State of Innovation: The Food Chain

How to Use

This guide is intended to support you in adapting the State of Innovation's "Food Chain" Challenge case into a lesson plan to implement with youth. It includes background information on the case, problem solving questions for youth to work on, and suggested activities to use with youth. It also explains how you can get support during the Challenge, including helping youth connect with industry leaders throughout the Challenge.

Challenge Case

COVID-19 has changed the way we purchase, distribute, and consume food in Washington.

Your challenge is to help the state ensure that every Washingtonian can have access to healthy, affordable, and environmentally sustainable food during the pandemic.

Watch the [Food Chain Challenge case video](#) for a brief overview of the topics and themes covered by this Challenge case.

Career Paths

- Agriculture Sciences
- Business & Marketing
- Environmental Conservation
- Family and Consumer Sciences

Learning Objectives

Youth will be able to…

- Solve real problems around the food chain currently facing Washington State
- Analyze social issues impacting the health of their local communities and economies
- Evaluate emerging solutions to solving food crises driven by the COVID-19 pandemic
- Develop new proposals and prototypes to improve Washington's food systems

Implementation

The resources presented in this guide are designed to be used flexibly based on the needs of youth and your classroom. You are invited to develop lesson plans of your own in alignment

with your course, leveraging one or more of the problem solving questions below or weaving the food chain theme into your own curriculum. You are also encouraged to use or build on lesson plans shared by other Washington State educators - see the "Support" section of the guide for information on how to access the State of Innovation Lesson Bank on OER Commons.

Structure and Timing

Participation in the State of Innovation Challenge has no strict time expectations or requirements. Youth can meaningfully engage with this Challenge with as little as one hour, or as much as several months. Youth are invited to work on this challenge individually or in teams of any size.

If you have **one class period**, you could:

- kick off the Challenge case with the Food Chain Challenge video
- present one of the problem solving questions to youth with a brief class discussion
- break youth into small groups to each read one of the provided background information resources
- have youth summarize their findings to the class, highlighting any ideas they have to build on the existing solution
- **Suggested end product**: A quick poster, slide deck or FlipGrid video

If you have **one week of classes**, you could:

- kick off the Challenge case with the Food Chain Challenge video
- present an overview of each problem solving question and allow small groups of youth to each choose one question to focus on
- have each group explore the background information resources provided for their question
- ask each group to develop a novel solution to their problem in the form of a lightweight design proposal, building on the successes and shortcomings of existing solutions in that space
- provide a space for groups to each present their solutions to the class with ample time for discussion and peer feedback
- **Suggested end product**: A design proposal document or poster

If you have **one month of classes**, you could:

- kick off the Challenge case with the Food Chain Challenge video
- present an overview of each problem solving question and allow small groups of youth to each choose one question to focus on
- have each group explore the background information resources provided for their question, and additionally find several research sources of their own
- ask each group to develop a novel solution to their problem in the form of a robust prototype, model or sales pitch

- run weekly design reviews with ample time for discussion and peer feedback
- connect youth with relevant industry leaders for authentic feedback
- help youth connect with relevant end users for user-oriented collaborative design opportunities
- **Suggested end product**: A functional prototype or business plan

Project Submissions

Youth can submit projects in a wide range of formats to the Challenge. Once you've selected the project format below that works best for you/your group, please review the submission guidelines in the Appendix and submit your project through the submission portal at www.innovationwa.org.

Problem Solving Questions

Below are some suggested questions for youth to tackle in this Challenge case. You can choose to use one or more of these questions, or you can create a problem of your own choosing that is related to the Challenge case.

Theme	Problem Solving Prompts
School Meals and Healthy Foods	Design a plan for school meals containing food that is grown locally in Washington, and provides healthy, good tasting food to students.
Food Waste and Climate Science	How could we reduce greenhouse gas emissions by reducing food waste in your community, even as people are buying more food than ever during the COVID-19 pandemic?
Food Production and Distribution	How can we help food banks connect with surplus food from farmers, restaurants, or homes?
Consumer Science	What are some ways that shopping for and eating food have changed because of the COVID-19 pandemic in your community?
Restaurants and Hospitality	If you were a restaurant owner today, how would you change your business to respond better to COVID-19?

You can find more information on each problem solving question below, including additional context and links to background information in the form of articles, videos 🎥 and data presentations 📊.

School Meals and Healthy Foods

Many young people rely on school meals as their main meals of the day, but school districts often source the food for student meals from large national food distributors. With COVID-19 continuing to harm the economy and more people out of work, meals provided by schools are

going to become very important for many youth in Washington State, even if they are not going to school in-person every day.

Design a plan for school meals (lunch, breakfast, or both) containing food that is grown locally in Washington, and provides healthy, good tasting food to students.

- Where should the food come from?
- Could families or schools be involved in growing some of the food themselves?
- Could local farmers be involved in distributing food from farms to schools?
- Where should the meal be served - in a school building, a community location?
- What types of food should be included and how should that be decided?

Background Information

- [After backlash, USDA agrees to extend free-meal program for children - Washington Post](#)
- [Eligible families encouraged to apply for free and reduced-price meal programs - OSPI](#)
- [Find meals for kids when schools are closed - USDA](#)
- [Free and reduced priced meals in King County - Communities Count](#) 📊
- [Hungry with children: 1 in 3 U.S. families with kids don't have enough food - CBS News](#)
- [Meal plans organized for Washington students amid coronavirus school closures - King 5 News](#)
- [Northwest Harvest COVID-19 response - Northwest Harvest](#)
- [USDA approves program to feed kids in Washington - USDA](#)

Food Waste and Climate Science

Reversing the impacts of climate change is one of the top priorities for Washington State. Food waste contributes to greenhouse gas emissions, which in turn drive up the negative impacts of climate change.

How could we reduce greenhouse gas emissions by reducing food waste in your community, even as people are buying more food than ever during the COVID-19 pandemic?

Note: Pacific Education Institute offers a [Middle School curriculum](#) and [High School curriculum](#) tied to this topic and is available for additional support and questions

Background Information

- [COVID-19 is making our food waste problem even worse - Food & Wine](#)
- [Fight climate change by preventing food waste - World Wildlife Foundation](#)
- [Food goes to waste amid coronavirus crisis - Politico](#)
- [How cutting your food waste can help the climate - BBC](#)

- [How the USDA's food box initiative overpaid and underdelivered - KUOW](#)
- [How to reduce food waste during the coronavirus - CBS News](#)
- [Inside America's food supply chain under COVID-19 - Forbes](#) 🎥
- [Smashing eggs, dumping milk: Farmers waste more food than ever - Bloomberg](#)
- [Why Americans lead the world in food waste - The Atlantic](#)
- [Why coronavirus is causing a massive amount of food waste - CNBC](#) 🎥

Food Production and Food Distribution

Food banks are in need of additional food to serve people who are not working.

How can we help food banks connect with surplus food from farmers, restaurants, or homes?

Background Information
- [Coronavirus pandemic: Purchase and distribution of food eligible for public assistance - FEMA](#)
- [Drive-thru food distribution paired with COVID-19 testing - KUOW](#)
- [Food banks expecting a surge in new customers during COVID-19 - KUOW](#)
- [Food insecurity data in King County - King County](#) 📊
- [Food insecurity data in King County - Communities Count](#) 📊
- [Food insecurity data in the US - USDA](#) 📊
- [Food insecurity rates in King County nearly double ahttps://www.kuow.org/stories/food-insecurity-in-king-county-doubless pandemic continues - KUOW](#)
- [Feeding America CEO: Unprecedented levels of food insecurity - Bloomberg](#) 🎥
- [Potato giveaway draws huge crowd to Tacoma Dome - The News Tribune](#) 🎥

Consumer Science

We all have to eat, but food serves more purposes than just providing nutrition and keeping us alive, especially during challenging times like a pandemic. It can be a way people stay connected to their family heritage, or recognize special occasions even if they cannot be with loved ones because of social distancing. Favorite foods can provide a sense of normalcy, or it can be a way to support small restaurants or local farms that are struggling because of the economic downturn.

What are some ways that shopping for and eating food have changed because of the COVID-19 pandemic in your community?

- How do you know that these changes have occured?
- Create a meal plan and a budget for and individual's weekly food consumption that shows some of these changes

Background Information

- [At least isolation is teaching people a better way to cook - Slate](#)
- [Health crises have a long-term impact on consumer demand - Food Navigator](#)
- [Making health and nutrition a priority during the coronavirus pandemic - American Society for Nutrition](#)
- [Our diets are changing because of the coronavirus pandemic. Is it for the better? - TIME](#)
- [The rise of 'dark stores': Grocery shopping in COVID-19 - Forbes](#)
- [With COVID-19, CSAs are trending as a way to shop - Eater](#)

Restaurants and Hospitality

Restaurants and hospitality industry businesses have had to adapt to a new way of working due to COVID-19.

If you were a restaurant owner today, how would you change your business to respond better to COVID-19?

- What would your business plan be?
- What support would you want from your City or state?
- Would you go mobile - shift to a food truck or pop up?
- Would you try to renovate your existing space?
- Would you offer different services like food in grocery stores or other retail?

Background Information

- [21 ways restaurants could change forever, according to chefs - Food and Wine](#)
- [A majority of survey respondents say they're not ready to eat inside Seattle's restaurants yet - Eater](#)
- [Economic recovery dashboard - WA State Department of Commerce](#) 📊
- [How coronavirus decimated the restaurant industry overnight - CNBC](#) 🎥
- [The Paycheck Protection Program is complicated for restaurants - Bon Appetit](#)
- [What Seattle chefs and owners think about reopening restaurants at 50% capacity - Eater](#)
- [Why I can't afford to close my restaurant during the pandemic - Eater](#)

Support

Industry Leader Engagement

Your class will have multiple opportunities to engage with relevant industry leaders during the Challenge period. These interactions will take the form of pre-scheduled meetings with members of the food industry to build on themes related to the Challenge case, learn about career pathways within the industry, and to get feedback on youth work.
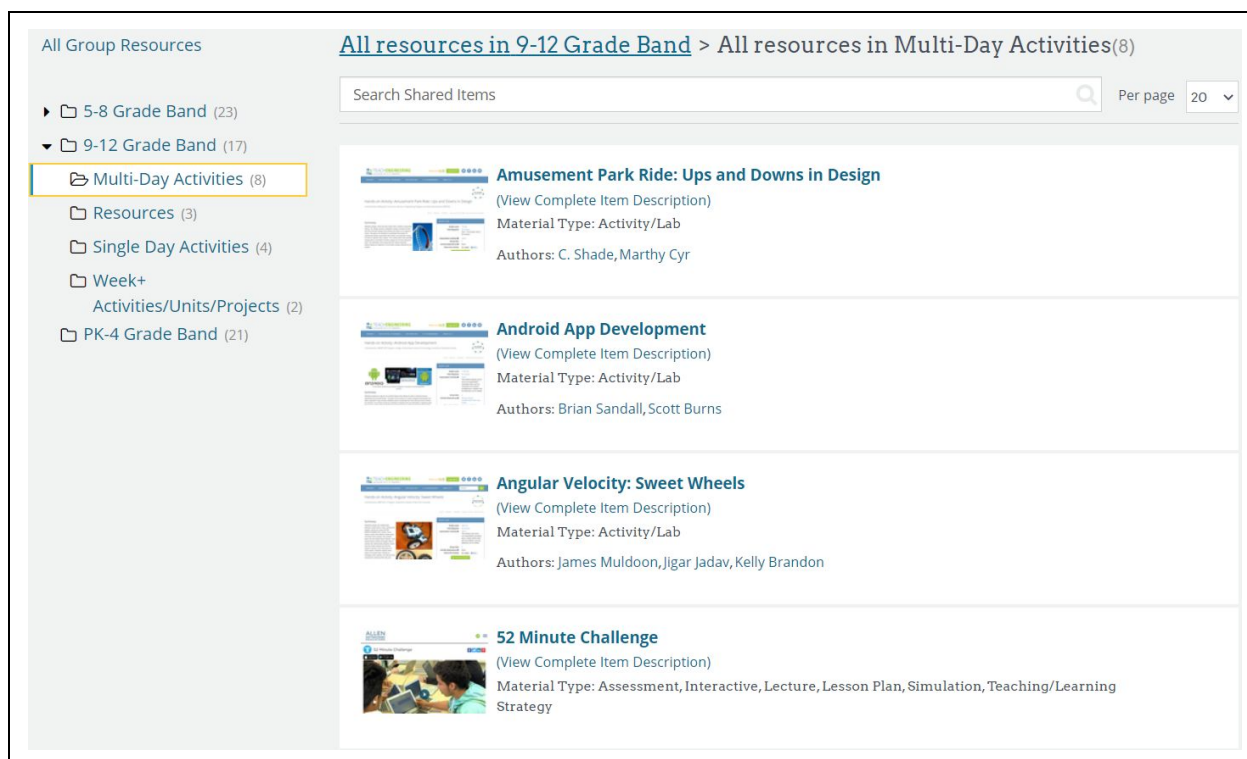
The schedule for these sessions will be available on the State of Innovation website. Be sure you are signed up for the State of Innovation Outreach list to receive updates as new sessions are added. All sessions will be recorded and posted on the State of Innovation website.

Office Hours

During the Challenge period, you may request one on one support from a member of the State of Innovation team. To schedule office hours, please visit this link to find a time that works well for you. You can get help with lesson planning, using any of the provided resources, or technical assistance with OERCommons or the youth response forum.

OER Commons

A wealth of complete lesson plans developed for this Challenge case are available in the **State of Innovation group at oercommons.org**, a platform for open educational resources. On this website, you will find remote-friendly lessons tailored to middle school classrooms, high school classrooms and Open Doors classrooms.

Are you willing to share a lesson plan you've developed for this Challenge case with other local educators? Please upload your resources using the **Contribute to this Group ⌄** button on the State of Innovation OERCommons page.

In addition to helping to build a robust lesson bank, the most creative lesson ideas uploaded to OERCommons will be recognized at a celebratory statewide event at the conclusion of the Challenge.

Standards

Due to the flexible nature of the Challenge, there are a great number of standards that may apply to your specific implementation. If you are looking for standards with which to align your implementation, you may find the following sources from OSPI helpful.

CTE Standards

- [21st Century Leadership Skills](#)
- [Program of Study, Career Clusters, and Career Pathways](#)
- [Program Standards](#)

Subject Area Standards

- [Arts Learning Standards](#)
- [English Language Arts Standards](#)
- [Environmental and Sustainability Learning Standards](#)
- [Mathematics Learning Standards](#)
- [Science Learning Standards](#)
- [Social Studies Learning Standards](#)

Appendix: Submission Guidelines

Disclaimer: Participating youth and their teachers or adult advisors are responsible for securing all necessary parental permissions and/or waivers prior to submitting a Challenge solution.

Nano Project

- Up to 2 minute video on [Flipgrid](#) using one of the followings submission links:
  - [The Food Chain Flipgrid](#)
  - [Responding to COVID-19 Flipgrid](#)
  - [Our Communities after COVID-19 Flipgrid](#)
- If you don't have access to Flipgrid, you can also upload a video to Vimeo or Youtube and email a short written solution.

Flipgrid Privacy Notice

Flipgrid submissions are publicly accessible. Once approved by the project team, your Flipgrid video can be viewed by anyone with a link to the Flipgrid community page. Do not share

personal identifiable information such as your last name, name of your school, address, etc. in your Flipgrid video.

Flipgrid videos will be reviewed for approval by the project team prior to posting on the community page. Videos containing personal identifiable information, as well as videos containing discriminatory, racist, offensive, obscene, inflammatory, unlawful or otherwise objectionable statements, language or content will be rejected.

Video Guidance

- In your video, give your first name *only* -- this will protect your privacy
- Say which case you're working on
    - The Food Chain
    - Our Communities During COVID-19
    - Our Communities After COVID-19
- State the problem you're trying to solve
- Give your answer - in your own words, what do you think the solution should be? Your answer should:
    - Reference the case video or at least one of the research links provided for the problem
    - Explain what this solution would look like if it was used in your community. Who would it help and why?

Micro Project

Upload through the [Submission Portal](#) in one of the following formats:

- Submit a video of up to 5 minutes that demonstrates your solution -- this includes a music video -- you can upload your video to Youtube or Vimeo and submit a link through the project website.
- Submit a short essay narrating your solution of up to 2 pages (middle school) or up to 4 pages (high school).
- Write an editorial explaining your solution and arguing why the state should support your solution -- if possible, submit your editorial to a local or school newspaper for publication.
- Submit a drawing or comic that describes your solution.
- Create a short research project around the problem-solving prompt. Create a hypothesis, write a research plan for how you will collect data (example: 2-3 questions you will ask community members about the issue), go out and collect the data, and submit a 1-2 page report or a slide deck with your research plan and an analysis of your findings.
- Create an elevator pitch for a business or nonprofit entity that implements your solution. For your pitch you can:
    - Create a slide deck (Powerpoint, Google Slides, Keynote, etc.) or short narrative (maximum 2 pages) explaining what your proposed business is, what problem it solves, and how.

- ○ Record yourself giving the pitch, as if you were talking to the state government or other potential investors about supporting your solution -- upload your pitch to Youtube or Vimeo and include a link in your slide deck.

Macro Project

Upload to the [Submission Portal](#) in one of the following formats:

Creative Project
- Write and record a podcast episode, song, or play about your solution. Record and submit your performance or podcast episode.
  - ○ Submit a link to your video or podcast through the project website.

Create a model
- Build a physical model of your solution. Submit a 1-3 page description with photographs of your project.

Research Project
- Create a research project around the problem-solving prompt. Create a hypothesis, write a research plan for how you will collect data, go out and collect the data, and submit a 3-5 page report or a slide deck with your research plan, an analysis of your findings, and a recommendation for next steps the state could take based on your research.

Computer Program or App
- Create an app or computer program for your solution. Submit at 1-3 page report about your app/program including:
  - ○ What it does, and who it helps
  - ○ How you developed it and why
  - ○ Any links demonstrating your app or program

Service Project
- Create a service project around your solution. Submit a 1-3 page report of your project, describing:
  - ○ What the project was and who you were helping
  - ○ Did you partner with any other community organizations for your project? If so, describe what they do in the community
  - ○ The length of the service project -- including how long it took you to prepare for and complete the project
  - ○ Why you chose this project and what you learned from the process
  - ○ What you think the state should do about the issue you focused on in your project going forward

Business Plan

- Create a business plan for a business that implements your solution. This can be an imaginary business or based on a real business in your community, but you must create the business plan yourself. Your business plan should include:
    - 1-3 page description of your business plan
    - Staff and customer safety plan for operating safely during COVID-19, including compliance with all state and local public health rules
    - Projected budget for your business
    - Sample menu for food, service, or merchandise offering
        - Optional -- Actually create the food item, service, or merchandise for your business. Photograph and describe the final product
    - Drawings of the physical space of your business (if physical)
    - Marketing plan for your business

Challenge Submission Criteria

We will recognize some of the most creative solutions submitted to the Challenge at our closing event in spring 2021. We'll be looking for solutions that meet most of the following criteria.

We are looking for solutions that are…	That means the solution shows us...
Creative	Original ideas or your personal spin on existing ideas.
Future focused	What isn't happening yet but that you think should be happening.
User focused	Who will use this solution? What do you know about them and how do you know they would benefit from your solution?
Implementable	How we can use the tools we have in real life to implement this solution -- unfortunately the Avengers are busy, we checked. Think about how you could use state and city budgets, support from business or philanthropy, donations or volunteer support from communities, etc. to accomplish your goals.
Reflective of you	How does your personal identity and your experiences shape the way you see the problem?

Reflective of your community	How are the people around you -- your family, friends, teachers, bosses, teammates, coworkers -- impacted by the problem? How will the solution you propose impact them?
Equitable	You've thought about how this problem impacts people of different races or ethnicities, genders, abilities, or income in different ways. How does your solution help address those different impacts?
Accessible	Is this a solution that could be used by a person with disabilities? Someone who speaks a language other than English? A person living in a rural area? In an urban area? An elderly person? A person with kids? What about a person who doesn't have access to the internet or a computer?