



COURSE 3:

Food Production, Nutrition and Health

QUACKERY OR NOT? THAT IS THE QUESTION



**food and
nutrition sciences**

PREPARATION FOR TOMORROW





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Project Overview



CONCEPT/DESCRIPTION

- 1 Calorimeter Lab – Students will re-visit the Calorimeter Lab from FNS Course 1, this time determining the energy content of different nuts.
- 2 Questions to ask to research scientific claim from a television show – teacher models
- 3 Researching scientific claims from a television show- students complete Credible Source Writing Lab (Appendix 1)- Students share and teacher captures claims on a chart paper for each class.
- 4 Researching scientific claims using Credible Source Writing Lab format to write on a chart paper.
- 5 Chart paper presentation on validity of scientific claims from a television show. Five minutes per group.
- 6 Finish chart paper presentations and teacher provides feedback on presentations. Start Appendix 2 –Scientific Claims Presentation Guidelines for more formal presentation on television show claims including the credibility of the spokesperson of the scientific claim.
- 7 Student prepare a formal presentation displaying their research of the credibility of a nutritional scientific claim and if it is supported by the Dietary Guidelines for Americans. Appendix 3 Presentation Guidelines (Part 2) Appendix 4 Rubric for Scientific Claims Presentation
- 8 Students continue to prepare Scientific Claims Presentation
- 9 Students share their Scientific Claims Presentation with another team and give/receive feedback.
- 10 Scientific Claims Presentations begin. Students observe completing Appendix 5 – Observer’s Task during the presentations.
- 11 Scientific Claims Presentations continue. Students observe completing Appendix 5 – Observer’s Task during the presentations.
- 12 Students will form an opinion as to why people endorse products on television and government regulation of the infomercial industry. Appendix 6- Inside the Making of an Infomercial Appendix 7-



CONCEPT/DESCRIPTION

- Engagement Scenario is read to the students.
- 13 Students receive details on the Engagement Scenario with Appendix 8- ChooseMyPlate.gov Infomercial Challenge and demonstrate understanding of the challenge completing Appendix 9- Comprehension Questions for Infomercial Challenge. Groups delegate tasks and assign timelines on a Project Management Log
- 14 Students become familiar with project requirements from teacher going over Appendix 10- Rubric for ChooseMyPlate.gov Infomercial Challenge. Groups investigate features of ChooseMyPlate.gov Infomercial Challenge.
- 15 Students continue to develop infomercial script focusing on feature or features of the website ChooseMyPlate.gov that fulfill the requirements of the task.
- 16 Students continue to develop infomercial script focusing on feature or features of the website ChooseMyPlate.gov that fulfill the requirements of the task.
- 17 Last day for students continue to develop infomercial script focusing on feature or features of the website ChooseMyPlate.gov that fulfill the requirements of the task. (Teacher should adjust time if students need more or less)
- 18 Student group presentations - 10 per presentation, 3 minutes transition, 3 presentations per day with teacher and student feedback
- 19 Student group presentations - 10 per presentation 3 minutes transition, 3 presentations per day with teacher and student feedback
- 20 Student group presentations - 10 per presentation 3 minutes transition, 3 presentations per day with teacher and student feedback
- 21 Project wrap up and assessment



Key Question of the Day:

What macromolecule contains the most calories?

Students will be able to listen carefully to identify scientific claims stated on a television show.



Estimated Time

One 50-minute class period



Learning Objectives

As a result of this lesson, students will be able to:

- Students will distinguish between Calorie and calorie
- Determine an approximation of calories in different types of food



Required Materials

- Equipment and Materials as explained in [Appendix 14](#)



Bell-Work

(Each day the Bell-Work question should be prominently displayed and used to open the lesson)

- **"Which contains more calories, fat (lipids) or sugar (carbohydrates)?"**
 - ✓ **TEACHER TIP!** Fat has a little more than twice the calories of carbohydrates but let the lab for this day answer this question for the students. You can provide the information below after the lab.
 - » *Fat: 1 gram = 9 calories*
 - » *Protein: 1 gram = 4 calories*
 - » *Carbohydrates: 1 gram = 4 calories*

OPENING

*(Designed to **prepare** students for learning. Students are prepared for learning by activating an **overview** of the **upcoming** learning experience, their **prior knowledge**, and the **necessary vocabulary**.)*

- Read the BELL-WORK question and solicit responses.
 - › Which contains more calories, fat (lipids) or sugar (carbohydrates)?

MIDDLE

*(Designed to provide a **structure** for learning that actively promotes the **comprehension and retention** of knowledge through the use of **engaging strategies** that acknowledge the brain's limitations of **capacity and processing**.)*

- Students will follow procedures as explained in [Appendix 14](#) for the Calorimeter Lab.
 - ✓ **TEACHER TIP!** Students may have done this lab in Food and Nutrition Science Course 1. [Appendix 14](#) includes the lab as they may have experienced it as well as a different setup along with procedures and a data table.

CLOSING

(Designed to promote the **retention of knowledge** through the use of engaging strategies designed to **rehearse** and **practice skills** for the purpose of **moving knowledge into long-term memory**.)

- Students will turn in their data sheet that has Analyzing Results questions to serve as an Exit Ticket for that day. They will respond to the following prompts that utilize information from their data sheets to answer the questions.

1. Using the equation below, calculate the calories of heat from the burning nuts. The 100 mL of water has a mass of 100 grams.

Calories =
grams of water x degrees of temperature change

How many Calories?

2. Divide the figure from question 1 by the change in mass of the nut. This gives the calories released per gram of nut burned. Nut initial mass was

3. Which kind of nut released the most heat per gram? The least?

- Collect the Exit Ticket for the day as students leave the classroom.



Learning Target of the Day:

Students will be able to listen carefully to identify scientific claims stated on a television show



Estimated Time

One 50-minute class period



Learning Objectives

As a result of this lesson, students will be able to:

- Using teamwork, capture all of the claims stated on a segment of a television show.
- Develop a series of questions that should be asked to research if the claim(s) are scientifically valid.
- Practice careful listening skills to hear scientific claims during television shows
- Develop questions to ask due to claims on the television show.



Required Materials

- YouTube
- Projector
- Audio
- Chart Paper (1) per team
- Markers (3) colors per team ideally



Bell-Work

- At the beginning of the class play this video without any introduction: Dr. Oz's Smart Move of the Week: Learn the Biology of Weight Loss <http://www.youtube.com/watch?v=doEvlRv6bmA>
- Provide students with the weekly Bell-Work sheet ([Appendix 12](#))
- **"What do you remember hearing on the 2 minute video by Dr. Oz? Write everything you can remember?"**

OPENING

5 minutes

- What do you remember hearing on the 2 minute video by Dr. Oz? Write everything you can remember?
- Possible answers may include:
 - › Biology Lesson
 - › Hungry – hormone Ghrelin
 - › Full- hormone Leptin
 - › Signals are not perfectly in sync – SO you ALMOST Always overeat
 - › Satiated (from Project 1)
 - › Small, frequent snacks meals throughout the day
 - › Different foods digest at different rates and have different nutrients
 - › SOLUTION: AUTOMATE YOUR MEALS
 - › What does he mean "a standard menu?"
 - › Claim: Automation is the key to success.

MIDDLE

40 minutes

- Arrange the students into the ideal group size of three. If the numbers do not work out, groups of two will also work. These groups will be working together for the next few weeks on challenges that will expose their misconceptions of nutrition and weight loss concepts.
- Now that the groups are formed, play the video again having them listen for claims to be scientific facts, the problem(s) stated, and the solution(s) stated. For example, what does he mean by... What other source also says ... Have all three group members take notes on a new piece of paper (not the Bell Work sheet). They will combine their notes after the video plays again.

- Dr. Oz's Smart Move of the Week: Learn the Biology of Weight Loss, <http://www.youtube.com/watch?v=doEvIRv6bmA>

Merge notes:

- Allow the newly formed team time to discuss their notes on what they heard during the video. Have them merge their notes onto a large piece of chart paper. (You may want to provide three different color markers one for each member and ask that each contribute during this activity.)
 - ✓ **TEACHER TIP!** Teams may need guidance how to formulate questions from what they hear during the video. Teacher may need to model a few suggested questions that can be asked about the information shared during the video. In the next few days, more will be asked of the students and instruction should become less teacher directed.

Ask questions:

- Have the student teams also include questions that should be asked about this video. For example: What does he mean “a standard menu” or “automation is the key to success?” How do you spell the hormones Ghrelin or Leptin?
- Display this question somewhere as a starter for all teams to listen for: **What terminology does Dr. Oz use in regards to feeling full that was defined during Project 1? Identify this term and define.**
- You may need to play the video one more time for the students to listen for the new details.
- This exercise is to stimulate the new team dynamics as well as their abilities to listen for details during a video which will be critical during the engagement scenario challenge.
- Teacher circulates around watching the development of the chart paper and looking for team interactions making sure each student is contributing.

- Have the teams post their chart paper on the wall and share out their notes, questions, and term (it should be satiate which is a form of satiety from Project 1)
 - ✓ **TEACHER TIP!** During this time, the teacher will reinforce and identify correct observations of the teams. If any key observation is not identified by any team, the teacher must explain this during the class. This is the time teacher guidance is direct and useful for students to grow in their abilities to listen for details during an informational video.

CLOSING

5 minutes

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt:
 - › **Did your team hear more details of the video segment than when you listened to the video the first time for the Bell Work?**
 - › **What was the main message of Dr. Oz's video segment? (Answer: automation is key, having a plan for breakfast and lunch, “a standard menu,” will reduce the margin of when trying to lose weight.)**
- Collect the Exit Ticket for the day as students leave the classroom.



Learning Target of the Day:

Research a scientific claim stated during a television show segment



Estimated Time

One 50-minute class period



Learning Objectives

As a result of this lesson, students will be able to:

- Learn about a claim such as carbohydrate cravings and research the validity of that statement while being selective on the source of information.



Required Materials

- YouTube
- Projector
- Audio
- Appendix 1- Credible Source Writing Lab (one copy per student)
- Each with a computer for research
- Chart Paper (1) piece for the class share out of claims



Bell-Work

- Provide students with the weekly Bell-Work sheet ([Appendix 12](#))
- *Do you often have an after school snack? If so, what are some of the foods that you eat?*
- *Name some food cravings that you have had before.*
- *What is a carb? Or what are carbs? (nickname for carbohydrate)*

OPENING

10 minutes

- Read the BELL-WORK question and solicit responses. (5 minutes)
 1. Do you ever have an after school snack? If so, what are some of the foods that you eat?
 2. Name some food cravings that you have had before.
 3. What is a carb? Or what are carbs? (nickname for carbohydrate)
- Teacher says: (5 minutes)
 - › ***Yesterday, you practiced the skill of listening for scientific claims during a video segment of a television show. You then developed a few questions that should be asked to test the claims mentioned during the video.*** (Teacher may insert example questions from yesterday)
 - › ***Today we start off again with another video segment with scientific claims. Your team is tasked with listening carefully for claims that should be investigated.***
 - › ***Each team member is to take notes on the video to capture all of the scientific claims presented.*** (At teacher's discretion) THIS VIDEO WILL ONLY BE PLAYED ONCE. This is to increase engagement during the video and to distinguish the difference between today and yesterday. Yesterday the video was played several times. Teams will report out the claims they heard.
- Natural Cures for Carb Cravings, <http://www.youtube.com/watch?v=8monEdhbpg8&list=PL67423F27570689B1>

MIDDLE

35 minutes

- After the video has been played and the teams have taken their notes allow a little time for the teams to compile their notes together so they can informally share out the claims they heard.
- Teams share out their claims and teacher writes claims down on a chart paper that can be referred to the next day. Teacher provides feedback on claims for accuracy.
- Assignment: Using [Appendix 1](#)- Credible Source Writing Lab (one for each student) each team member is to fill out [Appendix 1](#) researching, using the Internet, carbohydrate cravings. Each team member MUST choose a different article to read and fill out [Appendix 1](#) with. This will continue tomorrow.

CLOSING

5 minutes

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt:
 - › ***What was the title of the article you chose, to research the validity, of carbohydrate cravings?***
 - › ***Who is the author of the article?***
- Collect the Exit Ticket for the day as students leave the classroom.
 - ✓ **TEACHER TIP!** Using the EXIT TICKETS the teacher can determine if some articles are being used more than others and could possibly make reference to them the following days.



Learning Target of the Day:

Research a scientific claim stated during a television show segment



Estimated Time

One 50-minute class period



Learning Objectives

As a result of this lesson, students will be able to:

- Work as a team to research a scientific claim and develop a concise informal presentation.



Required Materials

- YouTube
- Projector
- Audio
- [Appendix 1](#) - Credible Source Writing Lab (one copy per team as a reference of format for chart paper)
- Each team with a computer for research
- Chart Paper (1) piece for each team



Bell-Work

- Provide students with the weekly Bell-Work sheet ([Appendix 12](#))
- **"What are some qualities of a good presenter?"**

OPENING

5 minutes

- What are some qualities of a good presenter?
- Show – Speaking Up- What NOT to do when presenting video: http://www.youtube.com/watch?v=L_6EHgr098w
- Have a discussion on your expectations even during an informal presentation. Today teams will develop a Chart Paper Presentation. Each team member should share a part of the presentation etc. Although informal, eye contact and voice projection are important. The video provides an experience to discuss what not to do. Have some fun with this to make your point!

MIDDLE

40 minutes

- If the students did not finish the [Appendix 1](#) - Credible Source Writing Lab for carb cravings they are to do so and turn this into the teacher.
- Prepare a chart paper for presentation.
 - ✓ **TEACHER TIP!** You may want to create an example and display in front of the class for clear format expectations.
- Today's assignment is for the team to choose one claim from the video from yesterday about carb cravings. For example, "miracle weight loss solution for bread addicts is Vollkornbrot Bread." These claims to choose from the chart paper that was created yesterday during the class share out. The team will use the format of [Appendix 1](#) - Credible Source Writing Lab to research a claim by forming it into a question that can be searched for on the Internet.
- The team will create a chart paper to display all the details of the author and of their selected article to research their claim.
 - ✓ **TEACHER TIP!** to have as much information as possible about the claims of the video, try to make sure each team is researching a different claim. Presentations will be tomorrow.

CLOSING*5 minutes*

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt:
"What claim from the carb craving video is your team researching?"
- Collect the Exit Ticket for the day as students leave the classroom.



Key Question of the Day:

Should all scientific claims on television be trusted?



Estimated Time

One 50-minute class period



Learning Objectives

As a result of this lesson, students will be able to:

- Effectively share information about the validity of scientific claims via oral presentation format.



Required Materials

- YouTube
- Projector
- Audio
- Chart Paper from previous day -(1) piece for each team



Bell-Work

- Provide students with the weekly Bell-Work sheet ([Appendix 12](#))
- "Should all scientific claims on television be trusted? Why or Why not?"**

OPENING

5 minutes

- Read the BELL-WORK question and solicit responses.
 - Should all scientific claims on television be trusted? Why or Why not? Discussion
- Today we are going to start our Chart Paper presentations. This video shares some last minute suggestions before a presentation. Again, today's presentation is informal but we are leading to another large project. (Engagement Scenario)
- Show video (1min 24 sec)-Speaking Up – Tackling Nerves
http://www.youtube.com/watch?v=49M3aymvNog&feature=c4-overview&list=UURhWbMu7gupqiRO9hU_T6Yg

MIDDLE

40 minutes

- Chart Paper presentation of claim researched using the Credible Source Writing Lab format. Allow five minutes per team to share the information on their chart paper. Encourage each team member to present part of the information.
- You may get 5-8 presentations accomplished today depending on how many had to finish the Chart Paper at the beginning of the class. Tomorrow there is time allotted to complete.

CLOSING

5 minutes

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt: **"Write down two things you learned, about scientific claims, from the presentations today."**
- Collect the Exit Ticket for the day as students leave the classroom.



Key Question of the Day:

How do you determine if a scientific claim is valid?



Estimated Time

One 50-minute class period



Learning Objectives

As a result of this lesson, students will be able to:

- Research the credibility of a spokesperson on the television and prepare a formal PowerPoint presentation on the spokesperson's scientific claim



Required Materials

- YouTube
- Projector
- Audio
- [Appendix 2](#) - Scientific Claim Presentation Guidelines- DAY 1 (one copy per student)
- Each team with a computer and Internet for research
- MS PowerPoint
- Project Management Log



Bell-Work

- Provide students with the weekly Bell-Work sheet ([Appendix 12](#)).
- **"What are some of the craziest nutrition (diet) claims you have heard about on television or other media?"**

OPENING

5 minutes

- Read the BELL-WORK question and solicit responses.
 - › What are some of the craziest nutrition (diet) claims you have heard about on television?
- Discussion should expose some interesting answers. This will lead them to the second part of today after the Chart Paper Presentations are finished.

MIDDLE

40 minutes

- Finish the Chart Paper Presentations from Day 4 and then offer a debriefing of the content shared and the presentations themselves.
- Today, the assignment leads the teams to choose a claim from a video segment again and to research the credibility of a spokesperson on the television show sharing some claims.
- This will be a formal PowerPoint presentation.
 - ✓ **TEACHER TIP!** Your debrief will be important to guide the teams towards your expectations for this next presentation.
- This presentation should be with less teacher guidance as you gradually release the responsibility to the teams. (presentations 10 minutes, debrief 10 minutes)
- **Announce the Scientific Claim PowerPoint presentation: (20 minutes)**
- Teams will watch the following video segment titled Jumpstart Your Morning. There is a guest spokesperson on this television show (Tim Ferriss) and he makes many claims.

- The teams will research one of his claims and the team needs to research the credibility of Tim Ferriss giving nutritional information.
- This presentation will be on a PowerPoint.
 - ✓ **TEACHER TIP!** This is important to keep in PowerPoint format because the Engagement Scenario asks the students to develop a storyboard and PowerPoint will be the easiest program to use.
- Show [Appendix 2](#) for the format of this presentation to share with the student teams. Jumpstart Your Morning video (4:15) <http://www.youtube.com/watch?v=6jEWIQYviMY&list=PL67423F27570689B1>
- Have students use the Project Management Log to divide team tasks for this project.

CLOSING

5 minutes

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt:
 - › ***What do you think will be the most difficult thing about this presentation?***
 - › ***What claim do you think your team will research?***
- Collect the Exit Ticket for the day as students leave the classroom.



Key Question of the Day:

How do you determine if a person has credibility to make a scientific claim?



Estimated Time

One 50-minute class period



Learning Objectives

As a result of this lesson, students will be able to:

- Research the credibility of a nutritional scientific claim and if it is supported by the Dietary Guidelines for Americans



Required Materials

- YouTube- Jumpstart Your Morning video <http://www.youtube.com/watch?v=6jEWIQYviMYzz&list=PL67423F27570689B1>
- Projector
- Audio
- [Appendix 3](#) - Scientific Claim Presentation Guidelines- DAY 2 (one copy per student)
- [Appendix 4](#) - Rubric for Scientific Claims Presentation
- Each team with a computer and Internet for research
- Dietary Guidelines for Americans <http://health.gov/dietaryguidelines/dga2010/DietaryGuidelines2010.pdf>
- MS PowerPoint
- [Appendix 15](#) – Project Management Log



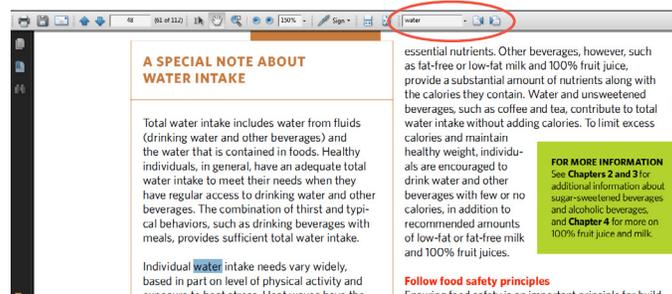
Bell-Work

- Provide students with the weekly Bell-Work sheet ([Appendix 12](#))
- Make this claim into questions that can be researched: ***“We do have a quarter of kids who drink no water under the age of 19. And over 40% of Americans aren’t even drinking half the water we know is recommended for optimum health.”*** Sam Kass- The White House Chef

OPENING

5 minutes

- Read the BELL-WORK task and solicit responses.
 - › Make this claim into questions that can be researched: “We do have a quarter of kids who drink no water under the age of 19. And over 40% of Americans aren’t even drinking half the water we know is recommended for optimum health.” Sam Kass-The White House Chef
- Possible answers may include:
 - › How much water is recommended daily for optimum health? Who makes this recommendation? (IOM- Institute of Medicine) For kids under 19? For adults? What is one quarter or 25% of the United States population that is under the age of 19? What is 40% of the United States population?
 - › Their presentation firsts asks for them to identify a claim to form into research questions. This BELL WORK discussion you will model how to form questions from a claim to something that can be searched for and to further understand the aspects of the claim.
 - › You can continue to model by showing them a search feature in PDF files such as the Dietary Guidelines for Americans. Searching for the word water in the guidelines is as simple as typing water in a search box and then clicking the Find Next button to the search field’s right. See picture below:



- While doing this you may discover that the IOM – Institute of Medicine, sets an Adequate Intake (AI) for water and not the Dietary Guidelines for Americans. The AI was based on a median of total water intake estimated from the U.S. dietary surveys and therefore, should not be considered a specific requirement level.

MIDDLE

40 minutes

- Teams continue working on the Scientific Claims Presentation. It is suggested to go over all slides and the expectations of each slide again.
- Today, hand out an additional guideline sheet- [Appendix 3](#)-Day 2 Scientific Claim Presentation Guidelines –DAY 2. This is the addition of two more slides (a new 5 and 6). This is to connect the Dietary Guidelines for Americans (now slides 7 and 8) to their claim and whether the claim is consistent with the guidelines.
- This new task should be added to the Project Management Log.
 - ✓ **TEACHER TIP!** Show the students the Presentation Rubric today- [Appendix 4](#). In this 4 point rubric, you may want to have the discussion on what it takes to receive a 4. The rating of a 4 should be above and beyond what is expected, which in this case is a 3. For instance, instead of forming a research question, they form research questions. Instead of just the author’s job and education stated they include job history, other articles published, classes they teach, and other things where evidence is provided the students dug deeper to understanding the person’s background.
- Teacher visits student teams and monitors the application of the Project Management Log or may have the students turn them in for teacher overview to be returned the next day for team management.

CLOSING

5 minutes

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt:
 - › **Based on the additional requirements of your presentation, will you keep the same research claim?**
 - › **Provide two questions that could be asked to further understand your teams claim to research.**
- Collect the Exit Ticket for the day as students leave the classroom.



Key Question of the Day:

Can you use the U.S. Dietary Guidelines to justify a nutritional scientific claim?



Estimated Time

One 50-minute class period



Learning Objectives

As a result of this lesson, students will be able to:

- Research the credibility of a nutritional scientific claim and if it is supported by the Dietary Guidelines for Americans



Required Materials

- YouTube- Jumpstart Your Morning video <http://www.youtube.com/watch?v=6jEWIQYviMYzz&list=PL67423F27570689B1>
- Projector
- Audio
- [Appendix 3](#) - Scientific Claim Presentation Guidelines- DAY 2 (one copy per student)
- [Appendix 4](#) - Rubric for Scientific Claims Presentation
- Each team with a computer and Internet for research
- Dietary Guidelines for Americans <http://health.gov/dietaryguidelines/dga2010/DietaryGuidelines2010.pdf>
- MS PowerPoint
- [Appendix 15](#) – Project Management Log



Bell-Work

- Provide students with the weekly Bell-Work sheet ([Appendix 12](#))
- **"Is adequate intake (AI) of water something recommended by US Dietary Guidelines?"**
 - › (No, The IOM – Institute of Medicine, sets an Adequate Intake (AI) for water and not the Dietary Guidelines for Americans. The AI was based on a median of total water intake estimated from the U.S. dietary surveys and therefore, should not be considered a specific requirement level.)

OPENING

5 minutes

- Read the BELL-WORK question and solicit responses.

MIDDLE

40 minutes

- Teams continue working on the Scientific Claims Presentation. Have them refer to their Project Management Log and check off tasks accomplished. They should be building the PowerPoint presentation using Appendices 1-4 for assistance.
- As teams finish they are to print the PowerPoint presentations using the following guidelines:
 - › Print All Slides
 - › 4 Slides Horizontal (4 slides per page)
 - › 2 copies minimum - 1 for the teacher, 1 for the group sharing activity
 - › Turn in both copies to teacher.
 - ✓ **TEACHER TIP!** Use turned in copies to match up teams for tomorrow's activity. Pair up teams to share presentations with each other. They can be paired up with teams of similar claim or different. There are advantages to each scenario.

CLOSING

5 minutes

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#))
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt: **"What has been the most difficult part of preparing this presentation?"**
- Collect the Exit Ticket for the day as students leave the classroom



Key Question of the Day:

What are other teams preparing?



Estimated Time

One 50-minute class period



Learning Objectives

As a result of this lesson, students will be able to:

- Share their scientific claim with another team and receive feedback and suggestions from the other team



Required Materials

- Projector
- Audio
- [Appendix 4](#) - Rubric for Scientific Claims Presentation
- MS PowerPoint
- Copy of the team PowerPoint to provide to other team
- [Appendix 15](#) – Project Management Log



Bell-Work

- Provide students with the weekly Bell-Work sheet ([Appendix 12](#))
- ***"If a team's Scientific Claims Presentation says they used an article written in 1978, what is a good question to ask them?"***
- ***"If a team's Scientific Claims Presentation says that the claim is scientific and responsible, what is a good question to ask them?"***

OPENING

5 minutes

- Read the BELL-WORK question and solicit responses.
 - › If a team's Scientific Claims Presentation says they used an article written in 1978, what is a good question to ask them?
 - › If a team's Scientific Claims Presentation says that the claim is scientific and responsible, what is a good question to ask them?
- Possible answers may include: Is 1978 current enough? What evidence do you have to support that the claim is scientific and responsible?

MIDDLE

40 minutes

- Today, teams will share their Scientific Claims Presentation with another team. The purpose of this is to practice your presentation and to ask good questions about the presentation you are listening to. (Remind them of the 10 minute requirement)
 - ✓ **TEACHER TIP!** Pair up teams to share presentations with each other. They can be paired up with teams of similar claim or different. There are advantages to each scenario. Each team will sit with the other team and provide the printed copy of their slides to the other team. The other team should listen carefully with the intent to ask good questions to the other team about their presentation details.
 - › After the two teams share and if time allows, they may move to another team to share again.
 - › Before the class ends, it is important to allow time for the teams to react to the questions that were asked about their presentation from the other teams. They may need to adjust or do further research to prepare their Scientific Claims Presentation.

CLOSING

5 minutes

- ✓ **TEACHER TIP!** Use the Exit Ticket to gauge the teams' readiness for presentation and make adjustments to presentation timeline if necessary.
- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#))
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt:
 - › ***Is your team ready to present tomorrow to the class?***
 - › ***If not, list your reasons why:***
 - › ***Name three questions another team asked you about your presentation.***
- Collect the Exit Ticket for the day as students leave the classroom



Learning Target of the Day:

Teams will present



Estimated Time

One 50-minute class period



Learning Objectives

As a result of this lesson, students will be able to:

- Either present as a team or listen to presentations with purpose checking off required elements



Required Materials

- Projector
- MS PowerPoint
- [Appendix 4](#) - Rubric for Scientific Claims Presentation (one for each student)
- [Appendix 5](#) - Observer's Task- Scientific Claims Presentation (one for each student)
- [Appendix 15](#) – Project Management Log



Bell-Work

- Provide students with the weekly Bell-Work sheet ([Appendix 12](#))
- ***"What is your prediction for the validity of the scientific claims we will learn about in the presentations today?"***

OPENING

2 minutes

- Read the BELL-WORK question and solicit responses
 - › What is your prediction for the validity of the scientific claims we will learn about in the presentations today?

MIDDLE

45 minutes

- Presentation Day- First five groups to volunteer or assigned to present today.
- The observers also have a task. See [Appendix 5](#) – Observer's Task.
 - ✓ **TEACHER TIP!** Inform all the students when they are observers they are to listen intently to award the number they think corresponds to the category of the presentation. For example, Scientific Claim and Research Question, did they develop many research questions for a (4) or just one research question for a (3)? This exercise is to develop the observing students more understanding of the requirements.
- 6-7 minutes per presentation
- 5 groups x 7 minute + (2 minutes transition time between presentations) = 45 minutes

CLOSING

3 minutes

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt: ***"Which Scientific Claims Presentation(s) impressed you the most today? Why?"***
- Collect the Exit Ticket for the day as students leave the classroom.



Learning Target of the Day:

Teams will present



Estimated Time

One 50-minute class period



Learning Objectives

As a result of this lesson, students will be able to:

- Either present as a team or listen to presentations with purpose checking off required elements



Required Materials

- Projector
- MS PowerPoint
- [Appendix 4](#) - Rubric for Scientific Claims Presentation (one for each student)
- [Appendix 5](#) - Observer's Task- Scientific Claims Presentation (one for each student)
- [Appendix 15](#) – Project Management Log



Bell-Work

- Provide students with the weekly Bell-Work sheet ([Appendix 12](#))
- ***"What is your personal opinion on whether Tim Ferriss has the credentials to give nutritional suggestions on television?"***

OPENING

5 minutes

- Read the BELL-WORK question and solicit responses.
 - › What is your personal opinion on whether Tim Ferriss has the credentials to give nutritional suggestions on television?

MIDDLE

40 minutes

- Continue with presentations
- Student observers continue with [Appendix 5](#) – Observer's Task. Inform all the students when they are observers they are to listen intently to award the number they think corresponds to the category of the presentation. For example, Scientific Claim and Research Question, did they develop many research questions for a (4) or just one research question for a (3)? This exercise is to develop the observing students more understanding of the requirements.
- 6-7 minutes per presentation
- 5 groups x 7 minute + (2 minutes transition time between presentations) = 45 minutes

CLOSING

5 minutes

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt: ***"Did your opinion of Tim Ferriss or Dr. Oz ever change during this presentation preparation? Why or why not?"***
- Collect the Exit Ticket for the day as students leave the classroom.



Key Question of the Day:

Can anything be claimed on television?

Estimated Time

One 50-minute class period

Learning Objectives

As a result of this lesson, students will be able to:

- Form an opinion as to why people endorse products on television and what exists of government regulation of the infomercial industry

Required Materials

- Today it would be fun to have a container of Nestles Quik® out in front of the students
- Computer
- Projector
- [Appendix 6](#) - Inside the Making of an Infomercial TRANSCRIPT (one for each student as they walk into class)
- [Appendix 7](#) - Engagement Scenario (one copy for the teacher)
- YouTube: <http://youtu.be/BcLVI3KXchU>
- [Appendix 15](#) – Project Management Log

Bell-Work

- Provide students with the weekly Bell-Work sheet ([Appendix 12](#))
- **"What products have you seen being sold on an infomercial? Did you want to buy it?"**

OPENING

10 minutes

- Read the BELL-WORK.
- Read the first three pages of Inside the Making of an Infomercial Dateline NBC
- Posted question: If you hear the word infomercial what do you think of first? Is it a product? Is it a diet?
- Discussion- solicit students for their answers and let them know that we are going to dive into how infomercials are made using a Dateline NBC investigation that aired September of 2007. Like it explains in the reading, Dateline created a fake product to make skin better. It was actually NesQuik® chocolate milk powder. Unfortunately, you will realize that infomercials are highly unregulated and many claims can make it to television.

MIDDLE

35 minutes

- ✓ **TEACHER TIP!** Originally this DATELINE NBC report was available online and it has been removed. After the first three pages of [Appendix 6](#), the full transcript of the segment is provided. You may assign this reading for the students to take on roles and act out the parts or summarize the reading for them. A very important part is to discuss the portions Dr. Margaret E. Olsen is speaking and "on screen."
- **Google Dr. Margaret E. Olsen.** You will find she is a dermatologist in Los Angeles, California. You may find a website she hosts as well, abeautifulskin.com. You can find a list of her credentials on an About Dr. Olsen tab. Click around her site and see that she sells products online.

Lesson Plan: Day 12

- Discussion Questions:
 - › Is ABeautifulSkin.com a credible website to identify Dr. Olsen’s credentials?
 - › No, A Beautiful Skin.com is her website. She can say anything about herself. She also sells products on this website.
- Why do you think a board certified dermatologist would endorse this fake product, Moisturol?

CLOSING

5 minutes

- ✓ **TEACHER TIP!** Read [Appendix 7](#) - Engagement Scenario to end the class.
 - › Optional: play video to stimulate their thinking for this challenge: <http://youtu.be/BcLVI3KXchU>, 1 minute 30 seconds. This trailer was made by using the iMovie App. This may be something the students could consider using for their challenge.
- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt:
"Do you think an infomercial for Moisturol would have ever made it to air on television in the United States? Why or why not?"
 - ✓ **TEACHER TIP!** PAGE 51 you will see that 1st Amendment guarantees free speech in the United States. Until a deceptive claim is made the government cannot stop it beforehand.
- Collect the Exit Ticket for the day as students leave the classroom



Key Question of the Day:

What does it take to make an infomercial?



Estimated Time

One 50-minute class period



Learning Objectives

As a result of this lesson, students will be able to:

- Identify multiple tasks within a project and delegate tasks to complete by a due date



Required Materials

- [Appendix 8](#) - ChooseMyPlate.gov Infomercial Challenge (one per student)
- [Appendix 9](#) - Comprehension Questions for Infomercial Challenge (one per student)
- At least one computer per team of 3 students
- [Appendix 15](#) – Project Management Log



Bell-Work

- Provide students with the weekly Bell-Work sheet ([Appendix 12](#))
- "Do you think it will be easy to make an infomercial? Why or why not?"*

OPENING

5 minutes

- Read the BELL-WORK question and solicit responses.
 - Do you think it would be easy to make an infomercial? Why? Why not?
 - Teacher transition statement after soliciting responses- "Today you are going to begin to find out just what it takes to make an infomercial." Direct students to [Appendix 8](#) and [Appendix 9](#) today.
 - You will have to determine a realistic due date for the students. It will be structured for three class days for preparation. This may or may not need to be adjusted.

MIDDLE

40 minutes

- Today the Engagement Scenario for Project 2 is provided to the students. [Appendix 7](#), titled "ChooseMyPlate.gov Infomercial Challenge" provides many options for the teacher to select what type of product the students are to provide as reflection of understanding various topics in nutrition.
- At its minimum, the challenge asks the students to create a script for a ten minute infomercial which leads to a live "presentation" of the infomercial. If it is possible, the teacher may want to open this up to actual filming of an infomercial. With technology today, the students are quite adept to making short videos. With easily accessible video editing technology such as iMovie, student may want to create an actual ten minute infomercial.
 - ✓ **TEACHER TIP!** Go over the comprehension questions with the class. Have each student answer these in writing to affirm the requirements they and their team are required to accomplish. Model how the information from the comprehension questions can be inserted into the Project Management Log.

For example:

- Visit ChooseMyPlate.gov and identify possible areas of focus for the infomercial.
- Identify a “host” for the infomercial. (The host will be one of the students)
- Search the Internet and identify an expert for a testimonial. (This can be anyone with the credentials. When it comes to the presentation, one of the student will have to role play) Dr. Oz (student 2): “That is why I always go to www. ChooseMyPlate.gov “
- Write a professional biography of the expert.
- Each student is to keep up a Project Management Log that notates the development of each task, who is responsible, and current status of the task. As the challenges get more involved this management log becomes a valuable tool of organization (for the students) and assessment (for the teacher)

CLOSING

5 minutes

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt:
“What do you feel will be the most difficult part of this project?”
- Collect the Exit Ticket for the day as students leave the classroom.



Key Question of the Day:

What would you say or feature to get visitors to ChooseMyPlate.gov?



Estimated Time

One 50-minute class period



Learning Objectives

As a result of this lesson, students will be able to:

- Students become familiar with project requirements from teacher going over [Appendix 10](#) - Rubric for ChooseMyPlate.gov Infomercial Challenge
- Groups investigate features of ChooseMyPlate.gov Infomercial Challenge



Required Materials

- [Appendix 10](#) - Rubric for ChooseMyPlate.gov Infomercial Challenge (one for each student)
- [Appendix 8](#) - ChooseMyPlate.gov Infomercial Challenge (one per student)
- At least one computer per team of 3 students
- [Appendix 15](#) – Project Management Log



Bell-Work

- Provide students with the weekly Bell-Work sheet ([Appendix 12](#))
- Select any comprehension question(s) from the day before ([Appendix 9](#))

OPENING

5 minutes

- Read the BELL-WORK question and solicit responses.
 - › Teacher should use Comprehension Questions from the day before as BELL-WORK questions to start this class.
 - › Teacher solicits questions about the [ChooseMyPlate.gov](#) Infomercial Challenge

MIDDLE

40 minutes

- Today the students need to become familiar with the project requirements and how they will be graded. Refer to [Appendix 10](#) which is the Rubric for [ChooseMyPlate.gov](#) Infomercial Challenge. Discuss with the students what the requirements are for a 4 on the rubric. This your time to put your personal emphasis on what you feel is important for grading purposes.
- The students should refer to their Project Management Log and make sure they have every task that will be necessary to complete this project and estimated time to complete the task.
- For the rest of the class time, the students should be investigating www.ChooseMyPlate.gov website with the intentions to become familiar with what it offers. They will need to focus on a feature of the website keeping in mind the requirements of the project challenge.

CLOSING

5 minutes

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt: **"Submit any questions or concerns you have with the ChooseMyPlate.gov Infomercial Challenge."**
- Collect the Exit Ticket for the day as students leave the classroom.



Key Question of the Day:

What would you say or feature to get visitors to ChooseMyPlate.gov?



Estimated Time

One 50-minute class period



Learning Objectives

As a result of this lesson, students will be able to:

- Continue to develop infomercial script focusing on feature or features of the website ChooseMyPlate.gov that fulfill the requirements of the task



Required Materials

- [Appendix 15](#) – Project Management Log



Bell-Work

- Provide students with the weekly Bell-Work sheet ([Appendix 12](#))
- **"What questions do you have about preparing your infomercial?"**

OPENING

5 minutes

- Read the BELL-WORK question and solicit responses.
 - › What questions do you have about preparing your infomercial?
 - › Teacher responds to EXIT TICKETS from the previous day and solicits questions about the [ChooseMyPlate.gov](#) Infomercial Challenge

MIDDLE

40 minutes

- Today students need to continue the development of the infomercial script. By this day the teams should be focused on a feature or features of the [www.ChooseMyPlate.gov](#) website to highlight during their infomercial.
 - ✓ **TEACHER TIP!** You may want each team to submit their focus of the website. This way you can provide guidance if they are featuring something that does not fulfill the requirements such as weight management.
- If students are starting the script writing process you may offer a tip in the timing of each line. Have a student read it aloud as it would be naturally spoken. Another student, having a stop watch, will write down the minutes and seconds as the person reads and gets to the last word of each line. See example again in [Appendix 8](#).

CLOSING

5 minutes

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt: **"Submit any questions or concerns you have with the ChooseMyPlate.gov Infomercial Challenge."**
- Collect the Exit Ticket for the day as students leave the classroom.



Key Question of the Day:

What would you say or feature to get visitors to ChooseMyPlate.gov?



Estimated Time

One 50-minute class period



Learning Objectives

As a result of this lesson, students will be able to:

- Continue to develop infomercial script focusing on feature or features of the website ChooseMyPlate.gov that fulfill the requirements of the task



Required Materials

- [Appendix 15](#) – Project Management Log



Bell-Work

- Provide students with the weekly Bell-Work sheet ([Appendix 12](#))
- **"What task from your Project Management Log are you going to do today?"**

OPENING

5 minutes

- Read the BELL-WORK question and solicit responses.
 - › What task from your Project Management Log are you going to do today?
 - › Teacher responds to Exit Tickets from the previous day and solicits questions about the [ChooseMyPlate.gov](#) Infomercial Challenge

MIDDLE

40 minutes

- Today students need to continue the development of the infomercial script. The teams should be focused on a feature or features of the [www.ChooseMyPlate.gov](#) website to highlight during their infomercial. (Teacher should adjust time if students need more or less)

CLOSING

5 minutes

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt: **"Submit any questions or concerns you have with the ChooseMyPlate.gov Infomercial Challenge."**
- Collect the Exit Ticket for the day as students leave the classroom.



Key Question of the Day:

What would you say or feature to get visitors to ChooseMyPlate.gov?



Estimated Time

One 50-minute class period



Learning Objectives

As a result of this lesson, students will be able to:

- Continue to develop infomercial script focusing on feature or features of the website ChooseMyPlate.gov that fulfill the requirements of the task



Required Materials

- [Appendix 15](#) – Project Management Log



Bell-Work

- Teacher responds to EXIT TICKETS from the previous day and solicits questions about the [ChooseMyPlate.gov](#) Infomercial Challenge.

OPENING

5 minutes

- Teacher responds to EXIT TICKETS from the previous day and solicits questions about the [ChooseMyPlate.gov](#) Infomercial Challenge.

MIDDLE

40 minutes

- Today is the last day for the students to development the infomercial script. The teams should be focused on a feature or features of the [www.ChooseMyPlate.gov](#) website to highlight during their infomercial. (Teacher should adjust time if students need more or less)

CLOSING

5 minutes

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt: **"Submit any questions or concerns you have with the ChooseMyPlate.gov Infomercial Challenge."**
- Collect the Exit Ticket for the day as students leave the classroom.



Key Question of the Day:

What would you say or feature to get visitors to ChooseMyPlate.gov?



Estimated Time

One 50-minute class period



Bell-Work

- No BELL-WORK.



Learning Objectives

As a result of this lesson, students will be able to:

- Students will be effective presenters and responsible observers



Required Materials

- [Appendix 15](#) – Project Management Log

OPENING

5 minutes

- No BELL-WORK. Presentations start after teacher explains the format and transition

MIDDLE

40 minutes

- Student presentations today –10 minutes per presentation
- 3 minutes transition time
- 3 presentations per day

CLOSING

5 minutes

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt: **"Submit any questions or concerns you have with the ChooseMyPlate.gov Infomercial Challenge."**
- Collect the Exit Ticket for the day as students leave the classroom.



Key Question of the Day:

What would you say or feature to get visitors to ChooseMyPlate.gov?



Estimated Time

One 50-minute class period



Bell-Work

- No BELL-WORK.



Learning Objectives

As a result of this lesson, students will be able to:

- Students will be effective presenters and responsible observers



Required Materials

- [Appendix 15](#) – Project Management Log

OPENING

5 minutes

- No BELL-WORK. Presentations start after teacher explains the format and transition

MIDDLE

40 minutes

- Student presentations today –10 minutes per presentation
- 3 minutes transition time
- 3 presentations per day

CLOSING

5 minutes

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt: **"Submit any questions or concerns you have with the ChooseMyPlate.gov Infomercial Challenge."**
- Collect the Exit Ticket for the day as students leave the classroom.



Key Question of the Day:

What would you say or feature to get visitors to ChooseMyPlate.gov?



Estimated Time

One 50-minute class period



Bell-Work

- No BELL-WORK.



Learning Objectives

As a result of this lesson, students will be able to:

- Students will be effective presenters and responsible observers



Required Materials

- [Appendix 15](#) – Project Management Log

OPENING

5 minutes

- No BELL-WORK. Presentations start after teacher explains the format and transition

MIDDLE

40 minutes

- Student presentations today –10 minutes per presentation
- 3 minutes transition time
- 3 presentations per day

CLOSING

5 minutes

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt: **"Submit any questions or concerns you have with the ChooseMyPlate.gov Infomercial Challenge."**
- Collect the Exit Ticket for the day as students leave the classroom.



Key Question of the Day: *Self-Reflection*



Estimated Time

One 50-minute class period



Learning Objectives

As a result of this lesson, students will be able to:

- Summarize their understanding of credible sources, responsible television claims, US Dietary Guidelines, and ChooseMyPlate.gov as a resource for nutritional information



Required Materials

- [Appendix 15](#) – Project Management Log
- [Appendix 16](#) – Self-Reflection Form
- [Appendix 17](#) – Collaboration Rubric



Bell-Work

- Provide students with the weekly Bell-Work sheet ([Appendix 12](#))
- ***"List three main things you learned from the infomercial project."***

OPENING

5 minutes

- List three main things you learned from the infomercial project.

MIDDLE

40 minutes

- Project wrap Essential Questions of the infomercial project:
 - › Are television personalities that give food and nutrition information being responsible?
 - › Do they use scientifically valid information to base their recommendations?
- Complete the Self-Reflection Form
 - › Self-evaluate using the Collaboration Rubric. Write a response for the reason you rated yourself for each of the three standards.

CLOSING

5 minutes

- Provide each student with the weekly Exit Ticket handout ([Appendix 13](#)).
- Students will turn in their Exit Ticket for that day. They will respond to the following prompt: ***"ChoosMyPlate.gov Infomercial Challenge, how could it be better?"***
- Collect the Exit Ticket for the day as students leave the classroom.

Credible Source Writing Lab

Name _____ Date _____ Class Period _____

Assign one person to each job role. For a group of four, assign two people to share the reporting out to the class.

Job roles- Technician- uses the computer _____

Recorder- writes down the answers _____

Reporter(s)- report out to the class _____

What is the phrase or question you searched? _____

How many results did the search engine find? _____

What is the title of the article or source you chose to investigate? _____

Who is/are the author(s) of the article? _____

What is the author's job or position? (Do a search of the author.) _____

What is the author's educational background? _____

After your investigation of the author of your chosen article, do you still wish to use the article?

 **If no, go back to your original search and follow the same steps with another article.**

 **If yes, prepare your answer to the question, "Are carbohydrate cravings a valid scientific claim?"**

According to your article, what supports your answer to the question, are carbohydrate cravings a valid scientific claim? _____

What is the author's purpose for writing the article? _____

When was the article written? _____

Scientific Claim Presentation Guidelines Day 1

1. Your team is to select a scientific claim that is stated during the Jumpstart Your Mornings television segment.
2. The scientific claim should be reworded into research questions to thoroughly understand the claim. For example, a claim that bananas are a miracle cure for migraine headaches could be stated. Make this into research questions that help understand the credibility of the claim: Are bananas a cure for migraines? Do bananas help relieve headaches? What is in a banana? Why do migraines happen? All of these questions could generate a list of sources to read and help validate the scientific claim. It would be important to go through the Credibility Source Writing lab criteria of the source(s). Remember, anyone can put anything on the Internet. Don't believe me? Look up the dangers of dihydrogen monoxide at www.dhmo.org/facts.html and then ask yourself, what is dihydrogen monoxide?
3. Use the slide format shown below to structure your PowerPoint presentation. Each member of the team is to go over a minimum of two slides.

- What is the scientific claim you are researching?
- What is/are your research question(s)?

Team Member's Names

- _____
- _____
- _____

1

- How many results did the search engine find?
- What is the title of the article or source you chose to use to research the scientific claim?
- When was the article written?
- Who is/are the author(s) of the source?

2

- What is the author's job or position?
- What is the author's educational background?
- What is the author's purpose for writing the article?

3

- According to your team's research, what conclusion about the scientific claim can you come to?
- Is this a responsible claim to broadcast to millions of television viewers? Why or why not?

4

- Who is the spokesperson on this segment, Tim Ferriss?
- How many results does a search for Tim Ferriss generate?
- What is Tim Ferriss's education background?

5

Continue to research research about Tim Ferriss and form an opinion if he should be giving nutrition information on a television show. You **MUST** support your answer.

6

Scientific Claim Presentation Guidelines Day 2

Continue to work on your Scientific Claim Presentation. There is an addition of two more slides today. They are to be inserted as the 5th and 6th slide of the presentation. You are now to include the research and answer to: Would this scientific claim be consistent with the recommendations in the Dietary Guidelines for Americans? See below for guidance.

Search online for the Dietary Guidelines for Americans to see the most current version.

Remember our example yesterday? Bananas are a miracle cure for migraine headaches. See how this is applied to the Dietary Guidelines for Americans.

Would this scientific claim be consistent with the recommendations in the Dietary Guidelines for Americans?
INSERT NEW SLIDE 5 AND 6 TO ANSWER THIS QUESTION.

SUPPORT YOUR ANSWER

For example, an all banana lunch everyday will promote weight loss.

5

What does the Dietary Guidelines for Americans state?

Bananas are not stated as a key recommendation for managing weight?

Increase fruit intake is recommended.

Select an eating pattern that meets nutrient needs over time at appropriate calorie level.

6

Scientific Claim Presentation Rubric

Team Name/Number _____ Period _____

CATEGORY	4	3	2	1
SCIENTIFIC CLAIM AND RESEARCH QUESTION	Team identified a scientific claim stated on the video and developed research questions to be the basis of their search for information.	Team identified a scientific claim stated on the video and developed only one research question to be the basis of their search for information.	Team identified a scientific claim stated on the video only without developing a research question.	Team identified a scientific claim that was not actually stated on the video and formed research question(s) based on this claim.
AUTHOR'S JOB AND EDUCATION	The author(s) of the article job and education were presented with evidence of extra information also provided.	The author(s) of the article job and education were presented.	The author(s) of the article job and education were presented but incomplete.	The author(s) of the article job and education was not included.
AUTHOR'S PURPOSE FOR WRITING	The presentation states a purpose for writing the article using evidence from the article and other sources of research.	The presentation states a purpose for writing the article using evidence from the article.	The presentation states a purpose for writing the article with little evidence from the article.	The presentation states a purpose for writing the article that is hypothesized with no evidence.
TEAM CONCLUSION ABOUT SCIENTIFIC CLAIM	The team presents a strong conclusion about their selected scientific claim using evidence from articles and research.	The team presents a strong conclusion about their selected scientific claim using evidence from the article and research.	The team presents a conclusion about their selected scientific claim using evidence from the article and research.	The team presents a conclusion about their selected scientific claim based on opinion only and not using evidence from the articles or research.
JUSITIFICATION TO BE ON TV OR NOT	The presentation states a strong argument using evidence on why or why not - Tim Ferriss claims from Jumpstart Your Morning should be on TV.	The presentation states an argument using evidence on why or why not - Tim Ferriss claims from Jumpstart Your Morning should be on TV.	The presentation on why or why not - Tim Ferriss claims from Jumpstart Your Morning should be on TV is mentioned.	The presentation states an argument on why or why not their selected claim should or should not be on TV with no mention of Tim Ferriss - Jumpstart Your Morning claims.
CONNECTION TO THE US DIETARY GUIDELINES	The presentation states clearly that there is or is not a connection to the guidelines and their claim. The US Dietary Guidelines are used in this explanation to support this connection or lack of connection.	The presentation states that there is or is not a connection to the guidelines and their claim. The US Dietary Guidelines are used in this explanation to support this connection or lack of connection.	The presentation does not clearly state that there is or is not a connection to the guidelines and their claim. The US Dietary Guidelines are used in this explanation.	The presentation does not clearly state that there is or is not a connection to the guidelines and their claim.

Presentation Skills Rubric

Name _____ Period _____

CATEGORY	4	3	2	1
COMPREHENSION	Team is able to accurately answer all questions posed by classmates during the Q/A.	Team is able to accurately answer most questions posed by the classmates during the Q/A.	Team is able to accurately answer a few questions posed by classmates during the Q/A.	Team is unable to accurately answer all questions posed by the classmates during the Q/A.
TIME-LIMIT	Presentation is 6-7 minutes long.	Presentation is 5-6 minutes long.	Presentation is 4-5 minutes long.	Presentation is less than 4 minutes OR more than 7 minutes.
POSTURE AND EYE CONTACT	Each team member stands up straight, looks relaxed and confident. Establishes eye contact with everyone in the room during the presentation.	Each team member stands up straight and establishes eye contact with everyone in the room during the presentation.	Each team member sometimes stands up straight and establishes eye contact.	Each member slouches and/or does not look at people during the presentation.
VOLUME	Each member's speaking volume is loud enough to be heard by all audience members throughout the presentation.	Each member's speaking volume is loud enough to be heard by all audience members at least 90% of the time.	Each member's speaking volume is loud enough to be heard by all audience members at least 60% of the time.	The speaking volume of the presenters was often too soft to be heard by all audience members.

Scientific Claim Presentation Observer's Task

Team Name/Number _____ Period _____

Directions: Listen for the group to present each requirement. When the group addresses the requirement place a check in the box below the group number.

CATEGORY	GROUP #											
	1	2	3	4	5	6	7	8	9	10	11	12
SCIENTIFIC CLAIM AND RESEARCH QUESTION												
AUTHOR'S JOB AND EDUCATION												
AUTHOR'S PURPOSE FOR WRITING												
TEAM CONCLUSION ABOUT SCIENTIFIC CLAIM												
JUSTIFICATION TO BE ON TV OR NOT												
CONNECTION TO THE US DIETARY GUIDELINES												

Notes:

Transcript for *Inside the Making of an Infomercial* - Dateline NBC aired

00:00 → 00:03 You've probably been there yourself. You're flipping through channels
00:03 → 00:05 and you get caught watching one of those infomercials!
00:05 → 00:09 You know, all those nice people saying how much they love a product
and how it's changed their lives.
00:09 → 00:12 You're tempted to reach for the phone, but then you think,
00:12 → 00:15 "Wait a second. Who are these people, and is this too good to be true?"
00:15 → 00:17 Well, Dateline's been going undercover inside
00:17 → 00:21 the world of infomercials to find out. Here's NBC's John Larson.
00:22 → 00:25 [Multiple voices speaking.]
00:25 → 00:29 JOHN: On TVs across America, the pitch is being made.
00:29 → 00:31 Would you like to feel beautiful again?
00:31 → 00:33 JOHN: Infomercial products claim to make you thinner.
00:33 → 00:35 WOMAN: Finally lose your unwanted fat --
00:35 → 00:38 JOHN: Richer. Stronger.
00:38 → 00:40 MAN: Let's see some biceps! Look at that!
00:40 → 00:44 JOHN: But what about infomercials making claims that are deceptive?
00:44 → 00:47 WOMAN: What if you could live to be 100 years of age--
00:47 → 00:49 JOHN: The makers of this ad, last year,
00:49 → 00:51 agreed to the largest health fraud settlement
00:51 → 00:53 in Federal Trade Commission history,
00:53 → 00:55 20 million dollars.
00:55 → 00:58 10% of your marketers are serial offenders.
00:58 → 01:00 Television terrorists, I call them.
01:00 → 01:04 Greg Renker has produced some of the most successful infomercials of
all time,
01:04 → 01:09 and he's worried about what he calls "renegades" in his industry.
01:09 → 01:11 GREG: It's embarrassing to be in the industry that works so hard
to put out good products, to deal with competitors who don't follow any
01:11 → 01:15 guidelines,
01:15 → 01:17 and they take the money and run.
01:17 → 01:19 So, if you had a questionable product,
01:19 → 01:23 say a pill filled with nothing more than empty promises,
01:23 → 01:26 how hard would it be to find someone to make an infomercial
01:26 → 01:28 and sell your product to millions?
01:29 → 01:31 Dateline decided to find out.

01:32 → 01:35 JOHN: We first invented a product, a skin moisturizer in a pill.
01:35 → 01:37 We called it Moistural.
01:37 → 01:40 We knew it wouldn't work as advertised
01:40 → 01:43 because we filled the pills with Nestle's Quik.
01:43 → 01:47 Then, with hidden cameras rolling, we met infomercial producers,
01:47 → 01:49 including this man, who we asked
01:49 → 01:53 if we'd need a medical doctor to endorse Moisturol.
02:09 → 02:11 JOHN: He found this doctor
02:11 → 02:14 DOCTOR: That moisture will really be very helpful for people.
02:14 → 02:17 JOHN: who agreed to a \$5,000 fee to endorse our pill
02:17 → 02:22 without seeing clinical studies or even testing it before she spoke.
02:27 → 02:28 [Laughter on and off camera.]
02:28 → 02:30 JOHN: An attorney for the doctor now claims
02:30 → 02:32 she was tricked by NBC's deception,
02:32 → 02:36 including an altered listing of ingredients on the Moisturol bottle.
02:36 → 02:40 Nevertheless, the doctor did admit to us she made a mistake.
02:40 → 02:45 JOHN: How could a woman this smart, without any clinical trials, be willing
02:45 → 02:50 to go on television and help sell a product to maybe millions of people?
02:51 → 02:54 I guess it seemed like a good idea at the time.
02:55 → 03:01 JOHN: The infomercial producers also found dozens of women who claimed they tried the product.
03:01 → 03:05 Moistural really blew me away because
03:05 → 03:10 it's so easy and it's so effective.
03:10 → 03:13 JOHN: But it turns out, many of these women
03:13 → 03:16 were actresses more than willing to exaggerate.
03:16 → 03:19 How many of you have taken a little bit of truth for an infomercial,
03:19 → 03:21 and stretched it? Raise your hand.
03:22 → 03:23 I stretch it a whole lot.
03:23 → 03:26 JOHN: Or even be fed lines by the producers.
03:26 → 03:30 PRODUCER: I really feel healthier since using Moistural because --
03:30 → 03:37 I really feel healthier using Moistural because my skin has that glow to it.
03:37 → 03:41 JOHN: Finally, what infomercial is complete without a host?
03:41 → 03:44 ACTRESS: Imagine how excited I was to discover Moistural.
03:44 → 03:47 JOHN: This actress was hired to read a script,
03:47 → 03:50 a script which said she had used Moistural.
03:50 → 03:53 I tried Moistural, and it really works.
03:54 → 03:58 JOHN: The only problem? That's not what she told us the very same day

2

on the set.

04:08 → 04:13 JOHN: We showed portions of our investigation to U.S. Senator Mark Pryor, of Arkansas.

04:13 → 04:18 SEN. PRYOR: We need to have the FTC send a very clear signal to the industry

04:18 → 04:21 that these types of infomercials will not be tolerated.

04:21 → 04:25 JOHN: A problem not easily solved as a flick of the remote.

04:26 → 04:28 For Today, John Larson, NBC News, Los Angeles.

Inside the Making of an Infomercial

By John Larson Correspondent NBC News
updated 9/15/2006 9:07:48 PM ET

Infomercials: How many times have YOU channel surfed and landed on one? They can be fun to watch and the products “just what you’re looking for.” But they’re not all created equal. Can you always trust the products, the promises, and the people who make infomercials? Finding answers isn’t easy so we figured the best way to learn about infomercials would be to make one ourselves.

Want clear skin? A fresh new look? Want to lose weight? Or get strong? Then somewhere, there’s an infomercial airing just for you.

The infomercial industry is booming, enjoying \$91 billion dollars a year in sales, offering safe, reliable products, and making household names of super pitchmen who offer you products to buy from the comfort of your own home.

But despite offering thousands of reputable products, the industry does have its blemishes. The Federal Trade Commission has launched an on-going crackdown targeting ads after the FTC found deceptive weight loss ads running ‘rampant’ and more than half of all weight loss ads studied contained at least one false claim.

And then there’s Kevin Trudeau, leader of what the FTC calls an “infomercial empire that’s misled Americans for years.” After an ad aired for a product called Coral Calcium Supreme, which claimed to cure everything from cancer to heart disease. The FTC banned Trudeau from infomercials for life. But thanks to a loophole in the settlement, within months, Trudeau was back on the air, hawking his book, which became a national best seller.

Greg Renker, infomercial industry pioneer: 10 percent of your marketers are serial offenders, television terrorists, I call them!

Greg Renker has produced some of the most successful infomercials of all time. He says his company has annual sales of one billion dollars. While Guthy-Renker has not been without controversy—years ago consumers even complained about one of its products here on Dateline—Renker is considered a leader in the industry. His company has no record of any FTC fines or actions. And Renker is worried about what he calls “renegades” in his industry.

Renker: They seem to be comfortable taking advantage of consumers, selling them bogus products, and running to the bank.

John Larson, Dateline correspondent: Do they get caught? From your experience, do the bad guys pay?

Renker: In our experience, the bad guys don’t pay enough. And sometimes they don’t pay at all. It’s embarrassing to be in an industry that works so hard to put out good products, to deal with competitors who don’t follow any guidelines and they take the money and run.

All this raises questions: if someone wants to rip you off with the help of an infomercial, who is going to stop them? Dateline has learned that while the federal government has essentially doubled its efforts to stop false and misleading infomercial claims in recent years, the FTC still only brings an average of five cases a year. That, in an industry that releases as many as two new infomercials a day; more than 700 year. There are those inside the industry warning that the FTC’s efforts are not enough.

On Friday night, we bring you a Dateline hidden camera investigation takes you behind the scenes to show you an infomercial for a product that should never be sold.

From meetings on how to get a genuine expert to endorse a product with no science behind it, to a doctor who ought to know better, to consumers who swear by the products, but may not be consumers at all!

How did we get such an inside look at how infomercials are made? Well, it occurred to us that to find out how a fake product might make its way to the marketplace, you'd almost have follow a marketer trying to sell a product with little more than exaggerated claims and empty promises. And to do that, you'd almost have to go into the infomercial business, yourselves. So that's precisely what Dateline did.

The 'company' and its 'product'

We began in Oregon, in a small town nestled near the California border, home to a small company called Johnston Products.

Meet Dirk Johnston (that's not his real name): He's a Dateline producer, playing the part of the front man for our company.

And there's another catch: The company is a phantom, a figment of Dateline's imagination, created by NBC News for just one purpose: to go inside the world of infomercials.

Then we came up with an idea for a product — a pill — that could not possibly work as advertised: a skin moisturizer that would claim to take your lines and wrinkles away. We decided we needed a secret ingredient for our pill. So we went shopping.

We took what we'd bought to NBC where the prop department began filling our product with the secret ingredient.

What was it? Nestle Quik.

Normally, if you wanted to sell a legitimate product, you might next put the product through rigorous scientific testing to make sure it was safe and effective — but Dateline did the opposite. We took it to a doctor to make sure it was safe and ineffective. We know, for example, of claims that cocoa butter, when rubbed onto the body, softens the skin. So we wanted to make sure that with our pill, we had not accidentally stumbled upon a magic skin moisturizer.

We showed it to Dr. Zoe Draelos, a clinical associate professor at Wake Forest University, and a nationally recognized skin expert.

Dr. Zoe Draelos, a clinical associate professor:

Two gel caps of Nestle's Quik might satisfy your chocolate craving but would do absolutely nothing to moisturize the skin.

So we had a product— a skin moisturizer we knew could not possibly work. Now all we needed was a name. Something catchy.

Introducing... Moisturol.

We planned to take our product — which we called Moisturol but was really just Nestle Quik in a pill — to marketing companies to see if anyone would be willing to help make an infomercial for us, to help us sell our useless skin care product.

Now, armed with hidden cameras, beginning in February of 2004, Dateline set up a series of meetings with infomercial companies we had found on the Internet.

The search for an infomercial producer

First stop, Arizona, where we met with a company that had made infomercials for weight loss products. We told them our idea for Moisturol. They asked if we had clinical studies. After we left, they never pursued a follow-up meeting.

We moved on to New York. There, we met with another company that had made infomercials for weight loss and penile enlargement products. This company wanted extra money from the sales of Moisturol down the road. Since we knew we were never going to sell it, we moved on.

Next stop, Las Vegas, where we met a representative of a third infomercial company. The man we met at that time was the president of a large infomercial production company based on the West Coast. His company had experience. And according to its Web site, big-name clients, including Universal Studios,

owned by NBC's parent company. And no record of any government fines for producing deceptive ads.

We knew we'd have to make up a few things about Moisturool, a cover story if you will, to get the project off the ground. So we told the infomercial makers that an amateur inventor had come up with the formula, and thought maybe half the people who tried Moisturool would feel a difference. But we also waved what we thought were some very bright red warning flags. We repeatedly told the marketers that we had no proof at all that Moisturool worked—and we had no scientific tests behind our product.

That's when we asked him the key question.

Dateline as Johnston Products (hidden camera): So I guess my question to you is... how important is it that it really works?

Infomercial producer: Well for us if it doesn't work at all, we wouldn't wanna get involved. If it works for a percentage of people, we would feel more comfortable then...

Dateline: What percentage? 70? 50?

Infomercial producer: Well that's a weird question because in the right circumstances, dirk, if it works for one out of four people we might feel comfortable. We won't sell something that doesn't work at all or that's potentially dangerous. But if it only worked for one out of four people y'know and those people buy it on a regular basis, then you have a business.

One out of four? Without any proof, how could we claim it worked for one out of four? Under federal law, infomercial makers can be held responsible for deceptive claims if they knew, or should have known the claims have no reasonable basis. So did the company president press us harder for more evidence? He told us there were ways around scientific proof.

Infomercial producer: The other way you could do it is you could do fake clinicals as part of the creative... what we're doing is...

Fake clinicals?

Producer: Well they're not quite clinicals but the way you do it is you say "Does it work? We're gonna show you."

One of the marketer's ideas was to gather a small group of people to try Moisturool and talk about whether it worked for them. It wouldn't have any scientific value, but viewers might think it did.

Producer: So you're not coming out and saying we've proven anything. You're just more or less saying, hey, it's part of the creative..

The company said one thing we would likely need would be an expert.

We asked if we would need an M.D. to give Moisturool a 'stamp of approval.'

Producer: You're gonna want somebody in a white coat saying it works and it's safe. Dateline as Johnston Products: So you're confident we can find somebody?

Producer: Oh, its never a question of can you find somebody. It's a question of how good are they. And how much do they want?

Dateline as Johnston Products: It's all negotiable?

Producer: Everybody has their price!

But what about the government, the Federal Trade Commission? Wouldn't we get in trouble making deceptive claims? We were told that the company knows the rules, and how to avoid problems.

Producer: You won't have to worry about the FTC if it doesn't hurt people. We know exactly what you can say, what you can't say, and how to disclaim what you wanna say but you got a question about it. And what you can say in a way that they're not gonna y'know come after you.

The infomercial maker did ask us how the product worked. So we bought a box of Nestle Quik, and looked at the list of ingredients on the side, which included, of course, cocoa.

We sent them published information we'd found in a quick search of Google, on how the same ingredients that go into Nestle Quik might somehow help promote healthy skin. Biotin, for example, promotes cell growth; zinc oxide protects skin from solar damage. But we sent them nothing claiming those ingredients would moisturize skin from the inside out.

We wanted to make sure the company understood once and for all that we had no real proof Moisturol worked. So we sent them this e-mail to remind them we had done “no clinical trials,” that we had “no doctors” behind the product. And that we had “no scientific evidence” Moisturol worked at all. If infomercial maker was going to back out— because we clearly couldn't substantiate any of the claims we had made, as the government requires— we figured this would be the time.

Our answer came in an e-mail reply in just 11 minutes. The company was not backing out, in fact, just the opposite: They agreed to, “find the host, expert doctor, and create the right marketing approach to give you maximum results.” And to “determine the best way to create credibility and market the product to the masses.”

Finally, the infomercial maker sent us a contract confirming Johnston Products substantiated all the claims we'd made to the company, and that broadcasting the infomercial or selling the product as intended by the agreement would not violate any laws or FTC rules. We signed it, because we knew we would never sell the product, so we knew we'd never be violating any laws.

With the contract signed, it was time to watch the company begin marketing the magic of Moisturol.

First step: a strategy session

We told the company that while we were confident it would work, we did not think people who took Moisturol would see dramatic results. The president had this response:

Infomercial producer: Even if there aren't noticeable physical differences, and I think that you know, let's

go into it assuming that there's not going to be, and if there is, then great. We're pleasantly surprised. But if there's not, then we really want to talk everything about how it felt...

In other words, we did not have to tell people the product worked, we could still sell it by talking about feelings.

Producer: The thing about it all being visual, it either is or it isn't—but with feeling there's a much wider range of interpretation.

The company told us that in 10 weeks, it would deliver a finished half-hour infomercial suitable for air on any TV station in America. The price? More than \$140,000 dollars.

And when we started writing checks—as they like to say in the infomercial industry “we began seeing results almost immediately.”

Finding a host, people for testimonials, and a script

The next step? Finding a host.

Host: With just a single tablet once a day you'll be on your way to glowing younger looking skin.

Then, people to offer testimonials. The infomercial makers found women to sample Moisturol.

Next, the company sent us a script. And we approved it without changing a word. Finally, remember what the president said about finding a medical expert?

Producer: Everybody has their price!

Apparently he was right. The company found a doctor to endorse Moisturol in exchange for \$5,000. Her name was Margaret Olson. How would she justify endorsing our pills? In July 2004, four months after our first meeting, we were about to get our first look at the finished infomercial for a useless skin product called Moisturol.

The final product

Four months after our first meeting with the president of a West Coast infomercial production company, the final product was delivered. Our infomercial arrived in the mail.

The infomercial makers had rented a mansion in Malibu, with an exquisite poolside setting.

Moisturool infomercial hostess: We all know water is essential to life. Moisturool is the first ever product designed to give your skin the moisture it needs from the inside out!

And there were our testimonial women.

Woman giving her testimonial: I would feel my cheeks and they were like velvety smooth and I'd go, "Wow this is just totally amazing!"

Woman giving her testimonial: I wanted something that worked from the inside and that's exactly what this product did. Moisturool is great!

Is this our Nestle Quik they're talking about?

Woman giving her testimonial: Moisturool really blew me away because it was just... it's so easy and it's so effective!

And finally, there was the doctor.

Dr. Margaret Olson (in the infomercial): So in this situation Moisturool would be really very helpful for people. Moisturool is one of the new products out that is going to help get rid of lines and wrinkles from the inside out. The idea being is if you can make happier, healthier cells that make better collagen and this is a very innovative way to do it and very practical.

Dr. Olsen, board certified, and at the time Chief Of Dermatology at Saint John's Hospital in Santa Monica, was clearly endorsing Moisturool.

Dr. Olson (in the infomercial): I think Moisturool is useful because it's going to be an efficient way to get what you need, that you may not get if you're not very good to yourself and you're trying to undo the damage of the past.

With the doctor's credibility and endorsement, we now had a powerful, convincing sales tool for a product that did not work as advertised.

Dateline was never going to sell Moisturool to the public, so it seemed a good time to find the people who'd been involved in the production and start asking questions.

Talking to the women who gave us their testimonial

We first called the women who said they'd tried Moisturool and had given those testimonial endorsements. We told them we were NBC News, doing a story about infomercials, and seven agreed to talk with us. We did not tell them that NBC was behind the product. At least not yet. But then we asked one direct question:

John Larson, Dateline correspondent: Did it really help your skin?

Woman in infomercial: It didn't help as much as I said it did, but it definitely helped! ... and the veneer began to crack.

Woman giving her testimonial: I mean it did work. I found some potential in it, but I mean I went on to say that y'know, I'm using this for the rest of my life! I'm telling everybody that I'm throwing everything in my medicine cabinet out because all I'm gonna have is this little bottle of pills!

Larson: How many of you have taken the little bit of truth for an infomercial and stretched it? Raise your hand.

Hands go up.

Woman giving her testimonial: I stretch it a whole lot!

They said on a typical infomercial set, there is a lot of pressure to please the producers, who, they say, influence and even trick them a little bit to better sell the product. And the Moisturool set was no different.

Woman giving her testimonial: The day that I went, they told me that they had been there for a few hours and they hadn't gotten a good interview from anyone prior to me. So I really wanted to do a good job.

Another woman giving her testimonial: They told you that too?

Larson: They told you that too? Who else got told that there hadn't been any good ones?

Woman giving her testimonial: Yeah! The day that I went. Larson: So, in other words, the pressure's on?

All: Yes.

But why would they feel such pressure? Because these women are not what they seem to be, everyday people who love our product.

Larson: How many of you folks are in fact, actresses? Raise your hand. Hands go up.

Larson: All right, six out of seven.

It turned out that nearly all the actresses had done other infomercials. And all were recruited by the company, whose president told us in our very first meeting that he had the names of hundreds of people like them: part-time actresses who were just flattered to appear on camera.

Infomercial producer (on hidden camera): There are tens of thousands of women in Los Angeles who came to L.A. when they were 18 to be stars. It didn't turn out, they got married when they were 25, they now have a kid or two, they live in the valley, they're attractive compared to most of the country. But when our producer calls them up and says "Hey, how you doing? Listen, we got this thing, it's not really any money but do you wanna do it?"

And for just \$50 dollars, these women did just what the company president said they would.

Larson: If you're not making a lot of money, why do you do it?

Woman giving her testimonial: Exposure! There's always a chance somebody will see you and say, "Hey I want her in my next movie..."

The women were supposedly in the infomercial to testify about their own experiences with Moisturool. And at one point, we asked if any of the women would say that it was the 'best product they'd ever seen'. No one took our suggestion, but meantime, just off camera, the company's producers were feeding them their own lines.

So what would they say when they found out that Moisturool, just like them, was not what it appeared to be?

Larson: I have a secret for you. The maker of Moisturool is not some big pharmaceutical company. It's, in fact, NBC News. And the secret ingredient in Moisturool is... Nestle Quik. Chocolate powdered drink!

All: Oh my god! Are you serious?

Larson: So the question is, how did this make your scar go away? Help your flakiness? Make your skin feel softer than you ever could have imagined? And get rid of those crow's feet?

Woman in infomercial: It was a stretch. I was trying to be creative in my testimony.

And now that our secret was out, the stories changed.

Woman giving her testimonial: I'm thinking how I didn't like ask questions, I didn't care, y'know? And I'm sitting here going, why did I do that? You know what I mean? And for 50 dollars?

Woman giving her testimonial: The exciting part was I had submitted my picture and I was chosen! So I wanted to do a really good job. And in my heart I knew I didn't see a difference, after using it.

Woman giving her testimonial: We were not exactly honest about it. And I don't know about anybody else but I was a little uncomfortable about that, yeah.

Larson: You were?

Woman giving her testimonial: A little bit. I mean not enough to not take the 50 bucks thank you...

In the end, there was one holdout; One who still believed in the wonders of Moisturol.

Larson: Do you still think it really changed your skin from the inside out?

Woman giving her testimonial: Absolutely. I'm gonna go buy some and do a two week trial and see what happens.

She did, and after a couple of weeks of drinking Quik, now admits she's not so sure. In many ways, most of these women were just doing what they were trained to do as actresses. But the woman we would interview next... would have no such excuse.

But what about the host?

Actress Ann Marie Howard was hired to read a script—a script which said, she had used Moisturol. The only problem? That's not what she told us the very same day on the set.

(Hidden camera) Dateline as Johnston products employee: Have you tried the product? Did they give it to you?

Ann Marie Howard: No I have not tried it.

Dateline: 'cause I could get you some

Howard: Yeah I would love to try it. I would.

We asked for an on-camera interview with Ann Marie Howard to ask her, among other things, how viewers are supposed to know the difference between people who have really tried the product and actresses who read a script. She declined, pointing to what she called our story's "negative angle."

Next, it was time to go to the doctor.

We told Doctor Margaret Olsen we wished to ask her about skin care products she had endorsed.

Dr. Margaret Olsen: I endorse products that I have used, and I don't have a problem with.

Dr Olsen told us repeatedly that she only endorses products she uses, and that she had in fact used Moisturol.

John Larson, Dateline correspondent: Did you have it tested?

Dr. Olsen: No I just tried it on me.

Larson: You did?

Dr. Olsen: Yeah and I didn't have a problem.

So she claimed she'd actually used the product. Next, we asked her if she had seen any proof, any clinical trials for Moisturol. Of course we knew there were no clinical trials.

Dr. Olsen: I'm sure everything has clinical trials. The question is how extensive are the clinical trials.

She couldn't remember, but claimed, she had seen clinical trials for Moisturol.

Dr. Olsen: There were clinical trials and they were showing that it helped? Supposedly it made a difference.

It was time to tell the doctor our secret. And we didn't anticipate her reaction.

Larson: Moisturol is Nestle Quik.

Dr. Olsen: Love it. It's great.

Larson: Love it?

Dr. Olsen: Well, I love the fact that it's as simple as doing something like that. The unfortunate thing is somebody's going to have to spend a fortune on getting a product that they could get simply.

Did the doctor fully understand what we were saying?

(On interview with John Larson)

Larson: You appeared in an infomercial basically saying that they had a revolutionary new product that would fix your wrinkles from the inside out.

Dr. Olsen: Trying to improve your skin, trying to improve your whole body, yeah.

Larson: It's chocolate powdered milk! I mean this stuff can't help fix your skin from the inside out.

Dr. Olsen: If it helps fix your body from the inside out, remember, it talks..doing..strong bones? But you're absolutely right. Fixing wrinkles is, talk about an overstatement by a billion percent. You're absolutely right.

This from the same doctor who'd endorsed the product as a "clever supplement" that "may be helpful for your skin." Claims made without any clinical studies or scientific proof.

Larson: Are you curious how we know all this?

Dr. Olsen: Yes.

Larson: The company that developed Moisturool was NBC News.

Dr. Olsen: Oh I love it. That's wonderful. That's great. Thrilling. I mean, that's fun.

But the doctor's smile was about to vanish. Remember, Dr. Olsen told us she only endorses products she uses, and she had used Moisturool herself. So we played for her a clip we obtained that did not make the infomercial's final version; taped when the cameras were rolling backstage.

Dateline (undercover, on hidden camera): Did you get to try it by any chance, I left you a bottle. Did you try it?

Dr. Olsen: No. Not only did I not try it. I didn't even see it!

Dr. Olsen: I don't even know if it's a capsule or a pill. I tried it when I got home. Larson: But you didn't try it before you endorsed it?

Dr. Olsen: No. But I read the label.

After our interview, an attorney representing the doctor said she was tricked because the ingredients on the Moisturool bottle were not listed in the same order of concentration as they exist in Nestle Quik. The attorney claimed ingestible skin care products are booming, and that studies show chocolate is indeed good for the skin. While experts tell us there's some scientific truth to those claims, there are no studies that suggest consuming chocolate in a pill can moisturize the skin. And remember, Doctor Olsen told us on tape that she hadn't even seen the product.

Larson: Obviously there's a big problem here. Dr. Olsen: It's very embarrassing. Absolutely.

Dr. Olsen told us that she got involved with Moisturool as a favor to someone she knew from the infomercial company. She said her husband warned her about taking part, but regrettably, she didn't listen. Larson: How could a woman this smart, without any clinical trials, without having tried it herself, without any proof that something like this works, be willing to go on television and help sell a product to maybe millions of people?

Dr. Olsen: I don't know. I guess it seemed like a good idea at the time.

In the doctor's defense, after reviewing the entire tape of her interview with the company, we did see that she had, at first, tried to be careful.

Dr. Olsen: This is a very innovative way to do it and very practical that may in fact actually work.

Notice the doctor said it may work, not that it did work. But watch this, as a producer for the company off camera tried to push her to go further.

Infomercial producer (on hidden camera during the taping): You tell me if I can get away with this. I know where... you're hedging your bet a little bit.

Dr. Olsen: Darn right! We had that conversation already.

And we had noticed something else. During the taping of her endorsement, the doctor had frequently hedged, saying Moisturol is going to “try to help.”

Dr. Olsen (in the infomercial): Its going to try to help get rid of lines and wrinkles. ..try to help, not that it did.

But in the infomercial, “try to” had been taken out by the company’s producers; the edit, covered up.

Dr. Olsen (from the infomercial finished product): Moisturol is one of the new products that is going to help get rid of lines and wrinkles from the inside out.

Nonetheless, the doctor did endorse the product without scientific proof making no fewer than eight statements extolling the virtues of Moisturol or its ingredients for money, though she now says she never received her payment from the infomercial maker.

Of course, Dateline was never going sell Moisturol and rip off Americans. But we were about to find out whether anyone would have stopped us.

Would consumers be interested?

We now had our infomercial for Moisturol. But we knew we couldn’t air it on television and take money from viewers by selling them a product that didn’t work. But we wondered if our infomercial was effective. To find out, we went to a mall in Las Vegas, and set up a kiosk to screen our infomercial and show off our product.

John Larson, Dateline correspondent: Do you feel like it’d be something you’d be willing to buy?

Girl in mall: Oh yeah definitely. It’s a lot easier to take a pill rather than to smother your whole body in lotion.

Woman in mall: I’m always on the lookout for moisture, things that will make the skin look younger.

Some shoppers even told us how much they’d pay!

Woman in mall: I wouldn’t go over \$59 a month.

Woman in mall: \$39.99 at the most.

Woman in mall: No more than a hundred dollars.

Of course none of them knew Moisturol’s secret ingredient.

Larson: This particular product actually is...

Woman in mall: That’s a group of liars on that screen?

Larson: It’s Nestle Quik is what’s in the pill!

Woman in mall: (Laughter) I’m going away now...

But when these women realized they were ready to spend good money on Moisturol because it had been endorsed by women who turned out to be actresses and by a medical doctor, the laughter stopped.

Woman in mall: I personally wanna take her license away! Because if she’s a doctor and she just certified that Nestle Quik will change your skin?

Woman in mall: It kind of appalls me that people are gonna support something that’s not truthful.

Would anyone stop an infomercial for an ineffective product?

The mall was as close as we’d get to test the sales potential of Moisturol. But had we wanted to put our infomercial on television, would anyone have stopped us? We took that question to our parent company, NBC Universal.

Allan Wurtzel, NBC President of Research and Media Development: If Moisturol did not have the substantiation that we require with respect to its efficacy, with respect to its safety, then it never would have aired at NBC.

Alan Wurtzel is NBC's President of Research and Media Development. He oversees NBC's effort to make sure questionable ads do not air on the NBC Television Network. Wurtzel admits the network has no say over what infomercials air on most of its 226 NBC affiliate stations, but says his department is sometimes consulted when questions arise at the 10 stations NBC owns and NBC's 12 cable channels.

John Larson, Dateline correspondent: What do you think about an NBC cable outlet? Wurtzel: It wouldn't have aired on an NBC cable outlet unless there was a mistake that was made. In other words, there is no intention to do it.

After the interview, we checked with the Infomercial Monitoring Service. It found that NBC cable properties—including CNBC, Bravo, Sci-Fi and USA have taken in nearly \$11 million dollars running just four questionable infomercials since 2004. Those include one ad whose makers paid a \$20 million dollar settlement to the FTC, the largest ever settlement of an infomercial case.

So if Moisturol had aired somewhere, what would the Federal Trade Commission, the government agency charged with protecting you from deceptive infomercials, have done about it?

Mary Engle, Federal Trade Commission: I think there's a good likelihood that we would have seen you in court.

The FTC's Mary Engle believes Moisturol would have been flagged.

Engle: A pill that helps you take away wrinkles and smoothes your skin sounds suspicious to me. So there's a good likelihood that we would have gone after you.

Larson: Do you ever stop infomercials before they get to the air?

Engle: No, the First Amendment to the constitution guarantees free speech in this country. And that means that until a deceptive claim is made the

government can't stop it beforehand.

Now the FTC is getting help from the infomercial industry.

Meet Barbara Tulipane, President of the Electronic Retailing Association, which represents 350 companies, many involved in making or distributing infomercials. Here's what she said when we told her about Moisturol.

Barbara Tulipane, president of Electronic Retailing Association: There are shows that I look at and think "My god, how did they get that on the air?" I'm appalled. You have to have substantiation. If you make a claim, you'd better have the study to back it up or you will be sought after.

Sought after by the infomercial industry's self-regulation program, established in 2004. Its aim? To identify marketers behind questionable infomercials, and then attempt to get the ads either changed or off-the-air.

And there are signs it's beginning to work: Remember the ad whose makers paid an FTC record settlement of \$20 million? ERA's self-regulation program brought the ad to the government's attention.

A money-maker?

No one knows whether Moisturol would have been targeted or fined. But infomercial industry pioneer Greg Renker says even if the government eventually caught up with us, Moisturol would have made a bundle.

Greg Renker, infomercial industry pioneer: I think a product like that on the air might have made \$10 million dollars in net profit in the first year alone, before the FTC or other government agencies were even stepping up to go after you.

Larson: And if they did go after us, how much would they have fined us?

Renker: They'd be lucky to get two million out of you. They'd tell you you can't do ingestible skin care anymore. So next year you're going to do weight loss!

Larson: With \$8 million dollars in my pocket?

Renker: With \$8 million dollars in your pocket, you're going to double your money on another false and misleading claim.

The infomercial maker set conditions for an on-camera interview that we found unacceptable. But in letters, the infomercial company's attorneys allege that NBC used deception to "manufacture news."

The company's attorneys write, "Like the shameless scripted 'reality' television programs broadcast today, Dateline NBC hatched a deceitful plan and then day after day after day after day told lies and made false statements and representations to perpetuate it."

The attorneys say the marketer was merely a production company, making an infomercial for a product that Dateline created, relying on information that Dateline provided. Specifically they point to our statement that individual ingredients in the product had been approved by the FDA. They also point to information we provided claiming each of those ingredients has been known to improve the skin—the information we gathered from a simple Google search.

Finally, they say that under the contract we signed it was Johnston Products, not their client, that was responsible for substantiating all the claims in the infomercial—and making sure it did not violate any laws or FTC regulations.

But remember, the company wrote the Moisturool script, and hired the doctor and all the women who appeared in the infomercial. And the FTC told us that an infomercial maker can be held liable for deceptive claims if it played an active role in developing the claims and "if the company knew or should have known that the claims had no reasonable basis." Our investigation was complete. We'd learned that of the 700 hundred new infomercials hitting the air each year, a percentage make deceptive claims— a

percentage critics suggest could cost Americans billions of dollars a year.

We figured it was time to take what we had learned—about how a successful infomercial company creates credibility where there is none, how it hires actresses who admit they lie in infomercials, how a medical doctor endorses a product without ever checking it out— and take all this to the nation's Capitol.

U.S. Senator Mark Pryor, Senate Subcommittee for Consumer Affairs: We need to step in and stop this.

U.S. Senator Mark Pryor of Arkansas is the ranking Democrat on the Senate Subcommittee for Consumer Affairs. We showed him portions of our investigation.

Larson: I think most Americans, they think, "If it's on TV there must be somebody making sure that this is okay. It's met some standard."

Pryor: People think there's no way that these people are just actors, there's no way that they're lying to me, or someone, the government would step in and wouldn't allow this to happen. But what Dateline NBC has found is that it is in fact happening. We need to have the FTC send a very clear signal to the industry that these type infomercials will not be tolerated.

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Essential Question:

Are television personalities that give food and nutrition information being responsible? Do they use scientifically valid information to base their recommendations?

Engagement Scenario:

How many times have you channel surfed and landed on an infomercial? They can be fun to watch and the product may be just what you are looking for but they are all not created equally. Can you always trust the product? We have learned that deceptive practices have been used in the production of television infomercials. More importantly, we now understand the Federal Trade Commission (FTC) has to wait until a deceptive claim is filed against an infomercial. Meaning, it could air on television for millions of people to watch and buy their products before anything is done about it. Because of this, the FTC has launched an ongoing investigation. They found deceptive weight-loss infomercials running rampant. Half of all weight-loss infomercials studied contained at least one false claim.

Unfortunately the effects of false claims on television have impacted the American family. One indication is the unusual items being packed for lunch from home. Today students are bringing protein enhancements which vary from bars to shakes. Some are sprinkling a product that says they are tastant crystals on their food which curb your appetite. We've learned that there is nothing better for you and weight management than healthy meals, activity, and calorie balance.

Your team has been challenged to write a script for an infomercial that would promote and establish the credibility of the website www.ChooseMyPlate.gov. While the USDA wants you to have creative license, there are a few guiding principles you must abide by to win this production contract.

1. Identify the host(s) of the infomercial
2. Identify the experts to provide testimonials. They must have the credentials to provide expert testimony on nutrition or dietary guidelines. Their professional biography must be provided to the USDA.
3. Identify real people that have utilized the website's features for testimonials. (No actors)
4. You may only make nutritional claims that are located at www.ChooseMyPlate.gov or one of its other website links such as www.DietaryGuidelines.gov
5. The main focus of the infomercial needs to be on website features which assist the user with weight management.
6. The USDA's goal is to make this site "the go to place for Americans inquiring about nutritional information."

There are many attractive features to the www.ChooseMyPlate.gov website and it is your challenge to identify what would hook a viewer into watching this 10 minute infomercial. What will you focus on?

You will learn more details tomorrow about this challenge.

ChooseMyPlate.gov Infomercial Challenge

An infomercial is a relatively long commercial in the format of a television program. A whole industry has formed around this concept and it is booming! The industry enjoys 91 billion dollars a year in sales, offers safe, reliable products, and makes its hosts household names. Infomercials offer thousands of reputable products for purchase from the comfort of your own home, but the industry does have its blemishes. The Federal Trade Commission (FTC) has launched an ongoing crackdown targeting deceptive weight loss ads running rampant in the infomercial industry. More than half of all weight loss infomercials studied contained at least one false claim. While the federal government has doubled its efforts to stop false and misleading infomercial claims in recent years, the FTC still only brings an average of five cases to court for deceptive practices each year.

Your team has been challenged to write a script for an infomercial that would promote and establish the credibility of the website www.ChooseMyPlate.gov. While the USDA wants you to have creative license, there are a few guiding principles you must abide by to win this production contract.

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There are many attractive features to the www.ChooseMyPlate.gov website and it is your challenge to identify what would hook a viewer into watching this 10 minute infomercial. What will you focus on?

Assignment requirements

- Each team member must present during the infomercial at a minimum of three minutes.
- The infomercial is not to exceed ten minutes.
- Script must include timings (see example)
- All six previously mentioned guiding principles must be fulfilled.

For your assistance, see the next page for an example script that also provides timings. Your team's script should follow this format. Camera directions are optional.

Example Script

INFOMERCIAL: ReadYourMind.com (first 17 seconds)

00:00 -> 00:03 (Voice Over- VO) Brad Pitt HOST: You've probably been there yourself. You're surfing the

00:03-> 00:05 Internet trying to find the answer to a question and you get

00:05-> 00:09 a million possibilities. Working through all the

ACTOR WORKING ON A COMPUTER SQUINTING EYES, LOOKING FRUSTRATED, SHAKING HEAD (No)

00:09-> 00:12 information can be a time consuming task.

00:12-> 00:15 Now you can go to one place and get all of your answers instantly!

(JIB CAMERA ON CRANE) SHOT TO BRAD PIT IN FRONT OF STUDIO AUDIENCE (APPLAUSE)

00:15->00:17 ReadYourMind.com is the answer!

CHOOSEMYPLATE.GOV INFOMERCIAL CHALLENGE

Comprehension Questions

Name _____ Class Period _____

1. What is an infomercial?
2. How long is your team's infomercial (presentation) required to be?
3. What is the minimum time each team member is to speak?
4. Who is the client?
5. What is the product?
6. What are the six guiding principles of your infomercial?
 - 1.
 - 2.
 - 3.
 - 4.
 - 5.
 - 6.
7. What are the assignment requirements?
 - 1.
 - 2.
 - 3.
 - 4.
8. When is the due date for the presentation?

Presentation Rubric

Team Name/Number _____ Period _____

CATEGORY	4	3	2	1
NUTRITION CLAIM(S)	Team identified 4 or more nutritional claims and stated them as ways to manage weight.	Team identified 3 nutritional claims and stated them as ways to manage weight.	Team identified 2 nutritional claims and stated them as ways to manage weight.	Team identified 1 nutritional it and stated them as a way to manage weight.
NUTRITION CLAIM(S) CONNECTION TO CHOOSEMY PLATE.GOV	Team identified 4 or more nutritional claims and clearly linked them to ChooseMyPlate or a link from.	Team identified 3 nutritional claims and clearly linked them to ChooseMyPlate or a link from.	Team identified 2 nutritional claims and clearly linked them to ChooseMyPlate or a link from.	Team identified 1 nutritional claim and clearly linked it to ChooseMyPlate or a link from.
EXPERT'S JOB AND EDUCATION	The experts identified and job and education were presented with evidence of extra information also provided.	The experts identified and job and education were presented.	The expert identified and job and education were presented.	The expert identified and job and education were incomplete.
JUSTIFICATION TO BE ON TV OR NOT	The presentation states a strong argument using evidence from ChooseMyPlate.gov and at least one related link on how to manage weight.	The presentation states a strong argument using evidence from ChooseMyPlate.gov on how to manage weight.	The presentation states a weak argument using evidence from ChooseMyPlate.gov on how to manage weight.	The presentation lacks an argument using evidence from ChooseMyPlate.gov on how to manage weight.
REAL PEOPLE USED FOR TESTIMONIES	3 real quotes of classmates or other about use of ChooseMyPlate and quoted during the presentation.	2 real quotes of classmates or other about use of ChooseMyPlate and quoted during the presentation.	1 real quote of classmates or other about use of ChooseMyPlate and quoted during the presentation.	No personal testimonies or no identified real testimonies from classmates or other about ChooseMyPlate.
USDA'S GOAL IS PREVALENT	Stated at least 5 times "the go to place for Americans inquirng about nutritional information."	Stated 4 times "the go to place for Americans inquirng about nutritional information."	Stated 3 times "the go to place for Americans inquirng about nutritional information."	Stated 2 times "the go to place for Americans inquirng about nutritional information."
FINANCIAL ATTRIBUTES OF SITE IDENTIFIED	Identifies the biggest financial attribute of the ChooseMyPlate.gov website and is stated 10 times or more.	Identifies the biggest financial attribute of the ChooseMyPlate.gov website and is stated 9 times.	Identifies the biggest financial attribute of the ChooseMyPlate.gov website and is stated 8 times.	Team does not identify the biggest financial attribute of ChooseMyPlate.gov website.

Project Two Summative Cover Sheet

Name _____

Directions:

- Respond to each of the writing prompts as thoroughly as you can remembering to provide as much detail and examples to support your answers.
- Answer the prompts on separate paper(s)
- Attach this cover sheet to your answer sheets.

-
1. The Credible Source Writing Lab was introduced to you during the first project as your researched the question “why are Calories Important?” How did the Credible Source Writing Lab assist you in determining if carbohydrate cravings are a valid scientific claim?
 2. In what way did the chart paper presentation provide your team the practice to prepare the Scientific Claim Presentation?
 3. What did you learn that surprised you during Project 2 time period?
 4. How has your opinion of people sharing nutritional claims on television changed during this project?
 5. What nutritional claims did your team focus on during the Infomercial Challenge and why is it important to use claims from credible sources such as ChooseMyPlate.gov or the US Dietary Guidelines?

Daily Bell-Work Journal

MONDAY

DATE _____

TUESDAY

DATE _____

WEDNESDAY

DATE _____

THURSDAY

DATE _____

FRIDAY

DATE _____

Daily Exit Tickets



DAY EXIT TICKET Name: (First, Last) _____
Date: _____ Period: _____
Topic:



Continue your answer on the back if necessary

DAY EXIT TICKET Name: (First, Last) _____
Date: _____ Period: _____
Topic:



Continue your answer on the back if necessary

DAY EXIT TICKET Name: (First, Last) _____
Date: _____ Period: _____
Topic:



Continue your answer on the back if necessary

DAY EXIT TICKET Name: (First, Last) _____
Date: _____ Period: _____
Topic:



Continue your answer on the back if necessary

DAY EXIT TICKET Name: (First, Last) _____
Date: _____ Period: _____
Topic:



Continue your answer on the back if necessary

Calorimeter Lab

Students may have done this lab in Food and Nutrition Science Course 1. Below is the lab as they may have experienced it. Following, is a different setup along with procedures and a data table.

Key Question

Which contains more calories, fat or sugar (carbohydrates)? How much energy is stored in a peanut and in sugar?

Discussion

Food Calories: The calorie (energy) content of food is of obvious interest. It is known that the metabolism (breakdown, digestion) of food produces carbon dioxide (CO₂). In general, the reaction that occurs in metabolism of food is given by the following (unbalanced) equation:



However, this is the same equation used for the burning (combustion) of a substance. It can be shown that the energy released from metabolism should be equivalent to the energy released from combustion. Again, generally speaking, the more energy stored within our food, the more of it will be converted into fat and stored by the body if we don't "burn" it off.

Measuring Calories: In order to determine the heat (caloric) content of a food, scientists simply burn it and measure the amount of heat (calories) given off. The measure is usually given in terms of calories per gram. For example, if 5 grams of a burning food gave off 100 calories it can be said to give off 100 calories per 5 grams, or 100 calories/5 grams, or 20 calories/gram.

Scientists conduct this process in a chamber called a bomb calorimeter. (Calorimeter means to measure calories, or heat.) For our purposes, we will use a test tube filled with water. The water is used to absorb the heat given off by a burning piece of food, in this case a peanut and a piece of sugar. (Even though the peanut is not pure fat, it is predominantly fat.)

Comparative Data: Since we know it takes one calorie of heat to raise the temperature of 1 gram of water 1 degree Celsius, it is easy to determine the amount of heat given off by the peanut. The only problem, since we are not using a bomb calorimeter, is that we will lose some heat. However, if we burn both items in the same manner, we will get good comparison data, not necessarily correct data.

Units of Measurement: A nutritional calorie (Calorie) is the same as 1000 calories (1 kilocalorie) of energy. A calorie is defined as the amount of heat gained or lost when one gram of water changes temperature by 1°C. (This measurement is termed the specific heat, since it is specific to water. Every substance has its own specific heat and this is one way to identify a substance.) The approach we will take will be to burn a peanut underneath a container of water. If the amount of water is known and the change in water temperature is known, the amount of heat gained by the water in calories can be determined.

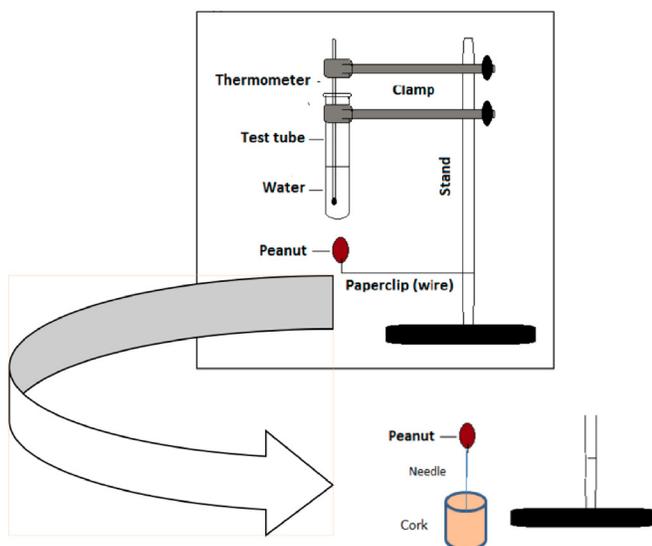
Assumptions

- All of the heat given off by burning the peanut is absorbed by the water (not really true)
- The water will not lose any heat to its surroundings (not really true)
- Only that part of the peanut that burns will be used to determine calorie content

Set-up/Design

The flame from the burning peanut must be in contact with test tube. Peanuts, water, test tube clamp, stand, a paper clip and an electronic balance will be provided. Use the thermometer to measure the temperature of the water before and after heating.

Here is a suggested set-up.



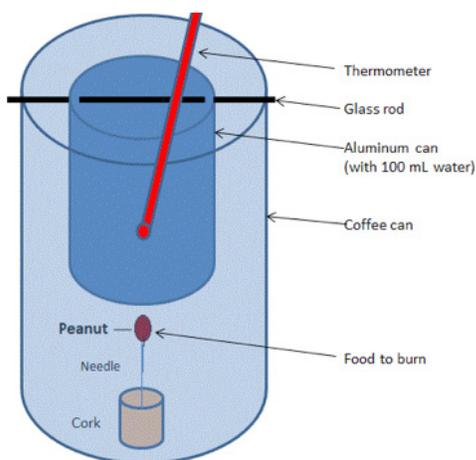
Next Step

Repeat with sugar. A piece of sugar candy or a sugar cube will work.

Summary/Write-up

- Submit your procedure, data table, and calculations.
- Account for your sources of error. How could some of the errors have been prevented?
- According to your experimental result, which food contains the most calories?
- According to "official" data, which food contains the most calories?

Different Setup



NUTRITION SCIENCE CALORIMETER LAB DIFFERENT SETUP

Equipment and Materials per Lab Group

- A variety of shelled nuts
- Large cork
- Long needle
- Balance or electronic scale
- Coffee can or large juice can (top and bottom removed)
- Soup can (top removed)
- Water
- 100 mL graduated cylinder
- Lab thermometer
- Glass Stirring rod
- Wooden matches or grill lighter

Procedure

1. Create a nut assembly: stick the eye of the needle in the narrow end of the cork, then on the point of the needle mount the shelled nut assigned by your teacher.
2. Determine mass of the nut assembly. Record it in your data table.
3. Remove both ends of a large can, and punch holes in the sides near the bottom. This will serve as a chimney to minimize heat loss during the experiment.
4. Remove one end of a small aluminum can. Punch two holes, opposite to each other, in the sides of the can near the open end.
5. Pour exactly 100 mL of tap water into the small can. Record the temperature of the water in your data table.
6. Insert a glass stirring rod through the holes in the sides of the small can. Use the glass rod to balance the small can within the large can.
7. Place the nut on a nonflammable surface,

and ignite it with a match. Immediately place the large can around the nut assembly so the small can of water is above the nut.

8. Allow the nut to burn for 2 minutes or until it goes out.
9. Stir the water with the thermometer. In your data table, record the water's highest temperature.

10. Mass the nut assembly, and record it in your data table.

11. Copy the results for other kinds of nuts in your data table. Expand your data table on separate paper if needed.

Data Table

KIND OF NUT	MASS			TEMPERATURE		
	Original	Final	Change	Original	Final	Change

Analyzing Results

1. Using the equation below, calculate the calories of heat from the burning nut. The 100 mL of water has a mass of 100 grams.

calories = grams of water \times degrees of temperature change

2. Divide the figure from question 1 by the change in mass of the nut. This gives the calories released per gram of nut burned.

3. Which kind of nut released the most heat per gram? The least?

Self-Reflection on Project Work

Think about what you did in this project and how well the project went. Write your comments in the right column.

Student Name:	
Project Name:	
Driving Question:	
List the major steps of the project:	
ABOUT YOURSELF:	
What is the most important thing you learned in this project:	
What do you wish you had spent more time on or done differently:	
What part of the project did you do your best work on:	
ABOUT THE PROJECT:	
What was the most enjoyable part of this project:	
What was the least enjoyable part of this project:	
How could your teacher(s) change this project to make it better next time:	

Collaboration Rubric

	BELOW STANDARD	APPROACHING STANDARD	AT STANDARD	ABOVE STANDARD
RESPONSIBILITY FOR ONESELF	<ul style="list-style-type: none"> is not prepared and ready to work with the team does not do project tasks does not complete tasks on time does not use feedback from others to improve his/her work 	<ul style="list-style-type: none"> is sometimes prepared and ready to work with the team does some project tasks, but needs to be reminded competes some tasks on time sometimes uses feedback from others 	<ul style="list-style-type: none"> is prepared and ready to work with the team; is available for meetings and uses the team's communication system does what he or she is supposed to do without having to be reminded completes tasks on time uses feedback from others to improve his or her work 	<p><i>In addition to At Standard criteria:</i></p> <ul style="list-style-type: none"> does more than what he or she has to do asks for additional feedback to improve his or her work, beyond what everyone has been given
HELPING THE TEAM	<ul style="list-style-type: none"> does not help the team solve problems; may cause problems does not share ideas with other team members does not give useful feedback to others does not offer to help others 	<ul style="list-style-type: none"> cooperates with the team but does not actively help it makes some effort to share ideas with the team sometimes gives useful feedback to others sometimes offers to help others 	<ul style="list-style-type: none"> helps the team solve problems, manage conflicts, and stay focused and organized shares ideas that help the team improve its work gives useful feedback (specific and supportive) to others so they can improve their work offers to help others do their work if they need it 	<p><i>In addition to At Standard criteria:</i></p> <ul style="list-style-type: none"> steps in to help the team when another member is absent encourages others to share ideas, helps to make them clear, and connects them to the team's work notices if a team member does not understand something and takes action to help
RESPECT FOR OTHERS	<ul style="list-style-type: none"> does not pay attention to what teammates are talking about does not show respect for teammates (may interrupt, ignore ideas, hurt feelings) 	<ul style="list-style-type: none"> usually listens to teammates, but not always is polite and kind to teammates most of the time, but not always 	<ul style="list-style-type: none"> listens carefully to teammates is polite and kind to teammates 	<p><i>In addition to At Standard criteria:</i></p> <ul style="list-style-type: none"> encourages the team to be respectful to each other recognizes everyone's strengths and encourages the team to use them