How it works!

- Create a free account on www.spark101.org
- Search videos by topic, grade and standards
- Select lesson plan
- Play 10 minute video

Get started with our Sodexo video challenge

In this video challenge, students will use mathematics to help Sodexo create menus. The accompanying lesson plan can be found in the following pages. Visit spark101.org for 7 additional lesson plans for elementary, middle, and high school students. View Video
## Spark 101 Lesson Plan

Access all of the free Spark 101 resources for your lesson by signing up at [Spark101.org](http://Spark101.org)!  

### Case Study Video Title: What’s for Lunch?

### Unit of Instruction: Money, Elementary Health (Daily Nutrition)

### Subject/Course: Math, Health/PE

### Grade Level(s)

- E  
- M  
- H

### Education Standard(s):

What standards (CCSS, AP, TEKS, etc.) are the focus of this lesson?

- TEKS 127.2 - Career
- TEKS 111.6- 4th Grade Math
- TEKS 111.7- 5th Grade Math
- VA Math SOL- 3.6, 4.6, 5.5
- VA Health SOL- 3.1, 4.1
- ISTE 3- Knowledge Constructor
- ISTE 6- Creative Communicator
- CCS Math 4.MD

### Objective(s):

By the end of this lesson, students will be able to:

- Understand the importance of receiving a balanced meal at school for lunch
- Develop a solution to a real-world problem for school nutrition workers based on a budget and nutrition non negotiables

### Assessment/Demonstration of Learning:

What will students do to show what they have learned?

- Meal planning sheet which includes a school lunch menu for a week
- Exit Ticket
- Review “learned” sticky note from KWL chart
- Class discussions throughout the lesson

### Resources Needed:

All Spark 101 lesson planning and student engagement resources may be accessed at: [http://www.spark101.org/portal/spark-resources/](http://www.spark101.org/portal/spark-resources/)

- Spark 101 “What’s for Lunch?” Industry Developed Resources
  - Use list of foods for menu project (Excel spreadsheet)
  - Meal planning Excel sheet example (may need to adapt for younger students)
- Sticky Notes
- Chart Paper
- Markers
- Access to technology for menu
<table>
<thead>
<tr>
<th>Lesson Component</th>
<th>Time Allotted</th>
<th>Teacher Procedure</th>
</tr>
</thead>
</table>
| **Making Connections to Prior Knowledge**  
(Engage the students in an activator that helps them connect to prior knowledge before showing the case study video presentation.) | **Time:**  
5-7 minutes | **Group discussion:** KWL Chart  
What do you know about the “My Plate” nutrition plan from the United States Department of Agriculture (USDA)?  
What do you know about the importance of eating a balanced diet?  
What do you want to know about how “My Plate” can be used to inform the planning of menus? |
| **Problem/Motivation**  
(Segment I of video through 6:40) | **Time:**  
7 minutes | Show this first segment of the case study video to your students, letting them know that they will be working on solving the real-world problem after viewing. |
<table>
<thead>
<tr>
<th>Solving the Problem</th>
<th>Time: 45-60 minutes</th>
<th>Challenge: How do school systems create meals that satisfy students’ appetites and meet nutritional standards with $1.25?</th>
</tr>
</thead>
</table>
| (Engage the students in solving the problem and describing the process they used to identify possible solution(s) to the problem presented.) | | □ Group Discussion:  
  □ Consider the most important components of creating a daily and weekly school lunch menu:  
    □ Cost  
    □ Student’s favorite foods  
    □ Balanced meals (acceptable number of nutrients)  
    □ Variety of menu  
    □ Non-negotiable items (8 oz. of milk)  
  □ Project and pause video at 6:00 to allow all students to see the required food portion requirements for a daily lunch (allow students to write this down somewhere for reference at a later time or leave it up while the students work)  
  □ Give the students the option to work with a partner or small group to come up with a week’s worth of menus for an elementary school lunch.  
  □ Go over the separate parts of the list of foods for menu project (Excel spreadsheet) and explain they will be using that information for the menu.  
  □ Students should use some sort of electronic table to present their menus- this can include the Meal planning Excel sheet example, one provided by the teacher, or one their make on their own (depending on the grade level) |
| **Grouping:**  
  □ Independent  
  ✓ Pairs  
  ✓ Small groups (3-5)  
  ✓ Whole group | | Checks for Understanding—Active learning through guiding questions  
  □ Partnerships share their solution with the whole class  
    How did you go about planning your menus? Did you start with a specific food group?  
    What was the hardest part in planning menus for student lunches?  
    What made you choose the foods you did for the students to eat?  
    What are some of the choices you had to make in order to stay under the daily budget? |
| The Actual Solution  
(Segment II of video) | Time: 5 minutes | Show this second segment of the case study video to your students, letting them know that they will be comparing their solutions to the actual solution shared by the industry professional(s). |
|----------------------|-----------------|---------------------------------------------------------------------------------------------------|
| Comparing and Reflecting  
(Engage the students in deeper learning as they compare and reflect upon the solutions that they generated and the actual solution for the problem presented.) | Time: 15-20 minutes | **Comparing Solutions:** How did your planning and output compare to the example from Sodexo? (8:30)
- Partnerships compare their menu by day and week to Sodexo’s solution
- How was your solution similar to/different from Sodexo’s solution?
- Were there any aspects of Sodexo’s solution that you did not think of or could use to make your solution better?
- Join with 2 other partnerships and share one day of each groups’ menu and decide which day is the best to share with the whole class and the reasons for the choice (including price, variety of foods chosen, and how it meets the criteria)
- Whole class share of chosen solution

**Gallery Walk**
Each group should set out their weekly menus (hard copy or on the computer) around the room and have students silently walk around to look at each groups’ work. |
| Pathways  
(Segment III of video) | Time: 6 minutes | Show this third and final segment of the case study video to your students, letting them know that they will be reflecting on their thoughts related to pursuing possible education and career pathways presented in the video. |
<table>
<thead>
<tr>
<th>Connecting to Pathways</th>
<th>Time: 5-10 minutes</th>
<th>Meaning</th>
</tr>
</thead>
</table>
| (Have the students reflect on the impact of how solving this problem might relate to their broader education and career goals.) | | □ Turn and talk:  
  □ How could these careers impact our future? Which career do you think is most important to working to plan menus for students in schools? (Business Management, Nutrition & Dietetics, Culinary Industry, Food Science, Agricultural Engineering, or Database Management)  
  □ Have students reflect on their learning by having them write one thing they learned about planning a menu or nutrition on a sticky note and add it to the class KWL chart. |

<table>
<thead>
<tr>
<th>Summarizer/Closure</th>
<th>Time: 5 minutes</th>
<th>Reflection: Exit Ticket</th>
</tr>
</thead>
</table>
| (End the lesson by helping students to zero in on key takeaways and lessons learned.) | | □ Have the students write their thoughts on the following questions:  
  □ What skills do you need to be successful in this career?  
  □ Is this a career you would be interested in pursuing? Why or why not? |

<table>
<thead>
<tr>
<th>Assessment (if applicable)</th>
<th>Checks for Understanding</th>
</tr>
</thead>
</table>
| (if applicable) | ● Meal planning sheet which includes a school lunch menu for a week  
  ● Exit Ticket  
  ● Review “learned” sticky note from KWL chart  
  ● Class discussions throughout the lesson |

| Additional Notes (if applicable) | Free CK12 Connections (if applicable) | Recommended Internet Connections (if applicable) |