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| **P R O J E C T O V E R V I E W** |
| **Name of Project:** Food Systems Investigation | **Duration (days):** 4 weeks, 2 days/week | **Written For:** [x] Period Schedule [x] Trimester [ ] Block Schedule [ ] Semester |
| **Subject/Course:** JAG | **Teacher(s):** Lauren Darby | **State:** Iowa | **Grade Level(s):** [ ] 7/8 [ ] Alternative Ed. [x] 9/10 [ ] Out of School [ ] 11/12 [ ] Any |
| **Other Subject Areas to be Included:** Gov’t, Econ, Science, Sociology |
| **Project Summary**What will the students be doing? What challenges will they face? What is the purpose? | Students will learn about food systems and how they operate globally and locally. They will become familiar with the complexity of systems and players that bring raw materials to our plates and the inequalities that these systems create or expose. They will choose an issue and investigate it, becoming experts and developing a local service project that will seek to ameliorate a food-related challenge in the community, while also learning about different careers in agriculture, food services, and food policy. |
| **Driving Question**What problems/questions will students be learning about? | How do we participate in a global food system? What can we do to make sure that all members of our community have access to healthy food? |
| **Entry Event**How will you introduce the topic in an engaging way? | Bring in a couple of complex, processed foods (granola bars are an easy one). While the students eat, they must figure out, in small groups, the provenance of each ingredient. They will use the provided “stickers” to map every part of the world where that food likely came from. The next class, we will brainstorm questions, concerns, and opportunities the map inspires. |
| **Public Product**How will students be able to demonstrate what they have learned? | **Team:**In small groups, students will develop presentations that they deliver to one another to learn about different aspects of food production.They will meet with local stakeholders to learn about how these aspects play out in our area.They will conduct a service-based project with a local organization to solve one of the challenges to food security in our area. | **Presentation Audience**[x] Class[ ] School[x] Community[x] Experts[x] Web[ ] Other: Click here to enter text. |
| **Individual:** See the formative and summative assessments listed below.  |

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| **P R O J E C T O V E R V I E W** |
| **Competency Attainment**What competencies should students understand, know, and be able to do as a result of this PBL? | **What competencies will you introduce in this project?** (Level 1):Competencies will vary based on the type of project students elect to do.D.21 Comprehend verbal communications.D.22 Comprehend written communications.D.23 Communicate in writing.D.24 Communicate verbally.D.25 Perform mathematical calculations.G.59 Prepare a short- and long-term personal budget.**What competencies will be in progress during this project?** (Level 2):E26    Demonstrate team membershipE27    Demonstrate team leadership.E28    Deliver presentations to a group.F35 Demonstrate ability to assume responsibility for actionsH61    Taking initiative and being proactive **What competencies will students be able to demonstrate mastery by the end of the project?** (Level 3):C17 Time management G.41 Apply critical thinking skills.G.55 Apply the problem-solving process to complex problems.Additional competencies adapted from Iowa Core to complement the general education curriculum.  |
| **Formative Assessments** (Check all that apply or add your own)How will you assess student learning throughout the PBL? | [ ] Checklists | [ ] Notes | [x] Plans/Outlines/Prototypes |
| [x] Concept Maps | [ ] Online Test/Exams | [ ] Quizzes/Tests |
| [x] Journal/Learning Log | [x] Practice Presentations | [x] Rough Drafts |
| [x] Other (see PBL Library for ideas): Socratic Seminar |
| **Summative Assessments**(Check all that apply or add your own)How will you assess student learning at the completion of the project? | [ ] Essay | [x] Oral Presentation w/Rubric | [ ] Peer Evaluation |
| [ ] Multiple Choice/Short Answer Test | [ ] Written Final w/ Rubric | [x] Self-Evaluation |
| [ ] Other (see PBL Library for ideas): Click here to enter text. |
| **Reflection Methods**(Check all that apply or add your own)How will you provide intentional opportunities for students to reflect on learning throughout the PBL? | [x] Journal/Learning Log | [ ] Fishbowl Discussion | [x] Survey |
| [ ] Whole-Class Discussion | [ ] Focus Group |  |
| [ ] Other (see PBL Library for ides): Click here to enter text. |

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| **P R O J E C T O V E R V I E W** |
| **Career Association**How will you build student leadership into the PBL? Think of natural ways to build leadership, extend ownership, and empower your students through this project. | **Which CA Goal(s) will be covered in this PBL?** [x] Leadership[x] Community Service[x] Career Prep[x] Civic Awareness[x] Social Awareness[ ] Fundraising[x] Other: Public Relations | **What roles will your officers lead in planning?**Leadership: Practicing project management skillsCommunity Service: Developing and implementing a food-related service project Career Prep: Working with local business leaders to better understand their work Civic Awareness: Working with local lawmakers to attend events and learn more about policymaking Social Awareness: Coordinating (with teacher support) events to which anyone outside of the class is invited Fundraising: Click here to enter text. Other: Because we have a “public relations committee,” this officer is responsible for documenting our efforts and with their team writing a press release and managing our Instagram and Snapchat stories to bring awareness to the student body about what we do in JAG. |
| **How will you incorporate committees, or the rest of your class?** Leadership: Click here to enter text. Community Service: Click here to enter text. Career Prep: Click here to enter text. Civic Awareness: Click here to enter text. Social Awareness: Click here to enter text. Fundraising: Click here to enter text. Other: Click here to enter text. |
| **Which Career Pathways will be incorporated into this PBL?** | **Which employers/businesses will you work with throughout this project?**Major grocery chainUniversity geography departmentSmall farmersRestaurant that sources food locallyMember of County Board of Supervisors/other applicable local government body that oversees land and resource useFood-related non-profit |
| [x] Agriculture, Food & Natural Resources[ ] Architecture &Construction[ ] Arts, A/V Technology &Communications[ ] Business Management &  Administration[ ] Education & Training[ ] Finance[x] Government & Public Administration[x] Health Sciences[x] Hospitality & Tourism | [ ] Human Services[ ] Information Technology[ ] Law, Public Safety, Corrections &  Security[ ] Manufacturing[x] Marketing[ ] Science, Technology, Engineering &  Math[x] Transportation, Distribution &  Logistics |
| **Employer Engagement Strategy** How will you utilize employer connections to increase relevance? | **Circle One:**[x] Meet and Greet[x] Classroom Presentation[ ] Project Observation[ ] Skype/Webinar[ ] Mock Interview[ ] Other: Click here to enter text. | **Circle Two:**[x] Service Learning[x] Company Tour[ ] Mentoring[x] Co-Develop PBL/Scaffolding[ ] Critique of Public Product [ ] Other: Click here to enter text. | **Circle 3:**[ ] Job Shadow[ ] Limited Time Work Experience[ ] Pre-Apprenticeship[ ] Internship/Apprenticeship[ ] Summer Job[ ] Other: Click here to enter text. |

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| **P R O J E C T O V E R V I E W** |
| **Scaffolding***\*this is a high level overview, details can be found in the Student Learning Guide*What lessons, exercises, and activities will be integrated into the project that build a student’s understanding and experience with the content? How is this scaffolding be leading students towards the Driving Question and ultimately to a high-quality Public Project? | **Prior to the Project Beginning:**(What do you need to do to prepare for the project to begin?)(What prep does teacher need to do to have enough information to teach the subject) Students should have strong project management skills in order to be successful on this PBL. It is not advised to use for first-time PBL students.**Launching the Project:**(How will you SPARK their attention?)Using the example of a food product that they interact with regularly; the students will explore where various ingredients come from and the implications of the map they create.**Project Navigation:** (What are the main ideas and lessons you will need to take from the first day, through completion of the PBL?)Main ideas to keep in mind - there are many interconnected layers and issues that affect our food production, distribution, and consumption. Within those layers are many opportunities for employment and challenges that they will be called upon to solve. |
| **Accommodations**What modifications will you need to make to fit the needs of all students in your classroom? | **Adjustments may be made based on 504 or IEP accommodations** | **Revision & Critique**How will you provide opportunities for students to review their work and provide feedback for improvement?  | Differentiations will be made to support students who are currently at different skill and developmental levels, with extra challenges built in for those interested in taking a leadership role and increased scaffolding for those who need it.Some suggestions for increased scaffolding include structured notes, adapted readings for different lexiles, subtitles on films, strategic grouping, using multiple modalities to reach students in ways that they favor, allowing options for those who need to work independently on a particular day. |
| **Resources**How will you incorporate business professionals, employers, community leaders, organizations, technology, funding and other resources to implement this project?  | **WHO will you be incorporating?**[ ] School Staff[x] Business Professionals/Employers[x] Community Leaders/Organizations[ ] Technology [ ] Other:  | **HOW will you be incorporating? (please describe)** Small farmers Field trip to farm or orchardRestaurant that sources food locally Grocery store buyer Member of County Board of SupervisorsFood-related non-profit  |

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| **S T U D E N T L E A R N I N G G U I D E** |
| **Project Title:** Food Systems |
| **Driving Question:** How do we participate in a global food system? What can we do to make sure that all members of our community have access to healthy food? |
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| **Description of Activity/Product**What will students, specialists, guests, etc. be doing during this portion? | **Learning Outcomes/Targets**What knowledge, understanding & success skills will students need to successfully complete this portion? |
| [x] Formative[ ] Final Product | Entry event - hand out different complex processed food products to students in groups of no more than 4. Challenge the students to identify and find the likely source of each ingredient. They should then place a sticker on the map (see Resource page for sticker designs) | Content:TSW begin to explore the complexity of our global food system and the sources of key ingredients.Skills:TSW be able to read an ingredient label, conduct a search for information on the internet, and use a map to find a location. |
| [x] Team[ ] Individual |
| [x] Formative[ ] Final Product | Entry event continued - Returning to the map, have students discuss in their groups and jot down in a T-chart what they know about what they are looking at it and what they want to know more about. We will then hang the T-charts on the wall and students will have the chance to walk around and read each other’s questions, adding checkmarks to those that they have as well to construct a master list. | Content:TSW come away with basic knowledge of the complexity of our global food system, and that many places, people, and politics are involved in getting food to their plates.Skills:TSW practice working in teams, organizing information, taking turns, drawing information from a map |
| [x] Team[x] Individual |
| [x] Formative[ ] Final Product | Hungry World - Now that we know about how interconnected different parts of the world are by ingredients, what are the challenges of that? Play the Oxfam “Winners & Losers” game and debrief (instructions and materials provided). | Content:TSW know some of the challenges faced by farmers and the barriers to success that are felt unequally around the globe.Skills:TSW practice working in teams, problem solving, and communication, as well as drawing information from a text and using it to drive decision-making. |
| [x] Team[ ] Individual |
| [x] Formative[ ] Final Product | Field trip to local orchard or other small farm operation, where students can tour the farm, learn about the products being grown/raised, the resources needed to operate a farm, what it takes for a small farm to remain viable, the kinds of jobs are created by local farming, and environmental concerns for the farm’s long-term sustainability. Have students break into smaller groups to complete different tasks, with adult supervision, that are done regularly on the farm. | Content:TSW explore more deeply the local needs and impact of food producers. They will analyze how environmental and cultural characteristics of various places affect economic development and behavior.Skills:TSW  |
| [x] Team[x] Individual |
| [x] Formative[ ] Final Product | Groups, created by class, by committee, or however works, do inquiry into specific challenges related to climate change, logistics & transportation, farm policy, resource management, water, and labor. Review or introduce the process of determining the reliability of sources. | Content:TSW be introduced to a specific area of inquiry related to food systemsSkills:TSW gather relevant information from multiple sources representing a wide range of views while using the origin, authority, structure, context, and corroborative value of the sources to guide the selection. |
| [x] Team[x] Individual |
| [x] Formative[ ] Final Product | With the support of the school librarian, have students conduct research on the internet to find more information about their topic. Depending on needs and experience of the students, they may require extra scaffolding in the form of a worksheet to help guide their inquiry (bibliography guide provided). | Content:TSW deepen knowledge of a specific area of inquiry related to food systems and evaluate how economic globalization and the expanding use of scarce resources contribute to conflict and cooperation within and among countries.Skills:TSW practice using search terms, gathering relevant information from multiple sources representing a wide range of views, creating a bibliography using APA format. |
| [x] Team[x] Individual |
| [x] Formative[x] Final Product | With their groups, each student will create a slide on Google Slides to create a presentation with a bibliography. Presentations will undergo peer review and teacher review before being delivered to their peers (see checklist in resource section). | Content:TSW deepen knowledge of a specific area of inquiry related to food systems.Skills:TSW practice using Google Slides to appropriately and effectively transmit information. TSW construct explanations using reasoning, correct sequence, examples, and details with significant and pertinent information and data.TSW critique the use of claims and evidence in arguments for credibility and receive feedback and use it to improve their presentations. |
| [x] Team[ ] Individual |
| [x] Formative[ ] Final Product | Students will vote, either as a class or as a program, on a single challenge to focus on locally. Depending on the selection, they will need to make a list of experts to invite into the classroom for a panel about the topic and prepare questions. They should also brainstorm means of evaluating their work and building checkpoints into the project with teacher support. | Content: TSW principles of service-learning, local food justice issuesSkills: TSW use interdisciplinary lenses to understand the characteristics and causes of local, regional, and global problems; instances of such problems in multiple contexts; and challenges and opportunities faced by those trying to address these problems over time and place.TSW practice decision making, building consensus, working with local government and business, accountability measures, and time management. |
| [x] Team[ ] Individual |
| [ ] Formative[x] Final Product | Working with community stakeholders, students will develop a project to address their concern. Throughout the process, they should be using project management tools to monitor progress and meet deadlines. See additional information for possible ideas for a public product. | Content:TSW project management, local food justice issuesSkills: TSW decision making, building consensus, working with local government and business |
| [ ] Team[x] Individual |
| [ ] Formative[x] Final Product | Following execution of public product, there should be multiple opportunities for reflection and self-assessment, as well as feedback sought from community partners. Rubrics and methods may vary based on the form of the project. | Content:TSW principles of service-learning, local food justice issuesSkills: TSW decision making, written communication, reflection, project management, building consensus, working with local government and business |
| [x] Team[x] Individual |
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| **P R O J E C T C A L E N D A R** |
| M O N D A Y | T U E S D A Y | W E D N E S D A Y | T H U R S D A Y | F R I D A Y |
| **P R O J E C T W E E K O N E** |
| Entry event - hand out different complex processed food products to students in groups of no more than 4. Challenge the students to identify and find the likely source of each ingredient. They should then place a sticker on the map (see Resource page for sticker designs) | Entry event continued - Returning to the map, have students discuss in their groups and jot down in a T-chart what they know about what they are looking at it and what they want to know more about. We will then hang the T-charts on the wall and students will have the chance to walk around and read each other’s questions, adding checkmarks to those that they have as well to construct a master list. | Hungry World - Now that we know about how interconnected different parts of the world are by ingredients, what are the challenges of that? Play the Oxfam “Winners & Losers” game and debrief (instructions and materials provided). | Guest speaker | Field Trip |
| **P R O J E C T W E E K T W O** |
| Groups can be created by class, by committee, or however works to do inquiry into specific challenges related to climate change, logistics & transportation, farm policy, resource management, water, and labor. See resource list for possible readings and videos for each section. | With the support of the school librarian, have students conduct research on the internet to find more information about their topic. Depending on needs and experience of the students, they may require extra scaffolding in the form of a worksheet to help guide their inquiry (bibliography guide provided). | With their groups, each student will create a slide on Google Slides to create a presentation with a bibliography. Presentations will undergo peer review and teacher review before being delivered to their peers (see checklist in resource section). | Continue from previous day | Food Systems “Conference” with invited guests |

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| **P R O J E C T C A L E N D A R** |
| M O N D A Y | T U E S D A Y | W E D N E S D A Y | T H U R S D A Y | F R I D A Y |
| **P R O J E C T W E E K T H R E E** |
| Students will vote, either as a class or as a program, on a single challenge to focus on locally. Depending on the selection, they will need to make a list of experts to invite into the classroom for a panel about the topic and prepare questions. | Once a topic is determined, students should brainstorm means of evaluating their work and building checkpoints into the project with teacher support. They will also divide work and create a structure for accountability. | Guest speaker/panel | Debrief and reflect upon the information gleaned from the guest(s). | Work on project |
| **P R O J E C T W E E K F O U R** |
| Work on project | Work on project | Work on project | Work on project | Work on project |

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| **P R O J E C T C A L E N D A R** |
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| **P R O J E C T W E E K F I V E** |
| Following execution of public product, there should be multiple opportunities for reflection and self-assessment, as well as feedback sought from community partners. Rubrics and methods may vary based on the form of the project. | Celebration of final product with community members, and special recognition for student leaders. | Click here to enter text. | Click here to enter text. | Click here to enter text. |
| **P R O J E C T W E E K S I X** |
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| **A D D I T I O N A L I N F O R M A T I O N** |
| Additional activity:Create a budget and have students put together a meal entirely made from ingredients that are sourced from within a 90 mile radius. Tasks can be divided up, with some in charge of research, some in charge of buying, and some in charge of preparation, and then having lunch together one day with the meal created and inviting some additional guests from the school and/or community. The goal of this is to illustrate the challenge of sourcing locally, even in an agricultural state, and the added costs of buying locally, but also the possibilities that are nearby. For the buyers, I encourage starting with a supermarket but then introducing the Farmer’s Market, with students required to have conversations with local producers. This could be used as a summative action project should the students select it.Public products:Presentation at meeting of Board of SupervisorsService project with local organization that focuses on foodAdvocacy for and implementation of policy change within the school related to food policy of some kind (ex: composting initiative, school garden, change of vending machines, healthier breakfasts, etc)Creating an exhibit to present about and leave on display in public space (farmer’s market, public library)Further resources included in separate documents. |