic, political, cultural, and environmental factors that shaped it. Instead, the lessons focused on correcting presumed deficits of scientific knowledge and understanding. As Brian Wynne explains, deficit thinking is an inevitable result of "a culture of scientism" in which it is assumed that support for a particular policy position is determined by scientific fact: "Some kind of public deficit model explanation of public rejection or mistrust 'of science' is almost preordained as a function of this scientific, culturally entrenched premise about the basic meaning of the issue at hand." The variations of deficit thinking most prevalent in Alliance lessons resembled three described by Wynne in his 2006 list of "public deficit models of mistrust of science—abandoned but reinvented (ca 1990 to the present)." The models include public deficits of understanding of scientific knowledge, public deficits of trust in science, and public

deficits of knowledge of the benefits of science. All of these were accompanied by what Wynne describes as an underlying assumption that public responses are emotional, “epistemologically empty,” and susceptible to misinformation.<sup>37</sup>

While all Alliance lessons were shaped by the deficit thinking characteristic of the Real Facts frame, among the larger set of forty-five lessons issued in 2012 there were units for each grade level that focused specifically on addressing, or preempting, deficits of scientific knowledge or understanding that might turn people away from processed food and make them critical of the industrial food system. Though these lessons were designed to meet Common Core standards in English, writing, and math, their emphasis was explaining the role of modern food technologies, extolling their benefits, and portraying them as safe, familiar, natural, and desirable.<sup>38</sup> For example, a unit for third- through fifth-graders called “Understanding the Modern Food System” included the lesson, “A Super System: Understanding the Benefits of the Modern Food Production System.” The instructions explained, “At this learning center, students understand how modern technology has helped make our food system safe, convenient and accessible year-round.” The lesson came with sixteen “Food System Innovation Cards” and four “Activity Labels.” The instructions told the teacher to prepare by gluing each activity label to a separate paper plate. The labels read, “Improves safety,” “Improves efficiency (more work with fewer people),” “Increases the amount of food produced,” and “Makes products more convenient for consumers.” In the activity, students chose an innovation card, each of which highlighted a particular innovation, such as the refrigerator, chemical fertilizer, barbed-wire, flash freezing, the bread slicing machine, the mechanical tomato harvester, and the use of satellites to monitor farm fields. Then they placed the cards on the plate that “best describes the innovation’s benefit” (Fig. 2).<sup>39</sup>

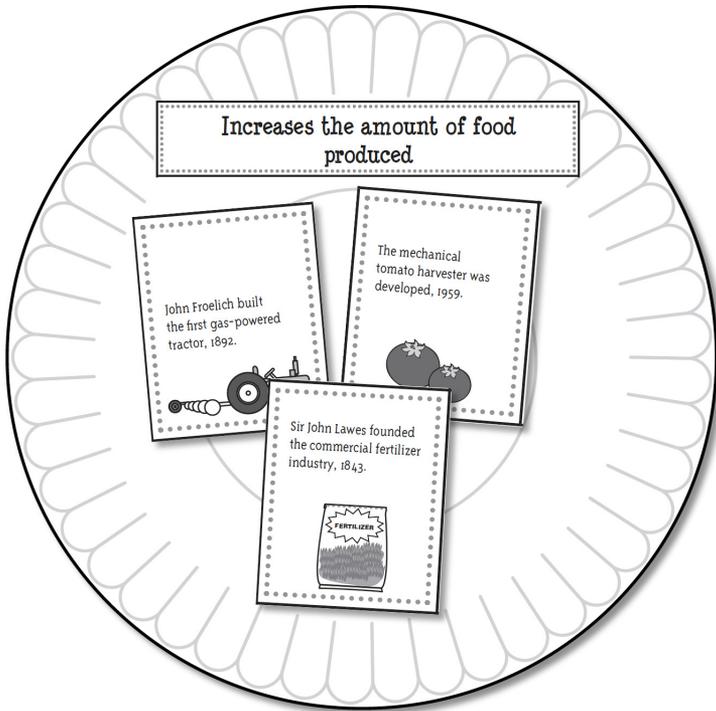


Figure 2. Illustrated example from the lesson “A Super System,” showing how students should sort “Food System Innovation Cards” according to their benefits. © 2012 Alliance to Feed the Future, [www.alliancetofeedthefuture.org](http://www.alliancetofeedthefuture.org). Text and design by The Education Center, Inc. The development of this curriculum is made possible, in part, by a grant from Farm Credit.

Similarly, a unit for sixth- through eighth-graders called “Buzzwords” included a lesson about unfamiliar ingredients called “It All Adds Up!” The lesson aimed to correct or preempt concerns about unfamiliar chemicals in food by explaining their purpose and benefits, emphasizing their connection to natural or familiar foods, and assuring students of their safety. The lesson plan began, “Is sodium bicarbonate in your bread? What about thiamine mononitrate? Yep, they’re both there—and they’re supposed to be! Sodium bicarbonate is baking soda, and thiamine

mononitrate is vitamin B1.” It continued, “In fact, every food we eat, whether it’s picked from the garden or pre-made and packaged, is made up of chemical compounds. However, when students read a food label, that list of long names may be unfamiliar.” A text box in the top corner of the lesson read, “Fun Fact: The Food and Drug Administration has a list of more than 3,000 ingredients that can be added to foods, all of which are regulated for safety.”

The lesson came with twenty-seven “Food Ingredient Cards” representing eleven categories. Each card highlighted one ingredient category, describing its benefits, and then introduced an example of an ingredient in that category. For example, there were four “color additives” cards explaining that color additives “enhance a food’s natural color or add color to colorless foods”; each introduced a specific example, such as FD&C Blue No. 1, “one of nine certified color additives approved for use in the US;” and beta-carotene, which “adds orange color to foods, found naturally in carrots.” All the color additive cards had the same final line: “The Food and Drug Administration regulates all color additives to ensure they are safe.” Two “fat replacers” cards explained they provide texture in reduced-fat foods; one introduced guar gum, which “comes from a shrub in the bean family,” and the other xanthan gum, “made by fermenting corn sugar.” “Emulsifiers,” described as creating smoothness and keeping ingredients from separating, included soy lecithin, which comes from soybeans, and sorbitan monostearate, found in whipped topping. And so on. The lesson plan instructed teachers to hand out a card to each student and challenge them to form groups based on the ingredient categories. Next, each group used chart paper to list the purpose of each additive in their category. Finally, the teachers invited students to come up with a motto for their category such as “less spoiling, less waste!” for the preservatives group or “we’re so smooth!” for the emulsifiers (Figs. 3–5).<sup>40</sup>



Figure 3. FD&C Blue No. 1 “Food Ingredient Card” from the lesson “It All Adds Up!” © 2012 Alliance to Feed the Future, [www.alliancetofeedthefuture.org](http://www.alliancetofeedthefuture.org). Text and design by The Education Center, Inc. The development of this curriculum is made possible, in part, by a grant from Farm Credit.

The second set of lessons, issued in 2013 to support Next Generation Science Standards, was also haunted by deficit thinking but, in addition, exemplified other aspects of food scientism. These lessons exhibited what Christopher Mayes and Donald Thompson refer to as “attitudinal scientism,” in which assumptions about the primacy of science are expressed and reinforced through the use of images, concepts, and practices associated with science.<sup>41</sup> As they explain in a *Journal of Bioethical Inquiry* symposium on scientism, such references are used by people to “add weight to arguments which they are advancing, or to practices which they



Figure 4. Guar gum “Food Ingredient Card” from the lesson “It All Adds Up!” © 2012 Alliance to Feed the Future, [www.alliancetofeedthefuture.org](http://www.alliancetofeedthefuture.org). Text and design by The Education Center, Inc. The development of this curriculum is made possible, in part, by a grant from Farm Credit.

are promoting, or to values and policies whose adoption they are advocating.”<sup>42</sup> The mascot for the Alliance lessons, “Professor G. U. Eatwell,” is a great example of this: the smiling woman scientist in a lab coat was technically associated with all the Alliance lessons but appeared most frequently in the Next Generation Science Standard series (Fig. 6). More importantly, the lessons enacted attitudinal scientism through their association with the Next Generation Science Standards and by taking the form of science lessons.

Consisting of just one lesson per grade plus classroom posters, the lessons supported science learning standards that had

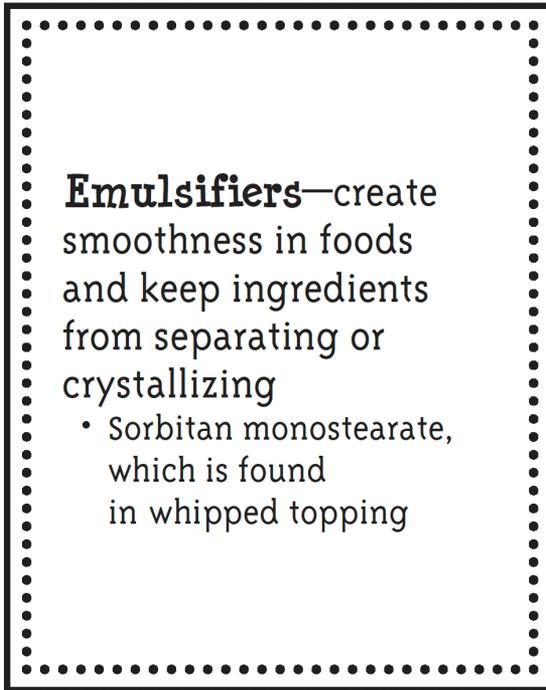


Figure 5. Sorbitan monostearate “Food Ingredient Card” from the lesson “It All Adds Up!” © 2012 Alliance to Feed the Future, [www.alliancetofeedthefuture.org](http://www.alliancetofeedthefuture.org). Text and design by The Education Center, Inc. The development of this curriculum is made possible, in part, by a grant from Farm Credit.

recently been developed by a consortium of twenty-six states, along with the National Science Teachers Association, the American Association for the Advancement of Science, and the National Research Council.<sup>43</sup> Each lesson plan noted the standard it was correlated with, described an “application,” and used the same introductory text, which read, “Farmers from around the world grow the food we enjoy each day,” and then listed the steps that “get food from the farm to the dinner table.” Following this, each presented an experiment in which students



Figure 6. One of many illustrations of Professor G. U. Eatwell that appear throughout the Alliance to Feed the Future’s lessons, this one is from “Watching Mold Grow.” © 2013 Alliance to Feed the Future, [www.alliancetofeedthefuture.org](http://www.alliancetofeedthefuture.org). Text and design by The Education Center, LLC. The development of this curriculum is made possible, in part, by a grant from Farm Credit.

learned about a particular food system technology, including carefully scripted instructions directing teachers to interpret the activity in terms of the technology’s benefits.

For example, a lesson for first-graders called “Watching Mold Grow” was designated as meeting an engineering design standard (K-2-ETS1-1) related to defining a simple problem that can be solved through the development of a new or improved object or tool. The “Application” section explained, “With food processing, foods stay fresher longer and less food is wasted. This experiment gives students a chance to see how preservatives extend our food supply.” The lesson began with the teacher initiating a conversation about how often students eat toast or sandwiches, asking what the one item is that they need to make both (*bread!*) and then asking if they have ever opened a bag of bread to find it moldy. The

teacher was told to “talk about the fact that scientists have created special ingredients called *preservatives*” that “keep food safe by preventing bacteria from growing, keeping food fresh longer, and preventing waste.” Next came an experiment in which the teacher put two pieces of bread—one with preservatives and the other without—into plastic bags, sprayed them with water, and had students record their observations every couple of days. The lesson plan provided questions for the teachers to ask about what students observed and the correct answers: “Why do you think one slice of bread has mold on it and the other doesn’t? *Preservatives help to keep food fresh longer. How do preservatives affect the amount of food we have? Less waste means we get to eat more of the food we grow; we don’t have to throw as much away.*”<sup>44</sup> Reflecting the food scientism of the Real Facts frame, the lesson both provided information to correct or prevent deficits (i.e., the facts about what preservatives do) and used scientific references, including the Next Generation Science Standards designation and the format of a science experiment, to “add weight” to the arguments, practices, and priorities the Alliance was promoting.<sup>45</sup>

The lesson for third-graders was called “Fortified for Health” and met an engineering standard (3-5-ETS1-2) involving improving “existing technologies or developing new ones to increase their benefits, decrease known risks, and meet societal demands.” Focusing on the benefits of fortification, the lesson recalls what Gussow said in her 1980 presidential address regarding the assumptions about the aims and trajectory of the food system that shape the questions people deem important to ask when faced with the facts about fiber (fiber is important to health, and processing removes fiber).<sup>46</sup> The application section explained that fortification adds vitamins and minerals to food to “make it more healthful and help people meet their recommended daily intake of different nutrients.” The lesson began with a discussion that

introduced the term “fortification,” noting that examples included adding fiber to promote digestive health and that the purpose of fortification is “to provide more nutrients in the foods people eat.” Next, the class discussed orange juice fortified with calcium or vitamin D and did a taste test to confirm that they could not tell the difference from regular juice. Then they discussed fortified breakfast cereal, focusing on iron and reasons bodies need it. Finally, the class conducted an experiment that involved crushing a bag of cereal fortified with iron, noting that the iron was not visible. The class then explored other ways to prove that iron had been added; after filling the bag halfway with water and letting it sit for a while, students watched as the teacher placed a strong magnet on the outside of the bag and observed the tiny black specks attracted to it.<sup>47</sup> Through a similar format and also meeting Next Generation Science Standards, students in others grades learned about the benefits of dehydration, ingredients that support special dietary needs such as diabetes and high cholesterol, technologies that allow food to be transported around the world, advancements in processing and packaging that allow food to be stored for longer periods of time, packaging technology that reduces food waste, and technologies that can extend the growing season such as hydroponics.<sup>48</sup>

Advocating for the safety and benefits of processing technologies and processed foods in the form of science experiments, with encouragement from Professor G. U. Eatwell, these lessons, along with those meeting Common Core standards, set out to fix knowledge and trust deficits. Shaped by the food scientism of the Real Facts frame, they treated the concerns of the public as a misunderstanding of science and framed the entire landscape of values, priorities, and policies involved in the food system as a matter of scientific knowledge, subject to scientific authority and value neutral. But, as Wynne argues and *Food, Inc.* made very clear, public

concerns about the uses of technology tend to be driven not by deficits but by questions about the values shaping innovation, who benefits, and the impacts across human, social, and cultural systems.<sup>49</sup> The Alliance lessons enacted antipolitics by treating these concerns as nothing more than deficits that could be corrected with the right information. They furthered this antipolitics in the service of a commercial imaginary of the public, in which the public was assumed to lack the skills and capacities to engage in shaping the food system and was seen solely as consumers. Asserting this imaginary over and against *Food, Inc.*'s vision, in which students were being prepared to act as engaged and knowledgeable agents within the food system, the Alliance lessons prepared students to embrace the products of the food system as future consumers.

#### FOOD AND HEALTH AS POLITICS

I now turn to the central content of the two curricula: stories about where food comes from and advice about what to do about health. Building on the preceding analysis, I look beyond surface differences in these accounts to explore how they were shaped by different assumptions about what food and health *were*. As the philosopher of food Michiel Korthals explains, competing food system frames are often shaped by overlooked differences in normative assumptions about what food *is*. He argues this is not only “an abstract definition issue, but also a power play that goes into the details.”<sup>50</sup> He goes on to describe what he sees as the material effects of ontological differences, or differences in “what counts as food.”

The answer to the question of what counts as food selects certain items and actions in the world and excludes others; the answer

discloses the world of food in a particular way and structures therefore normative ontological issues with wide reaching institutional and cultural implications. These ontological assumptions do not only regard perceptions, but ways people act upon an event that is seen as food, build networks of food, solve problems, and connect food with other events in the world.<sup>51</sup>

In other words, the meanings of food that animate competing food system frames such as Real Food and Real Facts matter because, usually without being recognized or acknowledged, they determine the kinds of questions and expertise that matter, the courses of action that seem sensible, and the actors who are deemed relevant for solving food system problems.<sup>52</sup> Each of the examples Korthals uses to explain his argument—biofortification, obesity, nutrigenomics—makes a further point about the relationship between what counts as food and what it means to pursue health; they are inseparable. For example, in the case of nutrigenomics, food is understood in terms of disease prevention and health and therefore is a state preceding the possibility of disease in which food choices can reduce risk. Other assumptions follow from this, including that minimizing disease risk through food choices is an individual responsibility.<sup>53</sup> The work of the theorist Annemarie Mol has also shown that what counts as food varies in different dieting techniques and is related to different understandings of the body.<sup>54</sup> Like the imaginaries of the public discussed above, the versions of food and health animating the *Food, Inc.* and Alliance curricula were in one case intrinsically political and in the other decidedly antipolitical.

In the *Food, Inc.* Discussion Guide, food was understood as a complex set of interconnections. What counted as food in the lessons was not simply matter that humans consume to sustain life and growth (dictionary definition) or the products of a food system

designed to deliver nutrition, convenience, and pleasure (Alliance understanding, as discussed below).<sup>55</sup> Food was not a discrete bounded object at all but inextricably and fundamentally connected to broader systems—economic, cultural, social, political, environmental—and thus the welfare of other humans and non-human animals. The film and the lessons focused on these connections. The first chapter, for example, told the story of where food comes from by looking at connections between human and nonhuman animal welfare, with questions exploring the kinds of rights animals should have. The next explored links between corn subsidies, the cost of meat, confined animal feeding operations (CAFOs), and the proliferation of both dangerous forms of *E. coli* and regulatory laxity regarding those dangers. A subsequent chapter connected those same policies to disproportionate rates of obesity and diabetes in low-income communities via the proliferation of cheap corn, soy, and wheat-based products (“bad calories”), while prices for healthier produce were, for many, prohibitive.

The point of revealing the connections that made up this version of food was to explicitly politicize food, the food system, the actions of consumers, and the actions of those working within the food system. In keeping with the public health orientation and ecological thinking of the Real Food frame, the lessons made it clear that the point of understanding “where food comes from” was to reveal “costs” long buried by dominant but mistaken notions of food that failed to include such connections and their consequences. The first chapter explained that “while industrially produced food appears inexpensive, the price we pay at the cash register does not reflect its true costs” and pointed to the “costs our society bears” elsewhere from factory farming, including air and water pollution, health problems, government subsidies, and animal suffering.<sup>56</sup> Chapter 5, “In the Grass,” also emphasized

that “cheapness comes at a price” and talked about how workers bear unseen costs in the form of dangerous working conditions, low wages, little job security, and the threat of deportation. The Focus Question was, “When deciding what to eat, how much should we consider the workers who pick, process and transport it?”<sup>57</sup> The following chapter, “Hidden Costs,” elaborated these themes, explaining that “by focusing on cost and abundance, our society may be trading off safety, health, environmental quality, and other things we value while promoting large profit-oriented corporations at the same time.”<sup>58</sup> Here the Focus Question was, “Should price be the most important force behind our food industry? Why or why not? How might our food system change if it was driven by other values, like health or environmental sustainability?”<sup>59</sup> The lesson included an activity in which students placed themselves on a scale between “I’ll buy what I like to eat, no matter who makes it” and “I’ll buy food only from companies whose values I agree with” and wrote about their positions.<sup>60</sup>

This inherently political understanding of food as comprising its connections extended to how the Discussion Guide talked about health. It did not refer to individual biomedical status, and teaching students what to do about health did not focus on the health outcomes related to individual eating habits. In back-to-back chapters focusing on health, one about food safety and the other nutrition, the Discussion Guide taught instead that health was a social product and what was to be done about health had to do with changing systems and structures. Chapter 3, “Unintended Consequences,” focused on food safety through the heart-wrenching story of a mother whose two-year-old son, Kevin, died after eating a burger tainted with *E. coli*, and who had since engaged in a relentless uphill battle to secure a safer food environment through regulatory reform. The film presented the

dangers of *E. coli* as the result of policy (subsidies) and practices (feedlots, slaughterhouse speed, industry consolidation) that led to the proliferation of a particularly life-threatening strain (*E. coli* O157:H7) while also increasing the likelihood of any given burger containing tainted meat. It argued that regulatory agencies were controlled by the same companies that were supposed to be scrutinizing them, and Kevin's mother says, "Sometimes it feels like industry is more protected than my son." In the film Polan explained that each time the industry encounters systemic problems it turns to "high tech fixes that allow the system to survive" rather than rethinking how to make the system work better, and the chapter ends with unflattering scenes of a factory using ammonia and ammonia hydroxide to produce pathogen-free meat, "through a marriage of science and technology."<sup>61</sup>

The Discussion Guide for this chapter led students to think about where food safety comes from and whose job it was to ensure it. The Focus Question was, "Who's responsible for keeping our food safe?" Deepening Questions prompted students to think about the role of various parties in Kevin's death, including meatpackers, federal court judges, restaurant workers, and the people who started feeding corn to cows in the first place. Activities included reflecting on the question, "Do we have the right to assume our food is safe? If so, who do you think should be responsible for ensuring its safety?" The "Ideas for Action" section suggested inviting students to think about a rule at their school or in their community they would like changed and consider who has the authority to make the change, what the process would be, and what they would need to promote the change. It suggested the teacher "help students develop an action plan for working toward that change."<sup>62</sup>

The following chapter, "The Dollar Menu," focused on dietary health through the story of a family whose ability to eat healthy

foods was constrained by external conditions, including their jobs, limited income, food policy, and the actions of the food industry. The film chapter begins with the family picking up burgers, chicken sandwiches, and sodas from a fast-food drive-through window. As they eat in their car the mother explains she feels guilty giving this food to her kids because she knows it is unhealthy but doesn't have time to cook because of workdays stretching from 6 a.m. to after 9 p.m. and budget constraints that mean the family must choose foods that fill them up cheaply. In the next scene they walk through the produce section of a grocery store agonizing about the cost of the broccoli and pears, which they do not buy because they are so much more expensive than a fast-food meal. Pollan explains that this is no accident because "bad calories" from commodity crops such as corn, soy, and wheat are subsidized, resulting in income level being one of the biggest predictors of obesity. He then describes a food environment that "presses our evolutionary buttons" with foods engineered to satisfy the innate desire for salt, fat, and sugar. The film then returns to the family, and viewers learn the husband is diabetic and the family struggles with choosing between "paying for his medicine to be healthy or buying vegetables to be healthy," with the mother asking, "So which one should we do?" The next scene follows the daughter to a meeting for teens run by the California Center for Public Health Advocacy in which every participant raises a hand in response to a question about whether they know anyone in their family who has diabetes, and the facilitator talks about how Type 2 diabetes is "affecting our community in epidemic proportions."<sup>63</sup>

The Discussion Guide for this chapter explored the contest between a public health-oriented, environment-focused view of health and a dominant "personal responsibility" frame

emphasizing individual bodies and choices, as discussed in chapter 1. Introductory text explained:

Some say that food choices fall under the realm of personal responsibility; according to this view, what we buy and eat is a choice, and individuals should be responsible for making healthier food choices. Others argue that healthy food choices should be available to everyone and not just those with means; according to this view, people shouldn't have to choose between healthful food and medicine, for example, and the farm subsidy system should be restructured to provide healthier foods for all.<sup>64</sup>

Advocating for the Real Food frame's sociocultural understanding of dietary health, the Focus Question asked, "Should access to healthy food be a right for everyone?" Deepening Questions prompted students to think about how government policies affected the types and costs of available food, how the cheap cost of processed food affects low-income families, and whether cheap, fast food is really cheap for everyone. Like the story of a child who innocently ate a tainted burger and the mother who unknowingly fed it to him, the scenes of the family agonizing over the cost of broccoli compared to burgers brought assumptions about what counted as food and health into stark relief; food was a product of interconnected systems, and these systems, not individuals acting within them, created the conditions for both health and threats to it. The Discussion Guide mentioned safe handling techniques and encouraged making good food choices, but when it came to what students should do about health the emphasis was on politics, not using thermometers, counting calories, or taking more steps.<sup>65</sup>

#### FOOD AND HEALTH AS ANTIPOLITICS

As Korthals notes, "The answer to the question of what counts as food selects certain items and actions in the world, and excludes

others.”<sup>66</sup> In the Alliance lessons, food was not understood as comprising connections; it was a bounded object, produced by the food industry to deliver nutrition, pleasure, and convenience to consumers.<sup>67</sup> The stories Alliance lessons told about where food comes from, therefore, did not involve tracing connections and unveiling hidden costs. They presented the journey from farm to fork as a linear process that began on the farm and ended not at symbolic “vote” by the public for the kind of food system it wanted but as a literal fork in the hand of a satisfied consumer.

For every grade level in the Common Core series, a unit called “Farm to Fork” included at least one sequencing exercise that traced a linear journey through a series of steps leading from the farm to the fork, or plate. The lesson for grades K–2 began with the teacher writing “farm,” “production plant,” “store,” and “fork” on the board and asking students to write or draw their favorite food on a sticky note. Then the teacher “drove” some of the notes through the phases, discussing each step.<sup>68</sup> In another lesson for the same grades, students received a worksheet with images of the different steps to cut out and glue in the correct order: apples growing in an orchard, workers making applesauce, a store selling applesauce, and a girl eating applesauce.<sup>69</sup> Students in grades 3–5 also went through a sequencing exercise, gluing cards to show the correct progression of milk through farm, production plant, store, and “your plate,” then discussing how a food they like moves through the same stages (Fig. 7). Afterward, they created cards with illustrations of their favorite foods and cards showing where those foods come from (e.g., eggs on one card, chickens on the other) before playing a game matching the products to their sources and, finally, decorating an envelope with the words, “What Comes from the Farm? Everything!,” to store the cards in.<sup>70</sup>

In this version of where food came from, the farm was the first step in a linear process rather than a node within an imagined

matrix of connections. In *Food, Inc.* farms were places where the inevitable interconnections of the food system erupted in suffering for animals and humans: dead chickens chucked into dumpsters, “downer” cows prodded toward slaughter, undocumented meatpackers arrested in company housing, dispirited farmers crushed by debt and intimidated by lawsuits. In the Alliance lessons farms were much happier places, represented by a familiar repertoire of pastoral images.<sup>71</sup> The sequencing exercise for grades K–2 included a photo of a smiling farmer in front of a tractor. The “farm” card in the sequencing exercise for grades 3–5 showed three cows grazing alongside a white picket fence, a storybook image of a barn with silos, and a windmill in the distance (Fig. 7). A lesson explaining that farmers “juggle lots of tasks to bring food to our table” was illustrated with a smiling Professor G. U. Eatwell holding a pitchfork in one hand and a bucket in the other.<sup>72</sup>

Alongside romanticized, pastoral images of silos, picket fences, and happy farmers, the Alliance lessons celebrated the modern technologies used on the farm. The lessons reflected the productionist assumption that feeding a growing population was a technological challenge that could be met by producing more food rather than a social, economic, and political challenge that would require others kinds of solutions.<sup>73</sup> They also reproduced a familiar strategy for dissuading criticism of novel agricultural technologies, especially genetic engineering, by portraying them as urgently necessary for meeting the world’s growing food needs.<sup>74</sup> The Alliance taught that modern production technologies, including genetic engineering, were necessary tools that should be embraced by the public, not debated. This was illustrated, for example, by a lesson for students in grades 3–5 with a sidebar explaining farmers would need to double food production by 2050 to feed nine billion people worldwide. The lesson started by noting that one way farmers feed a lot of people is by using

**Farm to Fork Cards**

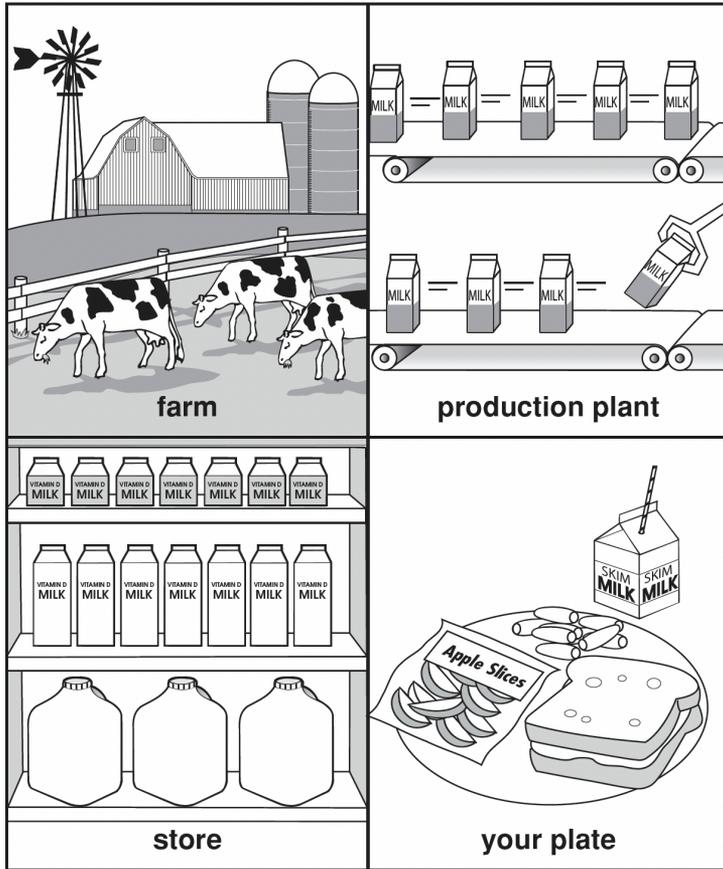


Figure 7. In the lesson “All in Order,” students cut out these “Farm to Fork Cards” and placed them in the right sequence. Also note the pastoral imagery on the “farm” card. © 2012 Alliance to Feed the Future, [www.alliancetofeedthefuture.org](http://www.alliancetofeedthefuture.org). Text and design by The Education Center, Inc. The development of this curriculum is made possible, in part, by a grant from Farm Credit.

“modern farm equipment.” After showing pictures of tractors, plows, seed planters, and cultivators the teacher then explained, “Farmers also work to increase the amount of crops they raise in other ways, too. This is important because there may not be enough land, time, or resources to continually plant more crops

to feed a growing world.” Then the teacher introduced the term “biotechnology,” breaking the word into pieces (*bio-*, *techno-*, and *-ology*). The lesson plan instructed the teacher to “lead the students to see that this is a scientific process of producing plants and animals that are faster growing, yield more food, and resist disease (and therefore reduce pesticide usage). It is a way for farms to ensure a productive crop to meet the food needs of the world.”<sup>75</sup>

Moving along a linear journey from the farm to the plate, Alliance lessons also stopped at the production plant, where processing takes place. Animated by an understanding of food that focused on benefits for consumers, rather than “hidden costs” borne by consumers and others in the food system, the lessons emphasized the ways that processed food was better than fresh. Many lessons set up comparisons between processed and fresh foods to highlight the benefits of processing for consumers in terms of health, convenience, and enjoyment. In one, the teacher left a piece of broccoli out for several days and then displayed the “dried-out and discolored broccoli” along with some frozen broccoli, explaining that both were purchased on the same day. Students drew and recorded their observations and then the teacher explained, “Frozen vegetables are just as nutritious as fresh, and you can keep them longer.”<sup>76</sup> In another activity students brainstormed “the steps you must take before eating a carrot,” and the lesson plan instructed the teacher to “lead them to conclude that first it must be washed, then peeled, then cut” and explain, “baby carrots are a quick and easy way to eat carrots” and are “considered a convenience food.”<sup>77</sup> A unit called “What are Processed Foods?” for grades 3–5 included a game of charades in which students wrote out the steps of preparing a processed food and the same food from scratch, for example, “eating a frozen cherry pie / baking a pie from scratch,” and then acted out the steps. The lesson plan explained, “Students will see that while cooking from

scratch can be fun and healthy, processed foods also offer healthful choices and are big timesavers for busy families.”<sup>78</sup>

With food viewed as a discrete object that moved through a linear production process ending with consumption, the focus of lessons about health was how individuals interacted with food once it arrived on the table. Not only food but also the body was conceived of much more discretely than in the *Food, Inc.* lessons, as a bounded biomedical entity rather than a socially produced one. Pursuing health—for this body, through this version of food—was thus an individual biomedical matter that required personal responsibility and expert guidance. When it came to both food safety and nutrition, the lessons provided scientific information and taught students to take responsibility for their own health by using it.

Whereas *Food, Inc.* addressed food safety threats as a product of policy and values that required systemic change, the Alliance lessons treated them as technical problems that could be managed with scientific information and personal responsibility. The lessons asserted that regulators were doing their job to keep food safe and provided the basic scientific information individuals needed to do theirs. A lesson for third- through fifth-graders called “Safe and Delicious” began by explaining, “Our modern food production system has many rules and regulations to ensure that food is farmed, processed, packaged, stored and delivered in a safe manner.” The class then discussed the places pathogens can enter the system, and the teacher explained that “one job of food producers and safety inspectors is to detect pathogens growing in foods to ensure people don’t get sick.” The lesson concluded with instructions for managing pathogens at home, such as “Meats must be cooked to specific temperature to ensure they are safe” and “Never serve cooked food on the same plate that held the raw meat.” A unit dedicated to food safety for sixth- through

eighth-graders included two lessons teaching students about the steps they should take at home to prevent food poisoning, such as remembering to “clean, separate, cook and chill,” using a food thermometer, and rinsing raw produce before using it.<sup>79</sup>

Like food safety lessons, those focusing on dietary health emphasized scientific guidance and individual responsibility, pushing back against the Real Food frame’s challenge to both the authority of scientific nutrition and the personal responsibility “blame frame” for obesity and other diet-related diseases.<sup>80</sup> With food understood as the nutrition-, pleasure- and health-delivering products of the food system, students learned that health was a matter of balancing these benefits. The lessons foregrounded the importance of understanding the basics of nutrition and using expert guidance to make healthy choices. Alliance lessons asking the question, “What should we eat?,” turned to the USDA’s science- and industry-backed MyPlate dietary guidance: an image of a plate with distinct nutritional categories, some slightly larger than others, designed to show how to choose a balanced diet.<sup>81</sup> Lessons taught how to understand and use the guide through activities such as placing pictures of foods into the correct sections of a blank MyPlate diagram.<sup>82</sup> Even when using MyPlate was not the focus, the lessons were shaped by its logic, for example, teaching students to think about food in terms of the categories that MyPlate used (fruits, vegetables, grains, proteins, and dairy) and often encouraging them to look to “packaged and convenience foods” to help them choose a balanced diet (Fig. 8).<sup>83</sup>

Balance was also the focus in lessons about how to avoid over-eating or eating too much of foods that were not health promoting. Pushing back against the public health framing of obesity taken up by the Real Food frame and in the *Food, Inc.* Discussion Guide, Alliance lessons taught that avoiding negative health outcomes

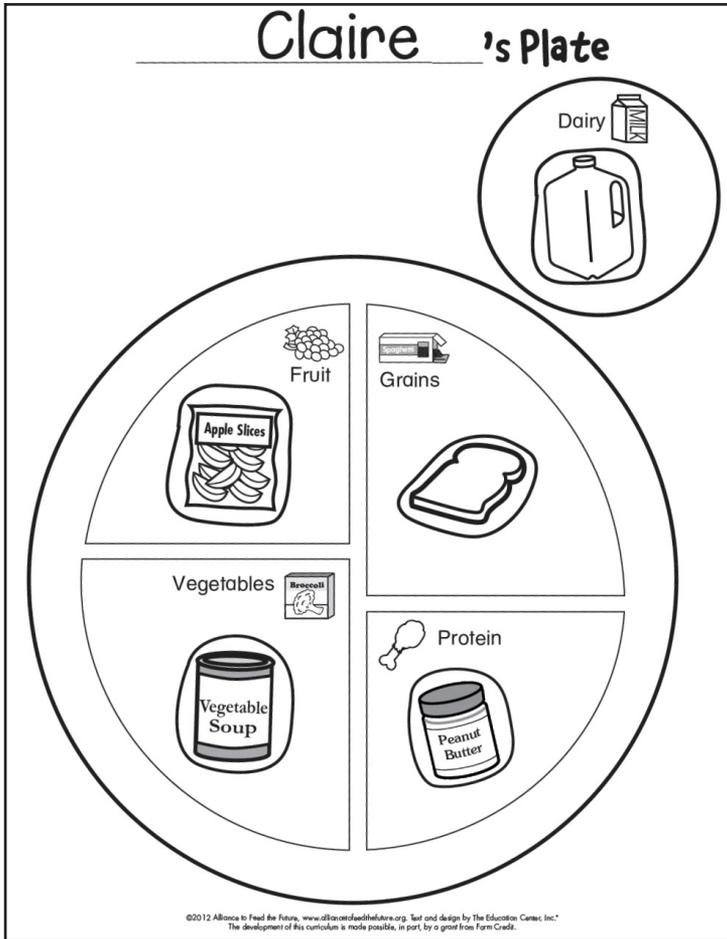


Figure 8. Illustrated example from the lesson “A Full Plate” showing how students should glue pictures of foods onto the correct section of a plate that is divided and labeled like “MyPlate.” The instructions note that teachers should encourage students to include fresh, frozen, canned, and packaged foods. © 2012 Alliance to Feed the Future, [www.alliancetofeedthefuture.org](http://www.alliancetofeedthefuture.org). Text and design by The Education Center, Inc. The development of this curriculum is made possible, in part, by a grant from Farm Credit.

was a simple matter of information and willpower. They emphasized “energy balance,” or understanding how to balance “calories in” and “energy out” by being active and understanding and choosing the proper portion sizes.<sup>84</sup> For example, in “Perfect Portions” for grades 3–5 the teacher presented a chart explaining the correct portion size for a variety of foods and had a volunteer talk about a time they ate “portions that [were] too large, especially when students were not hungry anymore.” The students then sorted cards showing specific amounts of different foods (3 cups spaghetti, 10 oz. hamburger, 1 waffle, 2 bagels, etc.) into two categories: “proper portions” and “large portions.”<sup>85</sup>

Lessons also taught that some foods were not meant to be eaten often or in large quantities and told students to balance these “sometimes foods” with more healthful choices. For example, in a lesson for grades K–2 the teacher gave each student a card with a food on it (apple slices, salad, eggs, milk, frozen carrots, hot dogs, cake, cookies, and chips, etc.) and asked them to decide if the food on their card would be a good choice for breakfast, lunch, or dinner. Then the teachers explained that the foods on the rest of the cards were “considered ‘sometimes’ foods, meaning they are ok to eat occasionally, after a nutritious meal,” and led students through a series of activities, including a discussion about how sometimes people snack even if they are not hungry. The lesson ended with the teacher encouraging students to become “‘smart snackers’ and to ask themselves if they are truly hungry before they reach for a ‘sometimes’ food.”<sup>86</sup>

Goal setting and self-tracking activities reinforced the message that health was a product of nutritionally informed individual choices. A page designed to be sent home to families of third-through fifth-graders, for example, described the many kinds of balance students learned about in the lessons and included

prompts for discussions at home about food labels, portion sizes, MyPlate, and so on. It also included a pledge card with boxes to check—"I'm eating balanced meals" and "I'm balancing the calories I eat with the energy I use"—followed by a signature line for parents and students (Fig. 9).<sup>87</sup> Sixth- through eighth-graders tracked their eating and activity for a week, wrote paragraphs summarizing how they were doing, and discussed how to handle any challenges. If students were not eating enough fruit, for example, the lesson instructed the teacher to suggest "trying prepackaged apple slices" or "pop-top cans of sliced peaches or pears." The lesson ended with students setting goals, such as "maintain a healthy weight," and listing what they would do to reach that goal, for example, "eat healthful snacks" and "ride my bike more often."<sup>88</sup>

Through these lessons the Alliance reasserted both the personal responsibility frame for dietary health and the primacy of scientific nutrition as a way of knowing about food. The emphasis on nutrition reflected what Scrinis calls the ideology of nutritionism, in which what matters about food is limited to what can be known about interactions between nutrients and the biomedical body. As he notes, environmental, social, and cultural dimensions of food cannot be accounted for in this worldview.<sup>89</sup> In this sense, nutritionism itself—and the reassertion of nutritionism in these lessons—was a form of antipolitics because it narrowed the assessment to only those factors that could be known through the expert authority of nutrition science. Furthermore, nutritionism provided a foundation for the view that individuals are responsible for their own dietary health, which is also a form of antipolitics because it removes choices about what to eat from the contexts that shape and constrain them. Mayes and Thompson note that the emphasis on individual responsibility for dietary

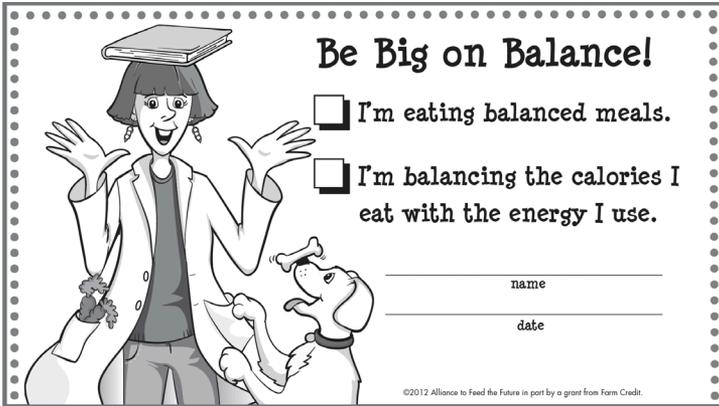


Figure 9. An example of a goal-setting activity reinforcing the message that health is a product of nutritionally informed individual choices, this “Big On Balance” pledge card was to be sent home and signed by families. © 2012 Alliance to Feed the Future, made possible in part by a grant from Farm Credit.

health outcomes stems from a narrow focus on what science can know about food, which they call “nutritional scientism.”<sup>90</sup> They explain that a narrow understanding of food in terms of nutrients leads to individuals becoming both dependent on nutritional authority to inform their choices and understood as responsible for their own health through informed choices: “Put simply, the story that foods are comprised of chronic disease-causing or disease-preventing nutrients and that individuals who choose to eat those foods are responsible for their own health outcomes is made possible through the biopolitical use of nutritional scientism.”<sup>91</sup>

Alliance lessons telling the story of where food comes from and teaching students what should be done about health didn’t just contest the Real Food frame by offering students competing information about production practices or different dietary advice. They presented students with a fundamentally incom-

mensurate understanding of what food and health *are*. Pushing back against the Discussion Guide's politicized version of food, the Alliance lessons reasserted a version of "what counts as food" that was removed from connections and thus politics. Resisting Real Food's reframing of health as a product of a connected system, the lessons reasserted the primacy of scientific nutrition and personal responsibility. As Korthals shows, the meanings of food and health that animate competing food systems frames matter because, though often unacknowledged, they determine the kinds of questions, information, expertise, and actions that make sense.<sup>92</sup> In this case, different versions of what counted as food and health shaped the stories about where food comes from and advice about dietary health that each curriculum provided. They were also inextricable from how *Food, Inc.* and the Alliance to Feed the Future imagined the roles they were preparing students to play in the food system.

Ultimately, this was not a contest over the facts about food production or dietary health but over the imaginaries that shaped which facts mattered and who had the agency to act in relation to them. The *Food, Inc.* Discussion Guide imagined a public acquiring knowledge to participate responsibly in dialogue and decisions about the food system, including the assessment and governance of technology. The Alliance to Feed the Future lessons contested this intrinsically political imaginary of the public and the ideal form of the science-society relationship it reflected.<sup>93</sup> Shaped by the food scientism of the Real Facts frame and its intrinsically apolitical imaginary of the public, the Alliance lessons reframed public concerns as scientific knowledge deficits and embraced the classroom as a place to train informed and willing consumers.