Changes to the Food Label: Engaging and Educating via Interactive Video

by
Casey M. Collins

A THESIS

submitted to

Oregon State University

Honors College

in partial fulfillment of
the requirements for the
degree of

Honors Baccalaureate of Science in Nutrition
(Honors Scholar)

Presented May 11, 2018
Commencement June 2018

AN ABSTRACT OF THE THESIS OF

Casey M. Collins for the degree of Honors Baccalaureate of Science in Nutrition presented on May 11, 2018. Title: Changes to the Food Label: Engaging and Educating via Interactive Video.

Abstract approved: _____

Ingrid Skoog

The project aims to engage and educate the OSU Undergraduate Student on 2020 changes to the food label as proposed by the Food and Drug Administration. The goal of the project was the production of a collaborative and meaningful piece of work that engages with effective educational practices such as interactive graphic material, clever script, and enthusiastic scenes and acting. The education portion of the project centers around label changes regarding serving size, added sugars, and micronutrients. Increasing the literacy of reading food labels especially with these new changes will allow college-aged students to make better-informed food decisions impacting their health.

Key Words: Changes to the food label, Nutrition Facts Panel, FDA, Effective Educational Practices, Interactive Video, Educational Video, Nutrition, Food Label

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APPROVED:

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Drew Olson, Committee Member, representing Oregon State University Ecampus

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Toni Doolen, Dean, Oregon State University Honors College

I understand that my project will become part of the permanent collection of Oregon State University, Honors College. My signature below authorizes release of my project to any reader upon request.

_____

Casey M. Collins, Author

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I would like to acknowledge the following people for their support, willingness, and passion in the collaboration of this project. Thank you.

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Austin Spaeth, OSU Ecampus Web Developer
Siew Sun Wong, Thesis Committee Member and OSU College of Public Health and Human Sciences Associate Professor
Jill Petreny, Bites Manager
Ecampus Team

And most notably for her encouragement, expertise, vision, and humor,

Ingrid Skoog, Thesis Mentor and OSU College of Public Health and Human Sciences Senior Instructor

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Introduction

A short, interactive, and engaging nutrition education video was created for Oregon State University students in response to newly announced changes to the Nutrition Facts Panel, the National Nutrition Education Tool produced by the Food and Drug Administration (FDA). This project aims to engage and educate on the food label mandated changes addressing serving size, added sugars, and micronutrients. This is important because increasing the literacy of reading food labels allows college-aged students to make better-informed food decisions impacting their health.

Who is the FDA?

The Food and Drug Administration (FDA) holds the responsibility to assure that foods sold in the United States are safe, wholesome, and properly labeled. This policy applies to domestically and foreign produced food (H.R.3562, 1990).

Rationale for FDA Proposed Changes to the Nutrition Facts Panel

The Nutrition Facts Panel, referred to as the food label hereafter, remains the widest reaching nutrition education tool impacting consumers. The content creation for the food label is guided by the United States Department of Agriculture (USDA) 2015-2020 Dietary Guidelines for Americans. The Dietary Guidelines reflect the most current research conducted by experts in the field of nutrition and are updated every five years. Although the Dietary Guideline have been updated every five years in response to current nutrition research, many of these nutrition recommendations have not tricked down to the consumer via the food label. Consequently, the current

food label (before the May 2016 version) had not changed in over 20 years (FDA, 2018). In response to this disconnect of current nutrition information to the public, the FDA mandated changes to the food label on May 20, 2016. These changes, addressed in the video, reflect new scientific information so that consumers are able to make better-informed food decisions about what and how much they choose to eat (FDA, 2018).

The main changes observed on the new label and covered in the video include updated serving sizes, the addition of “added sugars” information to the carbohydrate section, and the replacements of some micronutrients. Observe the visual changes between the old and new proposed food labels in figures I and II (FDA, 2018):

SIDE-BY-SIDE COMPARISON

Original Label

Nutrition Facts

Serving Size 2/3 cup (55g)
Servings Per Container About 8

Amount Per Serving

Calories 230	Calories from Fat 72
	% Daily Value*
Total Fat 8g	**12%**
Saturated Fat 1g	**5%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 160mg	**7%**
Total Carbohydrate 37g	**12%**
Dietary Fiber 4g	**16%**
Sugars 1g	
Protein 3g	
Vitamin A	10%
Vitamin C	8%
Calcium	20%
Iron	45%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily value may be higher or lower depending on your calorie needs.

	Calories:	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

New Label

Nutrition Facts

8 servings per container
Serving size **2/3 cup (55g)**

Amount per serving
Calories **230**

	% Daily Value*
Total Fat 8g	**10%**
Saturated Fat 1g	**5%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 160mg	**7%**
Total Carbohydrate 37g	**13%**
Dietary Fiber 4g	**14%**
Total Sugars 12g	
Includes 10g Added Sugars	**20%**
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Note: The images above are meant for illustrative purposes to show how the new Nutrition Facts label might look compared to the old label. Both labels represent fictional products. When the original hypothetical label was developed in 2014 (the image on the left-hand side), added sugars was not yet proposed so the "original" label shows 1g of sugar as an example. The image created for the "new" label (shown on the right-hand side) lists 12g total sugar and 10g added sugar to give an example of how added sugars would be broken out with a % Daily Value.

Figure 1 Side-by-Side Comparison of Old and New Food Label (FDA, 2018).

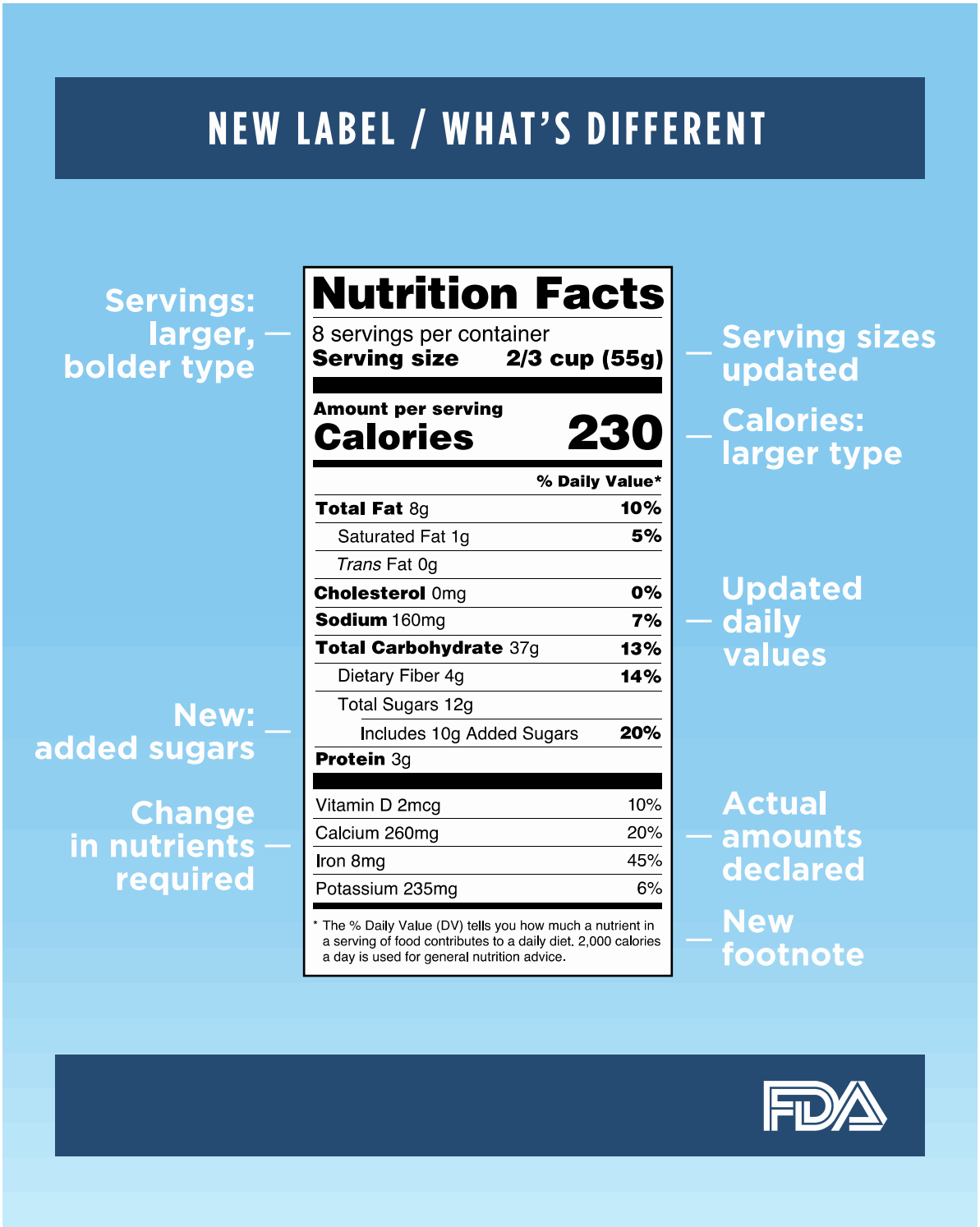

Figure 2 Specific Differences Observed on the New Food Label (FDA, 2018).

The Need for a Video Project

The primary purpose for this video project involved undergraduate students in an experiential learning process that incorporated passionate collaboration, evidence-based application, and increased proficiency in student education. This project incorporates effective educational practices that aim to maximize active learning through student engagement. The following figure displays effective elements used in the video project:

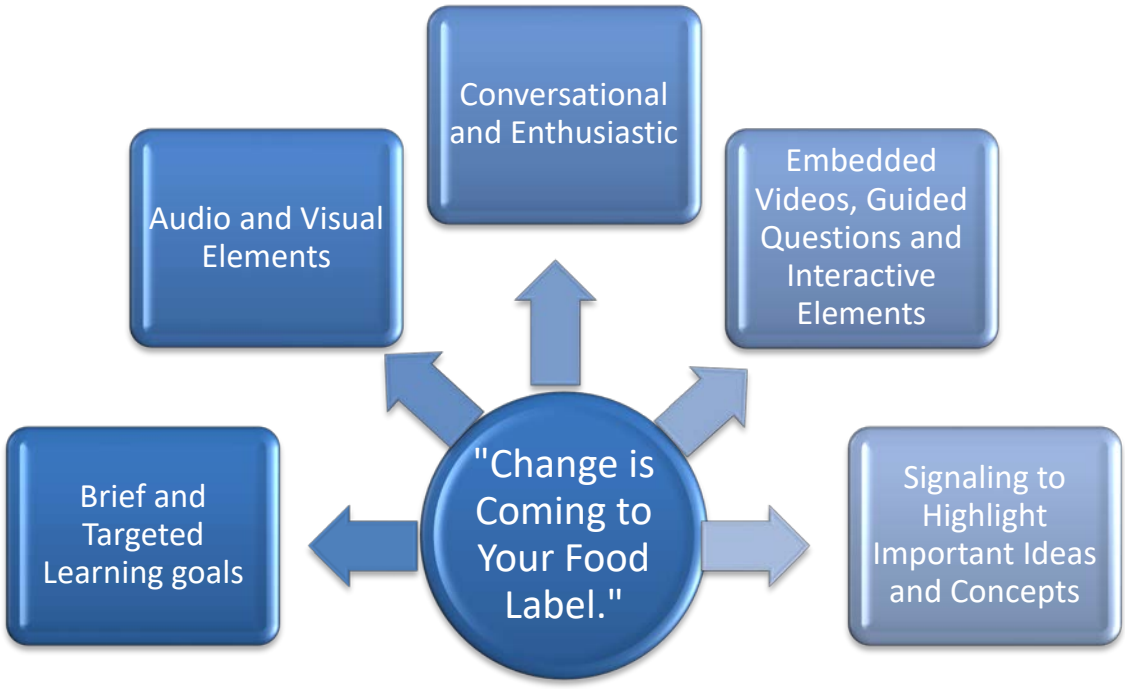

Figure 3 Effective Educational Elements Included in Video Instructional Design (Brame, 2015).

Project Learning Outcomes for Undergraduate Student Team

- Integration of Nutrition Dietetics acumen into experiential learning project, especially experiences from NUTR 240 – Human Nutrition, NUTR 319 – Promoting Food and Nutrition, NUTR 423 – Community Nutrition, NUTR

439 – Communications in Dietetics, and the Didactic Program in Dietetics at Oregon State University.

- Become proficient in the support science, evidence, and historical context and rationale for the current and proposed nutrition facts panel of the food label.
- Develop the ability to effectively communication complex nutrition concepts to peers and the public.
- Integrate skills developed from writing and performance with nutrition education.
- Collaborate with Ecampus multimedia technicians and develop a professionally edited video suitable for Ecampus and on-campus delivery.
- To establish best practices for pairing engaging content with nutrition education, working with interactive elements, etc.

Materials and Methods

Production of this video consisted of group collaboration to understand the changes being made by the FDA, storyboarding, the development of a script, the memorization and filming process in collaboration with Ecampus video and sound technicians, the development of graphic elements and interactive video, and assessment sections within the video, and video editing.

Effective Teaching Methods for Students

In response to these mandated changes to the food label, the video aims to educate about said changes and engage in a fun, lively, and interactive way. Brainstorming between student and faculty experience yielded several key items wanted by the team. These include:

- Student led
    a. A volunteer learning opportunity for students to lead and create a valuable project with thoughtful contributions from OSU students.
    b. Opportunity for students to collaborate, innovate, and captivate.
- Succinct topics for delivery
    a. The focus remained on three topics:
        i. Serving Size,
        ii. Added Sugars, and
        iii. Micronutrients.
- A video format

a. PowerPoint presentation would have covered the material, but leave out several key elements desired by the vision of this project, namely the collaborative and innovative elements.

- Short video segments
    a. From student experience, we recognized that the topic, however engaging for invested nutrition dietetic students, would not effectively draw students to fully engage in the education without the use of humor and other multimedia effects.
    b. The goal was less than 4 minutes per section, total video no longer than 15 minutes.
- Humor (in writing and acting)
    a. The topic, however engaging for invested nutrition dietetic students, would not effectively draw students to fully engage without the use of humor and other multimedia effects enhancing that humor.
    b. Employing light and inclusive humor was done by means of
        i. Miming (purely physical situation without talking),
        ii. Delivery (works spoken in a funny way), and
        iii. Actual Words themselves (humorous combinations or jokes).
            1. Following is an image of types and frequency of humor employed throughout the video. The black, orange, and green arrows represent miming, delivery, and words, respectively.

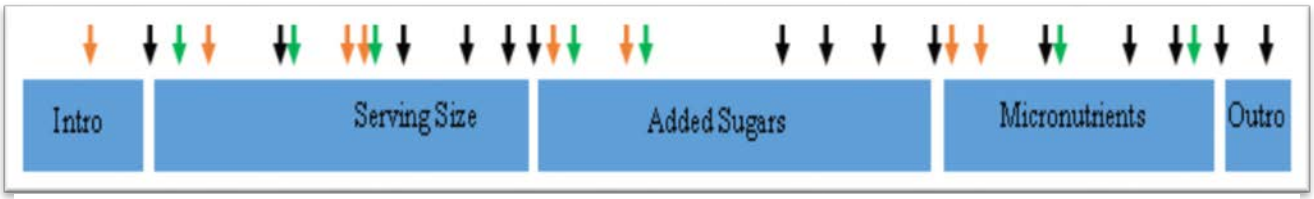

Figure 4 Frequency of Humor Employed Throughout Video.

- Graphic Elements and collaboration with Ecampus
    a. Graphic elements like a food label displayed in the corner throughout all the video segments would increase continuity between the multiple video segments.
    b. Imbedded visual game-like assessment to break from the watching/listening mode of learning and into a hands-on interactive approach.
    c. Avatar makeover piece as a fun “extra” to drive home the message of food label “makeover.”
- Realistic and relatable
    a. On-campus settings.
    b. Relevant food choices for OSU students.
    c. Student actors only (no faculty).
- Pre- and post- survey assessments
    a. Because this video will be used for Ecampus and on-campus delivery in different nutrition classes, the assessment tool will help the instructor to:
        i. Assess learning and indicate where students might need clarification,

ii. Encourage completion of the video as the instructor could attach points to each question, and
iii. Drive home points made in the video.

Additionally propelled by the pedagogy for maximizing student learning from educational videos, these elements wanted in the video were understood and implemented in a framework that considers three topics: cognitive load, student engagement, and active learning (Brame, 2016). The cognitive load element used signaling to highlight important information, segmentation to chunk information, and conveyed complementary information. This element was implemented with graphic elements appearing on the screen that highlight important information, using similar elements throughout the videos in order to increase continuity, and chunked information in the form of verbal delivery and assessment questions.

The second pedagogical element that framed the video development process was student engagement. Here, conversational language spoken with enthusiasm was used to increase the percentage of video that students watch, decrease mind wandering, and increase a sense of social partnership between the student and instructor (Brame, 2016). This element was implemented by use of short and multiple videos, each no more than 5 minutes long, expressions of instructor excitement with phrases such as “I’m very excited,” the use of familiar settings, and using the same actor throughout the videos to develop a social partnership with the viewer.

The third pedagogical element of active learning promoted strategies of interactive material, guiding questions, and making the video part of a larger homework assignment. This practice is found to improve memory via the testing

effect, increase student ownership, and increase student motivation to complete the video (Brame, 2016). This element of active learning was implemented by use of interactive material, imbedded assessment, and questions that ask students to apply the concepts they just learned in the video.

Scripting

The video was scripted to clearly address the learning objectives for an audience of OSU Students. It was designed to explain the rationale for changes to the food label and increase student literacy of reading food labels. The scripting process included many drafts to organize all the concepts. The preliminary step was creation of a storyboard available in Appendix I. Next, the script was organized, as it would be for a theatrical play. This draft allowed ease for creating the verbal content used in the video. This first draft is included in Appendix II. The next iteration of the script was separated into two sections. One section included words with blocking direction and the other included desired graphic elements to incorporate into the media of the video itself. The separation of the script enhanced communication with OSU Ecampus when included later in the video-making process. The final draft is included in Appendix III.

Important elements of the script included clarity and humor. Low food label literacy was assumed among the population receiving this video, so great lengths were taken to first ensure proper understanding of the food label. Additionally, explanations of common misconceptions were addressed to clarify the changes being made to the label. Specific examples included defining portion size vs. serving size and differentiating between naturally occurring sugars and added sugars. For the

humor element, clever scripting was employed with amusing scenarios, intentional pauses, and playful comments. In addition to adding humor, scripting had to be accessible to students with disabilities or with English as their second language. Thus, much of the humor implemented was done so with physical comedy which included no words and thus no possibility for misinterpretation. Additionally, a bar of text matching what was spoken was added by Ecampus to increase accessibility for students.

Script	Video, Game, Elements
Segment 2 - Added Sugars Another big change for the food label is the new added sugars section. What? Added sugars? Yes. Added sugars. The old label just put all sugars together in one category, but not all sugars are alike! Why add this to the food label? Because consuming more than 10% of your total daily calorie needs from added sugars has been linked to decreased essential micronutrient intake and an increase in body weight. The dietary guidelines recommend that no more than 10% of your daily calorie needs come from added sugar. For a 2000 kcal diet, that equivalent to no more than 12.5 packets of sugar. Keep in mind that on average, Americans consume about 13% (or 16.5 packets) of their total daily calorie needs from added sugars. (and this is even higher for our age group). **(Shoot to Jarrett holding [number] sugar packets, looking down at the sugar cubes in his hands, then at the camera, no words)**	Filming in Milam Hall Kitchen Filming (On the bottom of the screen: 1 packet = 1 tsp = 4g sugar = 16 calories) Show old vs new with this area highlighted on each (Insert FDA, CDC reference in the video at this point) Show the following math being written across screen…. • 2000 kcals *0.10 = 200 kcals • 200 kcals /4 kcals per gram = 50 g sugar • 50 grams' sugar / 4 grams per tsp = 12.5 tsp sugar • 1 packet sugar = 1 tsp.

Figure 5 Separated Script Example for Actor and Ecampus.

Filming

OSU Ecampus Video Producers, Drew Olson and Rick Henry conducted the filming portion of this video project. The professional equipment and execution during filming was essential to yielding a high-quality video. Filming itself took place

at 5 different on campus locations. The first location was right outside of the Memorial Union (MU) to film the “Intro” segment. The second location took place in Bites, an on-campus store within the MU for the “Serving Size” segment. The third filming location utilized one of the Milam Hall’s educational kitchens for the “Added Sugars” segment. And the fourth location took place in Callahan Garden, an on-campus garden behind Callahan Resident Hall, for the segment addressing “Micronutrients.” The final location was south of the Callahan Garden, looking onto Tebeau Resident Hall for the “Summary” segment.

Props used for the filming segment were purchased from Bites, a local grocery store, and Amazon.com with the exception of the sugar packets, which were ordered in bulk home. Production assistance, Emma Miller, was in charge of the props.

The student who developed the project served as the main actor, investing approximately 30 hours memorizing lines. No teleprompter or cue cards were used. Additionally, speaking speed, pronunciation, enunciation, and volume were all taken into account to ensure proper understanding from the audience. A dry-run rehearsal took place the day before filming took place.

Filming took place one day in June of 2017, which provided beautiful lighting that enhanced the quality of the video. Furthermore, because filming took place in early summer, the Callahan Garden was actually growing and producing food! Several takes were required for each segment ensuring the highest quality shots.

Graphic Visualization

Oregon State University Ecampus integrated the graphic elements into each video segment. These graphics were indicated in the script. Here are several examples:

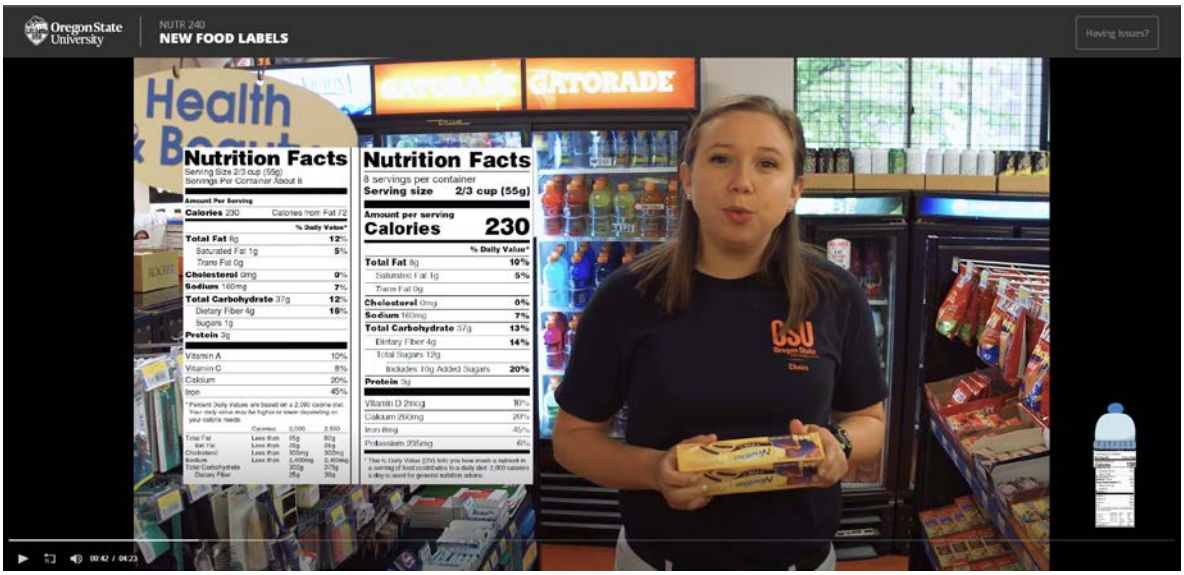

Figure 6 Graphic with a comparison of old vs. new label for the "Serving Size" segment.

Figure 7 Graphic displaying percentage of Calories consumed from snack in the "Serving Size" segment.

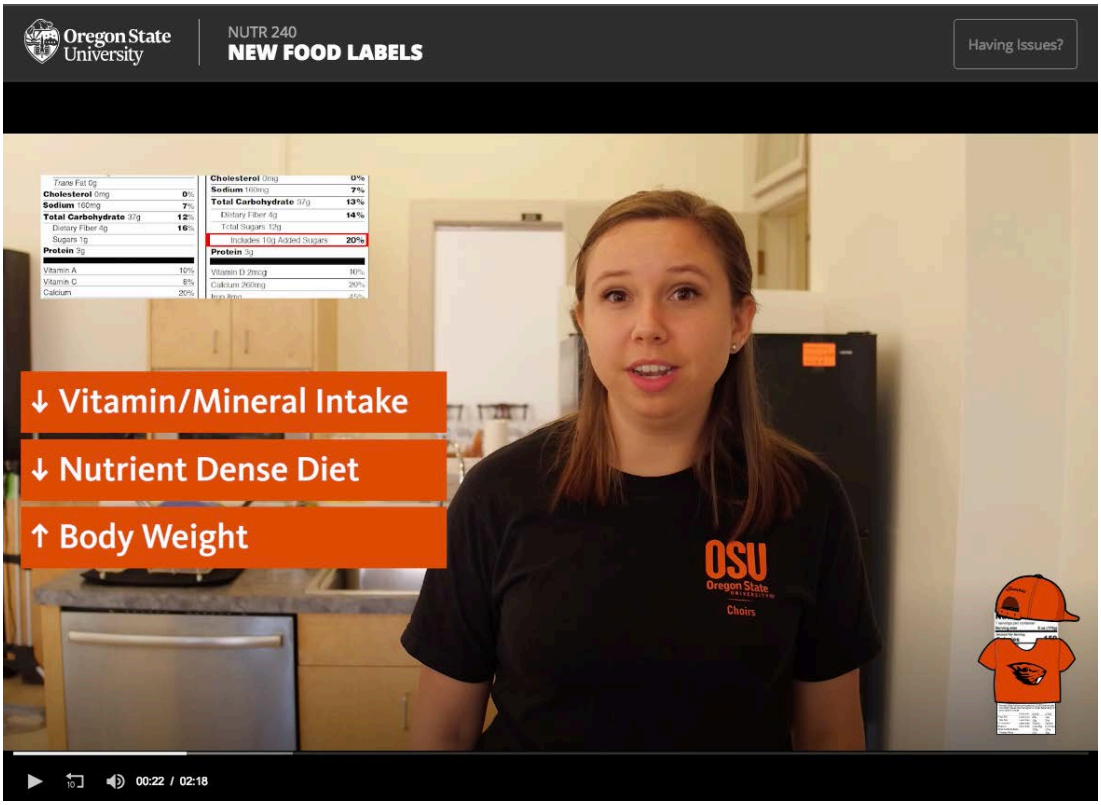

Figure 8 Graphic illustrating rationale for adding the "added sugar" section to the food label in the "Added Sugars" segment.

Interactive Animations

Several interactive animated game-like elements were wanted to ensure continuity between all the video segments and to increase engagement. One such interactive element includes a makeover avatar. The concept for the avatar reflects the "makeover" theme of the project. Practical application allows the student to choose something new (a hat, shirt, pants) to "makeover" the food label as they learn about the specific changes. As the food label video is separated into three segments, so too are the clothing options for the avatar concept. For example, after the serving size segment, the clothing added to the avatar overlays the serving size section on the actual food label. By the end of the video, not only is the food label completely changed and the student has interacted with the new label several times, but their avatar is uniquely "made-over."

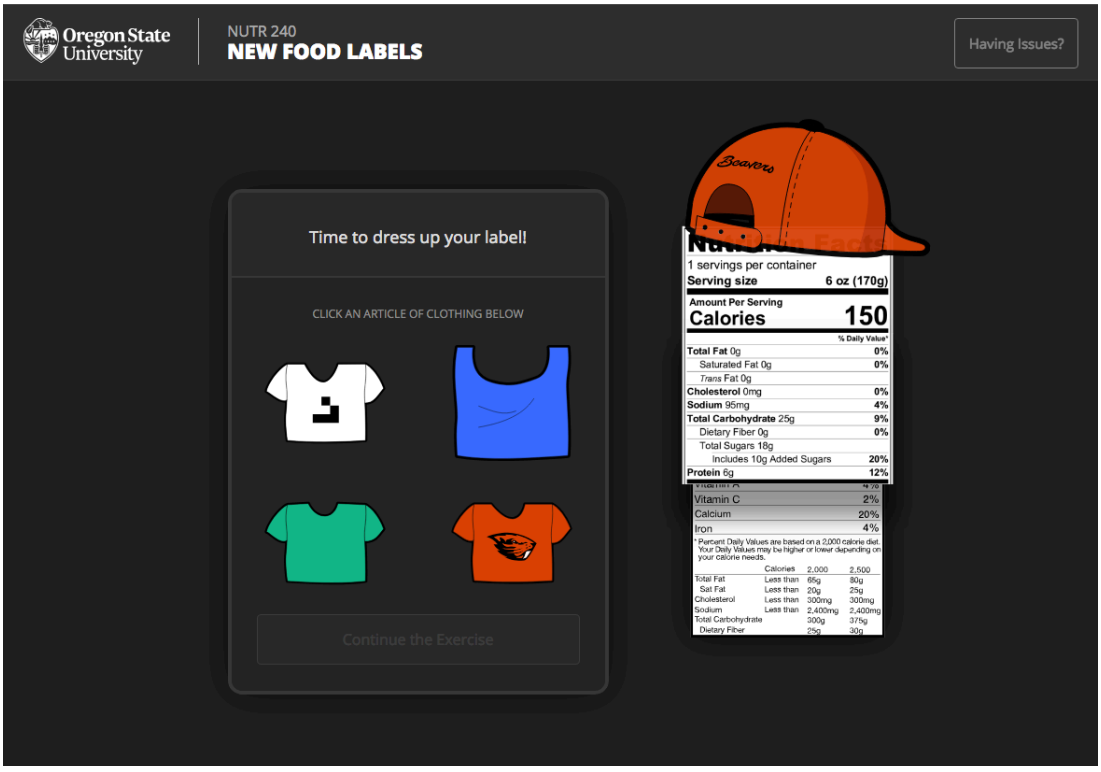

Figure 9 Example food label avatar makeover after the "Serving Size" segment.

Imbedded Assessment and Provided Curriculum

Additional interactive elements developed for the video include imbedded assessment. The imbedded assessment allows learners to engage with small pieces of new information as well as give them control over the flow of new information. This also gives the instructor feedback on the learning of her students. The following figures illustrate these elements:

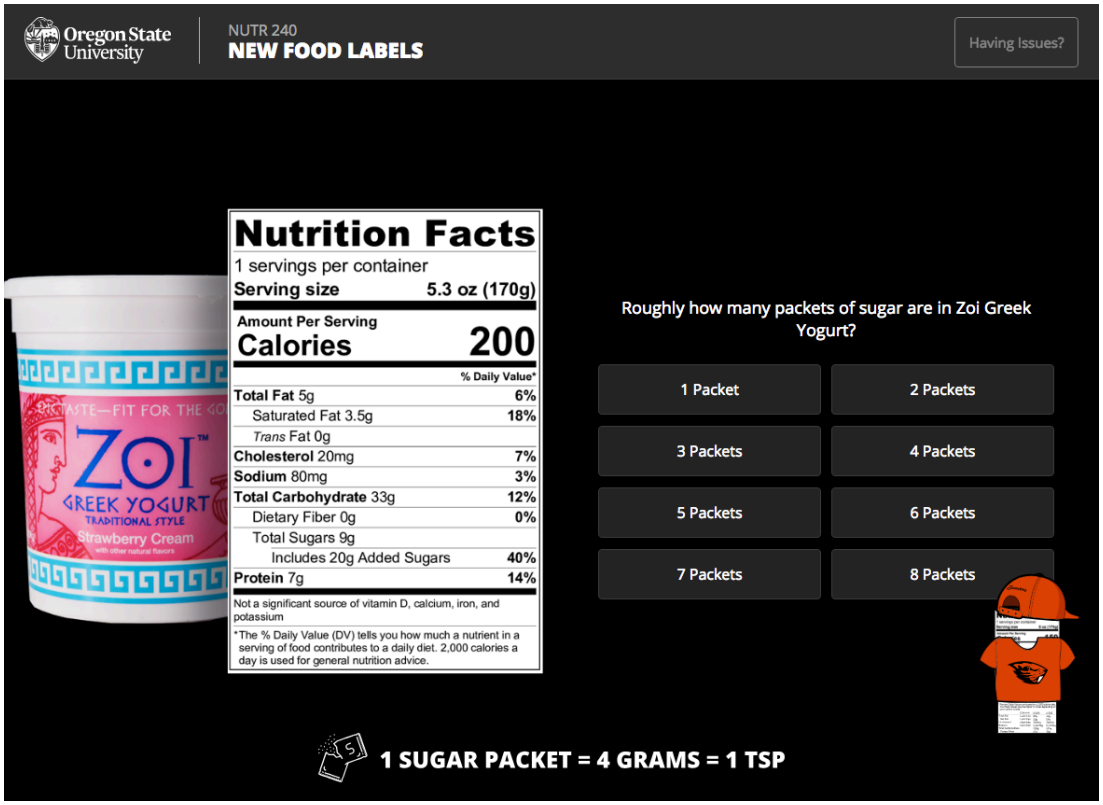

Figure 10 Example of imbedded assessment for the "Added Sugars" segment.

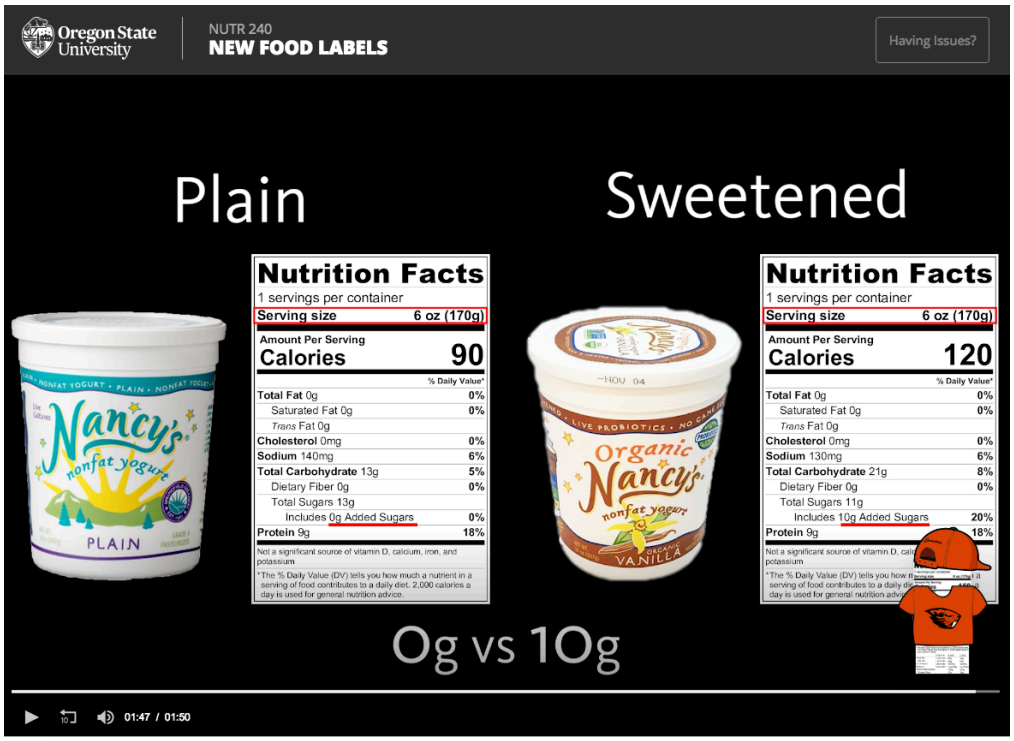

Figure 11 Comparison of plain and sweetened yogurt of the same brand to show differences in added sugar content in the "Added Sugars" segment.

Students must recall calculations and interpret label content. The labels in these pictures were produced for the project by a Food Label Generator accessed at https://www.onlinelabels.com/label-generator-tools/Nutrition-Label-Generator.aspx.

To add value to the video, pre- and post- knowledge assessments were developed to monitor and encourage completion of all segments and collect data from students for the course instructor desiring to use this video. The questions used for the pre- and post- assessment are attached in appendix IV. Some special tracking features exist as perks for the instructor with the software used at Ecampus. The software can show instructors if students skip segments of the video, how often or how long the video was muted, and anytime a student goes back to repeat a section.

The questions were both reflective – responding to segment content, and proactive – discovering interest for the next segment. The final assessment determining the overall video learning impact.

Copyright

As part of the project vision to open source the video, copyright proved an important topic to discuss and understand. In accordance with copyright law, because the main purpose of this video was educational, specific brands of food and the YouTube video imbedded were allowed. The owner of this video is Oregon State University and Ecampus maintains the IP of the video. Because some of the food labels were not yet created for the video project, an online food label generator was used.

The URL is: https://www.onlinelabels.com/label-generator-tools/Nutrition-Label-Generator.aspx. In the generator, the team inserted the nutritional information and the site created a food label. These generators were based on existing nutritional knowledge and used for educational purposes.

Here is an example of a created label and a comparison of food brands used in the video:

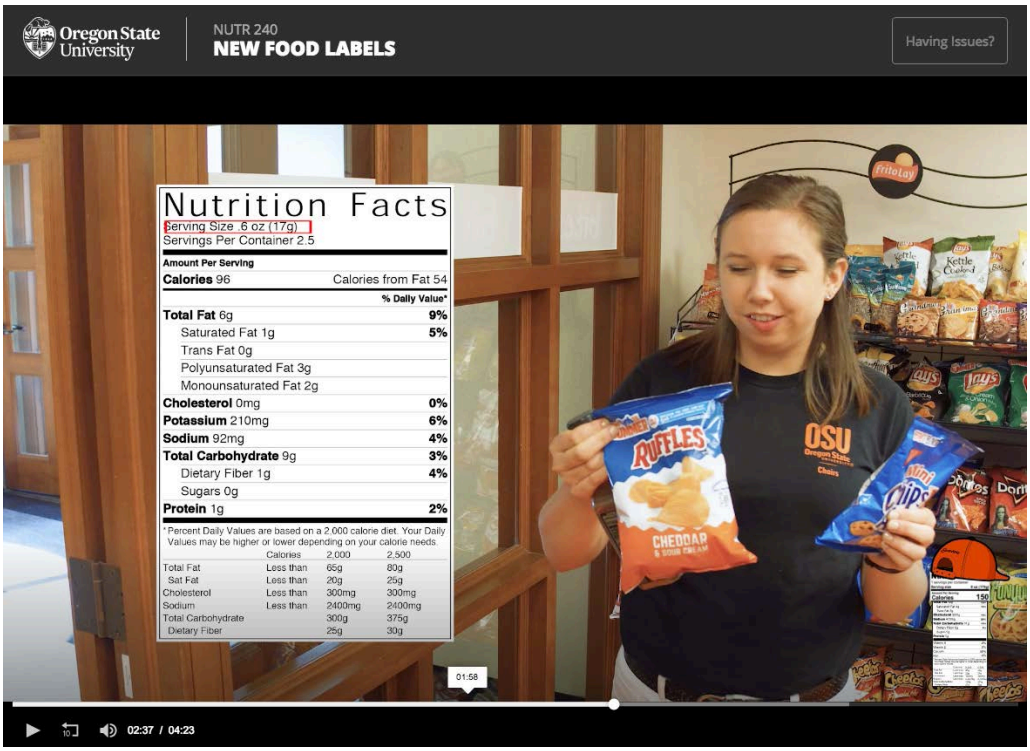

Figure 122 Example of created old food label to illustrate serving size discontinuity in the "Serving Size" segment.

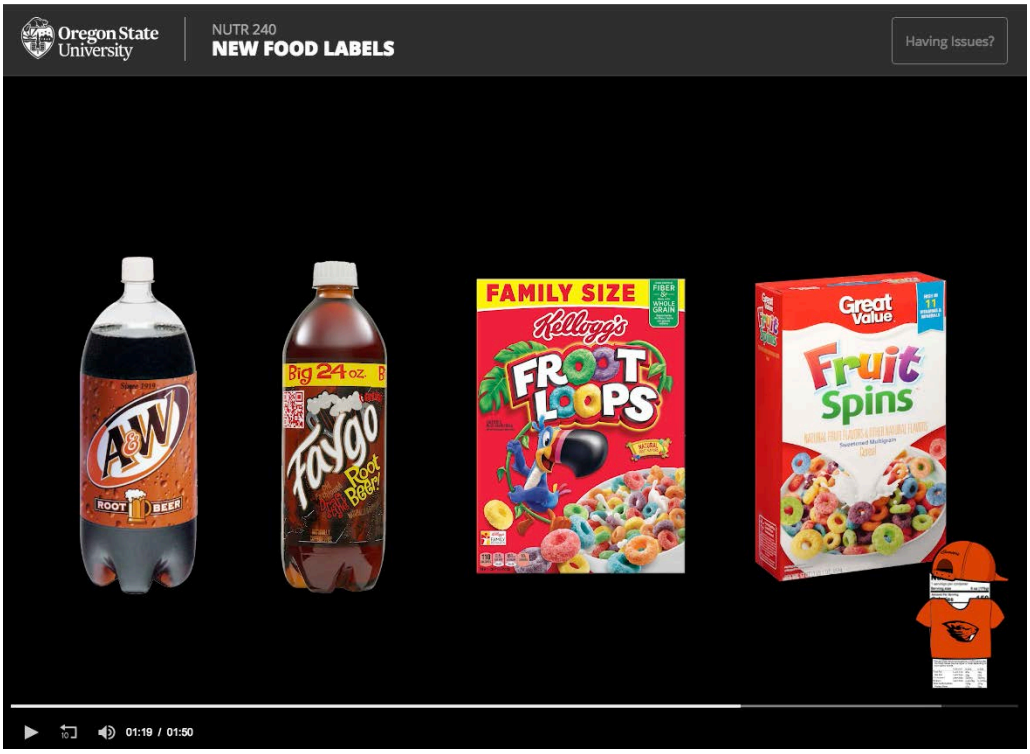

Figure 133 Comparison of brands of food during the "Added Sugars" segment.

Results

Food Label Video

The video segments can be accessed at the URL that follows. The segments vary in length of time and in total, the complete video is 13:23 minutes in duration, however completion requires more time due to student response time for assessments, makeover choices, and imbedded interactive assessments.

URL: https://dev.ecampus.oregonstate.edu/vdl/app/index.php?video=1524597986

DISCUSSION

In this section, concepts introduced in the video including challenges encountered are discussed in more detail. Additionally, the concept and development process of the video are discussed.

FDA

As previously stated, FDA is the governing body responsible for labeling information on the food label. Therefore, the mandated changes to the label fell under the FDA. The information on the FDA website proved invaluable to this project (www.fda.gov). However, due to the complexity of the new requirements on the label, unclear definitions, and inconsistencies in our personal understanding, continually grounding the script and focus of the video back into evidence from the FDA proved essential.

Many challenges were faced during the creation of this video project. One challenge was the timeframe for video development and production. The FDA announced the new mandate in May of 2016. This video project began in October 2016 with the mandatory compliance date set by the FDA as July 26, 2018.

Figure 14 Project Timeline.

Beginning the project so early had its benefits and drawbacks. One benefit was the far-reaching and long-lasting effects of educating the student population on changes being made to the label before such changes were mandatory. Difficulties of making this video early were unclear definitions that the FDA later defined (See the Added Sugars section on page 32) and a deferment in compliance dates which are still not 100% resolved.

The delayed compliances proved especially challenging because initial dates were used in the script and were later rendered useless. One example is the

“Introduction” segment of the video. The original shot was continuous and stated that the changes would be required as of summer of 2018. After the compliance dates were moved to as possible summer of 2020 date, that portion of the video was irrelevant. We took the ~30 second loss because filming proved difficult due to inconsistencies in the weather.

Serving Size

The changes discussed during the “Serving Size” segment respond to the need for updated serving sizes in the labeling and packaging of food for Americans. For clarity of definitions, a portion refers to how much food is eaten in one sitting. A serving is based on amounts of food people are actually eating in one sitting, as an average. The point of listing serving sizes on food packages is not to mandate or “guilt” someone into eating more or less, but to provide a reference based on what serving size people are currently eating.

The serving size section of the food label has not been changed since 1993 (FDA, 2018). In those 25 years, portion sizes have changed, but food labeling has not. This fact is observed in snack-sized food packages. The 1993 old label has some snack sized food package (imagine a snack-sized bag of Doritos) listed as three servings. The problem is that people do not typically portion out a snack-sized bag of Doritos into three servings, eating one now and saving two for later. Since the size of food packages heavily influences the portion of what a person eats, this change updates the serving size to reflect the portion sizes so that consumers will better understand the nutrition profile of foods they are eating.

Added Sugars

The changes discussed during the "Added Sugar" segment respond to a new line added to the carbohydrate section of the food label, which will be "added sugars." The FDA decided to include this change based on underlying scientific evidence laid out in the 2015-2020 USDA Dietary Guidelines for Americans. The Dietary Guidelines support reducing caloric intake from added sugars as do other expert groups like the American Heart Association, Institute of Medicine, American Academy of Pediatrics, and the World Health Organization (FDA, 2018). As illustrated in the video and Figure 8, the rationale for this change is because a diet too high in added sugars has been associated with decreased vitamin and mineral intake, a lower nutrient dense diet, and an increase in body weight (FDA, 2018). The 2015-2020 Dietary Guidelines for Americans state that no more than 10% of total daily calories should come from added sugar (USDA, 2015) In the video, it is discussed how even a 3% increase over 10% makes a large difference. And, how a reduction from 13% to 10%, a mere 4 sugar packets a day, equates to approximately 22,000 Calories from added sugar per year. Interesting to note how among the typical college aged population, the average intake of added sugars among males aged 19-30 years old is 15% of total calorie intake and among females aged 19-30 years old is 16%. (USDA, 2015) Adding "added sugars" to the new food label allows consumers to make more aware decisions about the consumption of certain foods with added sugars.

One of the most difficult concepts to convey in this video was the specific definition of added sugar and the added sugar content of food. The FDA defined added sugars as such:

"Sugars that are either added during the processing of foods, or are packaged as such, and include sugars (free, mono- and disaccharides), sugars from syrups and honey, and sugars from concentrated fruit or vegetable juices that are in excess of what would be expected from the same volume of 100 percent fruit or vegetable juice of the same type. The definition excludes fruit or vegetable juice concentrated from 100 percent fruit juice that is sold to consumers (e.g. frozen 100 percent fruit juice concentrate) as well as some sugars found in fruit and vegetable juices, jellies, jams, preserves, and fruit spreads" (FDA, 2018).

It was easy enough to differentiate naturally occurring sugars from added sugars: fructose in fruit compared to added sugars in chocolate sauce or lactose in unsweetened dairy compared to added sugars in ice cream. However, the most difficult food to understand was honey. Honey. Alone, honey exists as a naturally occurring sugar, but added to anything, it becomes an added sugar. For example, eating 10% of one's total daily calories of honey from the jar would be considered "naturally occurring sugar," but consuming honey-sweetened candy or bars (at 10% worth of one's total daily calories) would be considered "added sugar." And thus, explains the conundrum. This was a difficult point to easily clarify in the video and proved confusing for health professionals as well. In February of 2018 the FDA website published content to advise the public, health professionals, and regulatory

industry on the proper labeling of honey and honey products as a result of the confusion.

Micronutrients

The changes discussed during the “Micronutrient” video segment reflect the changing micronutrient deficiencies most common in the United States. As previously mentioned in the “Serving Size” segment, the food label has not been changed in several decades. As serving sizes have changed over that time, so have the more common micronutrient deficiencies in the American people. The four micronutrients required on the label before the mandated change were vitamin A, vitamin C, iron, and calcium (FDA, 2018). The update will include replacing label information of vitamins A and C with potassium and vitamin D.

One major element desired in this video segment was to show food examples high in these newly added micronutrients. This is why filming took place in an actual garden and included baskets of high-potassium or high-vitamin D containing foods. Within the video segment, video participants engage in an interactive portion selecting which foods are high in either of these micronutrients.

Scripting, Filming, Editing, & Assessment

The project script was developed to be engaging, educational, and entertaining. Many renditions and edits of the script were made to fit the needs of the project. The word choice, stage direction, and graphic interlays all specifically coalesce in order to maximize learning, according to student and faculty experience. This student and faculty experience in developing the vision and script are important and unique

aspects of this project. The student and faculty experience of learning and teaching pushed the script development to include humorous moments, concise definitions, and continuity within the storyline as seen with constant graphic elements, repetition of phrases and scenarios with the actors in the video, and the interactive makeover element.

Conducted through Oregon State University Ecampus, filming took place at locations familiar to students: on-campus store, kitchen, and an on-campus garden in order to increase relevance for Oregon State students. Challenges with filming were weather (luckily the Oregonian weather was very nice the day we filmed, but the first date set turned out to be a snow storm), unwanted sound from coolers and ice machines in the on-campus store, and poor-quality shots that were scrapped during the video editing process.

Similar to the filming, video production and editing was conducted through OSU Ecampus. This video project was collaborative in nature. There were many video production aspects desired, but completely out of the skill scope for the initial members involved in the vision and scrip production part of the project. Thus, handing over the video production to Ecampus involved effective communication for the vision, regular updates, and most importantly, trust.

The assessment elements in the video provide pre and post surveys for the course instructor to better determine how well students grasp the concepts presented in the video. This allows the instructor to better cater to her class course content. Additionally, this element incentivizes completion of the video from attached points to the assessments themselves.

Other production challenges that we would like to change if we did another video project in the future are to include more dry-runs with Ecampus. Additionally, we would like to include Ecampus at an earlier time during the pre-production. Finally, we would include more preparation for filming day with a check list of props, blocking, and lines to benefit Ecampus and the project as a whole.

Future Research Opportunities

In the future, many opportunities exist to conduct research on student learning via interactive video, its benefits, efficacy, and engagement. Specifically with this project, since the video has not yet made its début in any class and has a delayed compliance date, a unique opportunity presents itself. Future research could focus on the use of humor, embedded assessment, short video segments, and interactive game elements in the education and engagement of students. Future research could help predict the technological changes to student education and pioneer the field of interactive video for education.

Conclusion

Change is often inevitable, expensive, but ultimately, necessary. In response to a national crisis of diseases such as type 2 diabetes, cardiovascular disease, obesity, and some cancers, the changes made to the food label do not guarantee dramatic reductions in the onset of these diseases, but put more control into the hands of the consumer. With increased ease, readability, and relevancy, the changes to the food label set the consumer up for success in making informed food decisions.

To reiterate, the objective of this project was to identify best practices and key elements in the creation, filming, and production of an interactive education tool specific to nutrition education for the FDA changes to the food label. The collaborative efforts in the making of this video combined skills and talents from nutrition faculty, nutrition dietetic student volunteers, Ecampus video producers and web app developer, and the manager of the on-campus store where filming took place. Over 200 hours of vision and script development, line memorization, prop acquisition, pre-production, production, post production and interactive element development involved people from all these different skill sets created a 15-minute professional-quality video. And not just any video: a nutrition education video that engages students to fully grasp the reasons for and understanding of changes made to the food label through entertaining, clear, and accurate information delivered in a captivating form.

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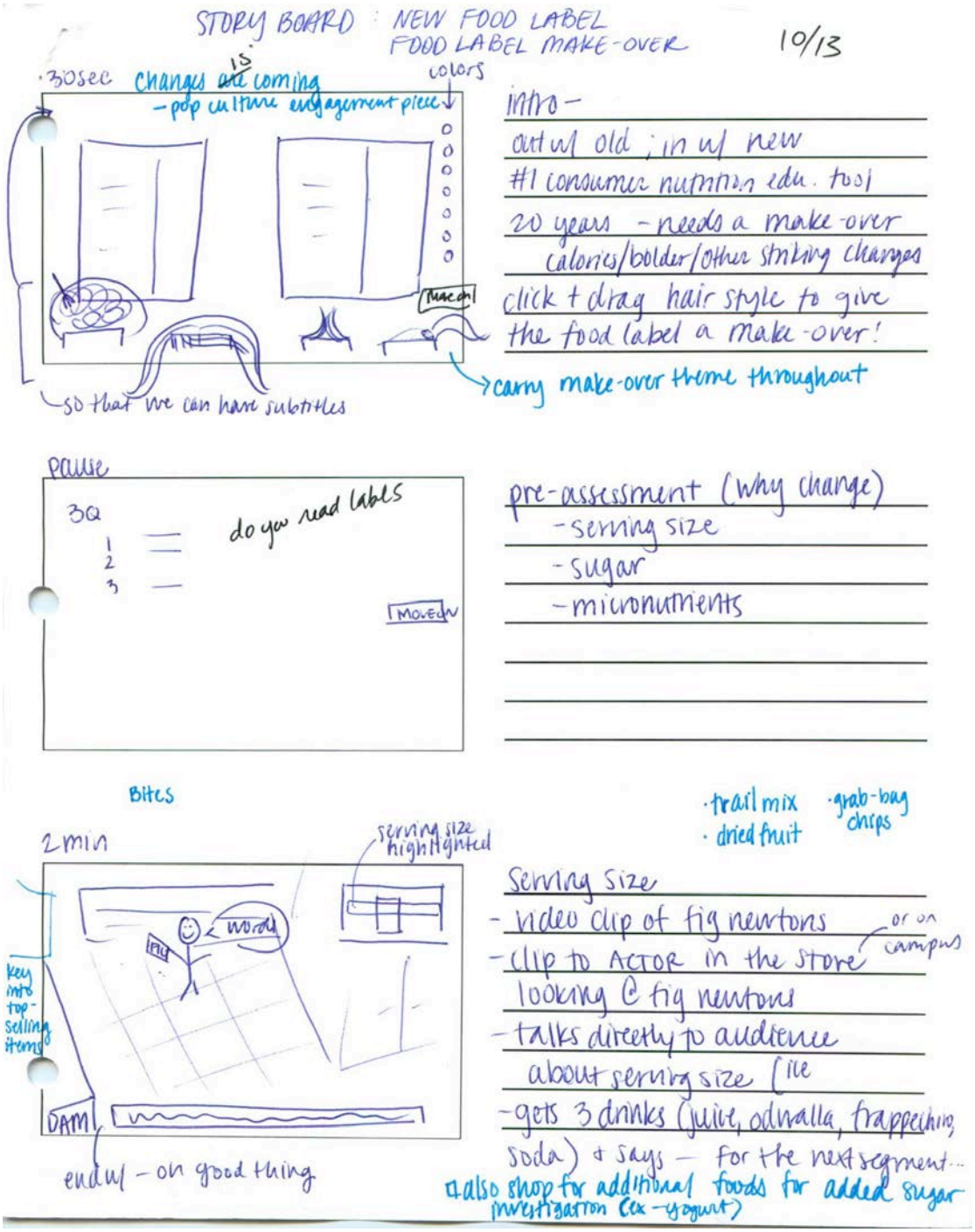
Appendix I: Storyboard



pause

which drink do you think contains the most added sugar?

- odwalla
- frap
- applejuice
- soda

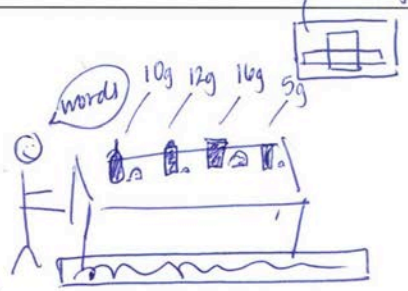
[move on]

assessment

naturally occurring sugars – ex) lactose

same foods, different location (lunch place)
– unpacking a lunch
– no background noise

added sugar highlighted



more than just drinks

Sugar
- "demonstration" w/ 4 drink choices
- talks to audience
- maybe click on each drink to see how many added sugars
- good things these drinks have so much of. C – I was really concerned I might be deficient... or am I?

By the way.... C
Yogurt, Fruit
product capsule
→ yogurt
→ cereals
→ ...

Do you know anyone deficient in vit. C? who's not a pirate.

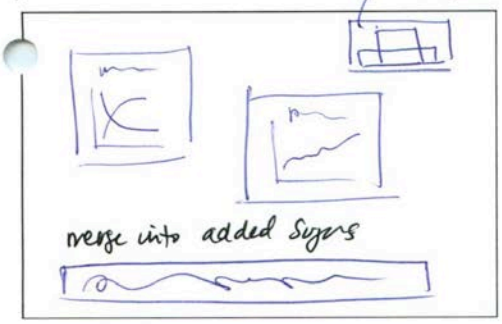
pause

which micronutrients are americans most deficient in?

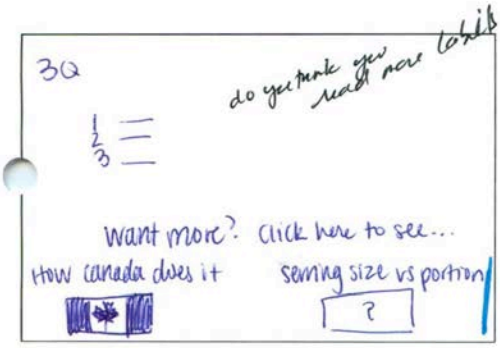
- A
- C
- iron
- D

~~micronutrients~~
assessment

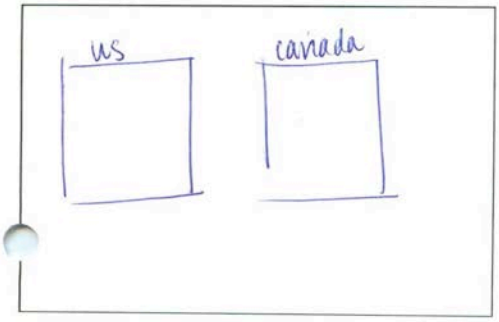
micronutrients highlighted



micronutrients
- show graphs from NHANES data
- ↓ vit A + c deficiency [] show pictures of pirates? (vit. C)
- ↑ K + vit. D deficiency
over last 20 years
- relay K+ w/ hypertension



post-assessment
same 3Q from pre-assessment to assess knowledge acquisition



canada
- look at the way they do it! woah!!

Links...

Appendix II: Prototype Script

Title page

Change is Coming

Changes to the New USDA Food Label

Class

Instructor

Intro

(Graphic Elements, show the food label)

ACTOR (voiceover):

- After 20 years, the food label is getting a makeover.
- Out with the old in with the new
- Changes include bolder and larger font for calories and other ~~striking changes~~ we will go into detail with in the subsequent videos

(Click and drag hair style to give the food label a makeover)

Pre-Assessment

- Questions about serving size, sugar, micronutrients

Segment 1 - Serving Size

(Video of Fig Newtons, transition to a store on campus DAM, Bites. ACTOR is standing in the store holding a sleeve of fig newtons, looking on the back of the nutrition fact panel)

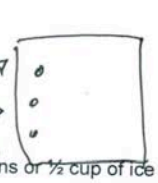
ACTOR: Oh Hello

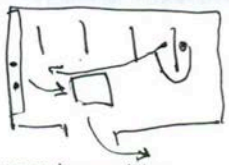
(puts the fig newtons back on the shelf).

ACTOR:

- One of the main changes with the new food label is the serving size.

? icecream





- Researchers and policy makers wanted to ...
- This makes sense because who eats 2 fig newtons or ½ cup of ice cream in one sitting.
- And that's why there's a new serving size.

(Pick up bag of chips or trailmix that has 4 servings)

- Would you only eat ⅓ of this bag based on the serving size and then calculate how many calories you ate? It's a shame what we have come to… but how many of you have a hard time calculating the tip for dinner?
- Does multiplying by 2.5 seem fun?
- Having multiple serving sizes for a single portion-sized food doesn't make sense.

(Get items to use for the next segment)

- Next, we will look at added sugars in food. I'm very excited.

does this mean people will be encouraged to eat/consume more?

1 - Fig newton
2. grab bag of chips
3. Trail mix / nuts
4. drink

Assessment goal ⇒ Why is the added sugar impt.

- Which food do you think contains the most added sugar (of the foods chosen at checkout from the previous segment)
- Is lactose an added sugar (what are added sugars)?

slide

2000 = 200 / 4 = 50 / 4 = ~~25~~ 12.5 tsp

12.5 tsp

Segment 2 - Added Sugars

ACTOR:

1 Did you know there's added sugars in soda? So did everyone else.

2 There are added sugars, though, in foods you wouldn't expect.

3 Also, the amount of added sugar varies from brand to brand.

12.5 cubes
12.5 packets

- Come look at this nifty table with all these foods.

(Walk over to display of foods with added sugar content next to them)

catsup – teriyaki sauce coffee syrups

sauces } less obvious

- (Educational piece) Wow, isn't that amazing. Who would have thunk!
- We hear there's a lot of sugar in fruit
- Not added sugars - it's different
- Lactose in yogurt also
- Now… like added sugars than are often hidden, so too are micronutrient deficiencies.

  Are you deficient in any vitamins or minerals?

Assessment

Which micronutrients are Americans most deficient in?

Segment 3 - Micronutrients

- Do you know anyone who's deficient in vitamin C who's not a pirate? Vitamin C and vitamin A are deficiencies seen in Americans according to NHANES data (SHOW GRAPH)
- But Vitamin D and ~~Vitamin K~~ deficiencies are more prevalent
- Lack of Vitamin D leads to XYZ
- Lack of Vitamin K has been related to hypertension

(Add link to studies or NHANES data)

Post-Assessment

Same 3 questions from the Pre-assessment

Link to future videos

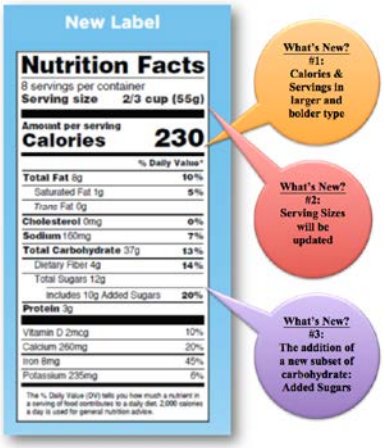
Appendix III: Final Script Draft

Changes to the Food Label Video Script

This video project will have 3 video parts along with an intro and summary.

1. Introduction of three major changes (Video @ Campus)
    a. Knowledge pre-assessment
2. First major change: serving sizes that line up with what people more typically eat (Bites)
    a. Posttest/pretest
    b. Avatar Makeover #1
3. Second major change: Added sugars category (Video @ Milam Kitchen)
    a. Posttest/pretest
    b. Avatar Makeover #2
4. Third major change: changing the key micronutrients (Video @ Callahan Garden)
    a. Posttest/pretest
    b. Avatar Makeover #3
5. Summary and more links (Video @ Campus)
    a. Posttest
    b. Avatar reveal

Script	Video, Game, Elements
Title: **Change is Coming: to Your Food Label**	**Title is a reference to Game of Thrones?**
<u>Introduction</u> It's been 20 years since your Food Labels have gotten a makeover. [And while we have to wait for summer of 2018 before its mandatory,] It's important to know that a lot of key information was considered before making these changes including: Scientific evidence, Public comments, Citizen petitions and Survey data.	**Better Introduction: Maybe documents being put one on top of each other** **Show PPT slide of:** **So,** why require the food label changes? • Reflects updated scientific information, including he link between diet, chronic diseases, and public health

Hi, my name is Casey Collins and I'm a student in the Oregon State University's Dietetic Program and today, we're going to talk about changes coming to your food label.	• Updated serving sizes are needed to reflect changes in amounts of foods consumed • Format draws attention to calories and serving sizes, two important elements in making healthier food choices
So, why require the food label changes? - Reflects updated scientific information, including the link between diet, chronic diseases, and public health - Updated serving sizes are needed to reflect changes in the amounts of foods consumed - Format draws attention to calories and serving sizes, two important elements in making healthy food choices [First let's look at a comparison of the old vs. the new label. To start, the new label will have a bolder and larger font for calories Wow. 2 full point sizes larger and bolded? And that's all folks, thank you for watching our video. Just kidding, making the label easier to read is important because if its too hard to read its also to hard to use! Moving on… there are actually three other interesting changes that we'll be exploring in this interactive video. These are serving sizes, added sugars, and micronutrients.]	**Show picture of label comparisons of the CALORIES area.**  

Now, answer a couple of questions so we can get to know you a little bit better!	New Label **Nutrition Facts** 8 servings per container **Serving size** 2/3 cup (55g) **Amount per serving** **Calories** 230 % Daily Value* **Total Fat** 8g 10% Saturated Fat 1g 5% *Trans* Fat 0g **Cholesterol** 0mg 0% **Sodium** 160mg 7% **Total Carbohydrate** 37g 13% Dietary Fiber 4g 14% Total Sugars 12g Includes 10g Added Sugars 20% **Protein** 3g Vitamin D 2mcg 10% Calcium 260mg 20% Iron 8mg 45% Potassium 235mg 6% The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice. **Source: www.fda.gov** **Add a feature so that the viewer can add something to the food label image. They will not be changing the content of the label; it will be similar to individualizing one's Avatar**
<u>Pre-Assessment Slide</u> 1. Do you read the nutrition facts on a food label? a. Yes or No (no correct answer) 2. If you do read food labels, have you ever changed your food choice after reading the nutrition facts? a. Yes or No (no correct answer) 3. If you do read food labels, which information is most important to you? (choose all that you use) (no correct answer) a. Serving size b. Calories per serving c. Amount of fat per serving d. Amount of carbohydrate per serving e. Amount of protein per serving f. Amount of protein per serving g. Amount of sodium per serving h. Amount of “sugars” per serving 4. What is the difference between a serving size and a portion size? a. They’re the same b. A portion is what you end up eating, a serving is a specific amount of food (correct answer) c. One word starts with an S, the other with a P d. Got no idea Click _____ to explore the first MAJOR change	**These questions can be inserted as pop-ups, as a part of the intro content above, or as a separate inserted PPT slide.** **Answer data collected?** **Casey write in some humor for the responses**

included in the food label makeover	
<u>Segment 1 - Serving Size</u> **Insert Brian Regan video link here? (https://youtu.be/0Qa-B7Sg_i4)**	**(Video of Fig Newton's, transition to a store on campus, Bites. ACTOR is standing in the store holding a sleeve of Fig Newton's, looking on the back of the nutrition fact panel)**
Oh Hello again. One of the main "makeover" changes seen wiht the new food label is that many foods will need to update their "serving size." **Standing in aisle where Fig Newton's are found.** If you were eating Fig Newton's, how many would you eat at in one sitting? Would you eat 2, or half, or maybe the entire sleeve? **What you eat, for example, the entire sleeve, is called your "portion size," but the serving size listed on the container is 2 cookies. And here's the problem: portion sizes have increased over the last 20 years, so the serving size listed on a lot of foods are no longer close to what people actually eat.** **Puts the Fig Newton's back on the shelf.** **Walks over to Trail mix area** **Grab a bag of trail mix.** Trail mix is another good example of where the current serving size doesn't match most people's portion size. On the label, it says a serving is 3 tablespoons. Jarrett, show me what 3 tablespoons. looks like. **Jarrett extends arm outside of the shot with the trail mix packet in hand, Casey gets TBSP from pocket and gets 3 TBSP in hand. Measuring tape for reference** **Spoken: for reference**	**Make a label for ice cream changes in serving size, or if possible for the Smart Popcorn** **Scroll red box to the Calories and serving size area**  Nutrition Facts 8 servings per container Serving size 2/3 cup (55g) Amount per serving Calories 230 % Daily Value* Total Fat 8g 10% Saturated Fat 1g 5% Trans Fat 0g Cholesterol 0mg 0% Sodium 160mg 7% Total Carbohydrate 37g 13% Dietary Fiber 4g 14% Total Sugars 12g Includes 10g Added Sugars 20% Protein 3g Vitamin D 2mcg 10% Calcium 260mg 20% Iron 8mg 45% Potassium 235mg 6% * The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice. **Pop-up question: How many Fig Newton's would you eat?** **Pop-up question:** **How much trail mix would you eat? 1?, 2?, 3?, servings or the whole bag?** Pop up "FDA" stands for the Food and Drug Administration

Does this look like a reasonable amount of trail mix for "1 PORTION?" Not for me! I'd want more of these multicolored morsels of love (whisper) M&Ms.

Pause/ BEAT

So, it's a good thing that food experts, like the FDA, now agree that a lot of foods and beverages must be updated from what people typically consumed 20 years ago.

Walks over to the other snacks area? (Overacting looking at watch or phone or wall clock)

Oh hey, it's that convenient 10-minute time period between classes. I'm hungry. (woah) And I'm conveniently in Bites. What looks good that I can eat right now?

(goes over to food stuff)

I have been craving these all day. Bad test this morning. I'm just kidding, it went great.

(Look at camera. Get chips ahoy)

Oh those look healthy! I feel so smart (cheeky) choosing this (put smart pop back)

(beat)

Yeah except for these look better.

(Get ruffles)

And… I'm going to be thirsty. Now, I'm not going to get soda because I heard its bad for you. Oh, hey tea. much better- oh look no trans fats!

(Get pure leaf tea)

Could you eat all this in one sitting?

Pop-up: FYI no tea should EVER have trans fats!

Pop-up Question: Could you eat these three items at one time?

Casey/Jarrett: I think he needs to be eating popcorn here? Or you have to set the chips up somehow so that the 12-chip reference makes sense.

May need to insert a picture of the food label (front and back) of the

PAUSE for silent answer time I sure could. But when we look a little closer at the food labels, we see the serving size is super small and get this: the cookies and the chips have multiple servings in each bag. (In the background, Jarrett looks up from the back panel of the chips, shakes his head in a disapproving way) Often when we read food labels, we look at calories, but forget to check serving size and number of servings. Updating the serving size will mean that the calories per serving better match what we eat. For packages listed as 2 servings or less, this will become 1 serving. And for packages listed between 2-3 servings, the new food label rules requires manufacturers to list the per serving as well as the per package nutrition information. For example, it will look like this. Ruffles food label pops up on the side This is important because we know package size influences how much someone decides to eat. If the package size looks reasonable, we think of this as 1 serving. But right now, these cookies, 3 servings! Doritos, same thing! Jarrett, show me what 3 servings looks like. *(Jarrett splitting up his package into 2.5 portions. Looking down at piles, then at the camera. Snap!)* **THINK TWICE** For those of you who aren't yet reading food labels, I encourage you to do so. My little snack, the cookies, chips, and tea adds to 1030 calories. If my total calorie needs are 2300, that just turned my in-between class snack into about 50% of my daily energy needs. Problem is, I'll probably be hungry again in a couple of hours. Checking total calories and number of servings on a grab-n-go pack might make me think twice about what and how much I decide to eat. **(Get items to use for the next segment)**	chips here so the viewer can see the number of servings, serving size and kcals. Pop Up Question: If you knew this was 300 kilocalories, would this change your decision? Make over the food label (second set of options) Could also do a Mr Potato Head approach… (adding arms, legs etc..) Check-out counter for Bites Overlay of the kcals of each food as pop up.

Next we're going to talk about added sugars. I'm very excited. And while I go back for a couple more things, you add something else to your food label makeover and answer the following questions… I'll meet you in the kitchen….	
Serving Size Changes Review 1. Serving sizes listed on the new version of a food label will: a. Be larger for all foods b. Reflect amounts of food and beverages people usually consume (correct answer) c. Decrease to make people eat less d. Stay the same as the old label 2. Would it change the food you purchase if you could see the amount of added sugar in a food? a. Yes or No (no correct answer) 3. Which package of food do you think contains the most added sugar (Show the foods chosen at checkout from the previous segment - ruffles, iced tea, cookies) a. Ruffles b. Iced tea (correct answer) c. Cookies 4. Is lactose (milk sugar) considered an added sugar or a naturally occurring sugar? a. Added sugar b. Naturally occurring sugar (correct answer)	Insert Links to Estimating energy and nutrient need sites: 1. https://www.nal.usda.gov/fnic/interactiveDRI/ 2. **www.myplate.gov**
Segment 2 - Added Sugars (holding unsweetened yogurt, looking at the back) Wow this has a lot of sugar in it. I heard I shouldn't eat any sugar… (beat) Oh hello again! Another change seen on the new food label is the section of carbohydrate called added sugars. What the heck are added sugars? I thought all sugar was sugar? Yeah! So did the old label! They just put all sugar together in one category called sugars, but here's the thing, not all sugars are alike! Some are considered naturally occurring sugars while others are added during the production of a food. Let's first define "natural sugars" first. These are found in whole foods that contain naturally occurring sugars, the most common two are lactose, found in unsweetened dairy, and fructose, found in whole fruit, some fruit juices, or honey	Filming in Milam Hall Kitchen Filming (On the bottom of the screen: 1 packet = 1 tsp = 4g sugar = 16 calories) Show old vs new with this area highlighted on each

from the jar. These sugars are NOT added sugars. Oh my gosh! Eureka!

Our focus now is going to be on these added sugars: sugars added as an ingredient during the preparation of a food.

(Show list of commonly added sugars)

Products sweetened during processing contain added sugars. Examples are cookies, candy, bars, shakes, drinks and sweetened beverages. Did you know there's added sugar in soda? (sassy) Yeah, so did everyone else.

However, the amount of added sugar can vary from food to food and brand-to-brand so this change will be very helpful when comparing foods. Let's practice this comparison by looking at some yogurts because sweetened yogurt contains both added and naturally occurring sugars. Let's start by looking at plain yogurt, (show label) all of this "sugar" is naturally occurring sugar and therefore is NOT added sugar. When we compare unsweetened verses sweetened yogurt of the same brand, if the serving size is the same, the difference is added sugar.

Now, let's look at sweetened yogurt. Your turn! (vary brand to brand and serving)

Guess how much sugar has been added to make these flavored yogurts. Remember, 1 packet of sugar is 1 teaspoon or 4g of added sugar.

(drag and drop amt. with correct yogurt, use a still shot of the yogurts on the table and the food label)

Second picture of same shot with the equivalent of sugar packets

You'll see the sugar packet equivalent of the added sugars next to each yogurt. It might surprise you that just because it's organic, or soy, or gluten-free doesn't necessarily mean it's low in added sugars. The only way you can know is if you read your label.

(Insert FDA, CDC reference in the video at this point)

Pop Up: If corn is a whole food, why isn't HFCS considered a natural sugar? ….. Because it is used as an additive, when you see this on a label it indicates- Added sugar

Pop Up: 1 packet sugar = 1 tsp.

Added Sugars: (names approved by FDA)

- anhydrous dextrose
- brown sugar
- confectioner's powdered sugar
- corn syrup
- corn syrup solids
- dextrose
- fructose
- high-fructose corn syrup (HFCS)
- honey
- invert sugar
- lactose
- malt syrup
- maltose
- maple syrup

INTERACTIVE: How many added sugars do you think are in each yogurt?

(show yogurts on screen)

(Insert disclaimer that each amount of added sugars are per yogurt container)

Added sugars are hidden in foods you maybe wouldn't expect - in ketchup, teriyaki sauce, even frozen foods.

Show a picture of foods with hidden sugars: use packets to show amounts

Fries with catsup and sugar packets

Now that we know what added sugars are… why make this change to the label? What's the point? Because consuming too many added sugars has been linked to decreased vitamin and mineral intake, a lower nutrient dense diet, and an increase in body weight.

The 2015 dietary guidelines recommend that no more than 10% of your daily calories come from added sugars. For a 2000 kcal diet, which is the Calorie value used on food labels for comparison, this looks like no more than 12.5 packets of sugar a day. Keep in mind that on average, Americans consume about 16.5 packets of sugar a day. Or 13% of their daily calories coming from added sugars. Do you think this might be higher for college students?

(Shoot to Jarrett holding [number] sugar packets, looking down at the sugar packets in his hands, then at the camera, no words)

Now you might be thinking, "13% vs. 10% this is not much of a difference to worry about" … "But reducing consumption from 13%-10% saves you 4 packets of sugar a day, 1400 packets of sugar in 1 year. This is about 29 cups of sugar, or 22,000 Calories. THIS is that 3% difference.

(sugar packets on the table shot)

Now, added sugars are super tasty, but you don't actually need them in your diet. So maybe for a first step, you can try to get your added sugars to below 10% of your daily calories.

- molasses
- nectars (e.g., peach nectar, pear nectar)
- pancake syrup
- raw sugar
- sucrose
- sugar
- white granulated sugar

You may also see other names used for added sugars, but these are not recognized by the FDA as an ingredient name. These include cane juice, evaporated corn sweetener, crystal dextrose, glucose, liquid fructose, sugar cane juice, and fruit nectar. (Myplate.gov)

Consider Pop-ups of summary points:

- Naturally occurring sugars: are sugars that are NOT added during food processing.

Show the following math being written across screen….

· 2000 kcals *0.10 = 200 kcals
· 200 kcals /4 kcals per gram = 50 g sugar
· 50 grams sugar / 4 grams per tsp = 12.5 tsp sugar
· 1 packet sugar = 1 tsp.

Show a picture of 12.5 packets of sugar and this amount of sugar poured out on a black background (for contrast)

Show a table with 1400 sugar packets, Add pop up question: Think that EXTRA might increase your risk of unwanted weight gain? Yes No

Answer: Yep!, so did ALL the nutrition and diet experts in the USA.

And this is where the new label can help - it will show added sugars in its own section. Finally. **(Jarrett in BITES)** You can think of the added sugars you eat as a budget. You only have so much to spend each day, right? Sometimes you have to choose, where-when and how much to "spend", and if you've reached your max. I know this sounds confusing, but reading the new label will help you spend your sugar budget where and when you want to. BITES has lots of great options to help you stick to your added sugar budget. **(Shoot to Jarrett paying for cookies with sugar packets, not enough packets to pay for the cookies. Sign 6 packets for these cookies. In BITES.) (have three options that apple (free), cookies) and a lower added sugar item.** Thanks BITES! (sign) That was a lot. Why don't we take a little break. You add to your food label makeover and answer the following questions. I'll meet you in the garden.	**(Insert disclaimer that each amount of added sugars are per yogurt container)**  **(Show yogurts on screen)**
<u>Assessment</u> 1. Which of the following foods has added sugars? a. Plain yogurt b. Apple c. Lemonade (correct answer) 2. If someone's daily energy needs are 2400 Calories per day, how many Calories from added sugar can they consume to stay within the USDA guidelines of no more than 10% of total daily calories coming from added sugars? a. 200 b. 240 (correct answer) (can we do a popup feedback that this is equivalent to 15 sugar packets /15 tsp added sugar) c. 24 3. Which of the four micronutrients listed are Americans most deficient in? a. Phosphorus b. Sodium c. Vitamin E d. Potassium (correct answer)	
<u>Segment 3 – Micronutrients</u> Oh, hello again! Welcome back…and welcome to the Callahan Garden. The third and final change we'll discuss	**Show an old vs. new label: Micronutrient area (scroll moves to micronutrient**

relates to the micronutrient section. Now remember how I said eating too many added sugars was related to decreased vitamin and micronutrient intake? It's okay if you don't remember, it's a little fuzzy for me too. But it might surprise you that you can have a micronutrient deficiency **even** when you consume enough Calories.

(on two hands) Eating enough, but not? Why is this so confusing? Well, just because you eat enough (or maybe too many) Calories doesn't mean your food choices contain all the nutrients you need.

Do you think the average American is deficient in any vitamins or minerals? Are you?

When it comes to micronutrients, we do good job getting enough of some, while others, not so much.

On current Food labels, they're required to provide specific information about 4 micronutrients: Iron, Calcium, Vitamin A and Vitamin C. On the new labels Iron and Calcium remain while Vitamin A and C are being replaced.

Why make this change? Well, FDA thought life was a little too easy for everyone. I'm just kidding. We're actually doing a much better job as a nation getting enough vitamin A and C now than we were 20 years ago. Now… Does this mean vitamin A and C aren't important anymore? (small laugh) Oh No. A lack of Vitamin C causes scurvy.

(Jarrett as a Pirate)
Hand an orange, Jarrett leaves "get outta here you Scurvy dog"

and too little Vitamin A affects our vision, teeth and our bones!

So, what's being added instead? Vitamin D and Potassium. Why add these two? Well, now, we know a lot more about these two nutrients AND we're not eating enough. Vitamin D, along with Calcium, is important for its role in bone health. In fact, you NEED vitamin D in order to absorb Calcium. So, it makes sense that both of these are micronutrients consumers should to know about.

portion)

(Where is more - let's go shopping for foods high in these micronutrient) (Interactive: shopping trip through the store)

This is where we wanted to show a cart going through Bites and/or another store where students could self-select foods that were good sources of potassium and Vitamin D.

Click on pictures of high potassium foods

And potassium … does lots of things like helping nerves and muscles communicate, and supporting bone health, but the 2 main reasons it was added was for its vital role countering the harmful effects of sodium and, because we need to eat more from fruits and vegetables. So, what are some good sources for these two newly added micronutrients? Potassium isn't hard to get – Colorful Whole Fruits and Vegetables are great sources. Like what they're growing here in the Callahan Garden. Here's 2 recommendations to increase your intake of potassium: read your labels and eat your product. Vitamin D, on the other hand, is harder to get because there aren't that many sources. Here's a few, but the primary way most people get their vitamin D is by the sun, but only if you go outside. I don't know what the weather's like where you're from, but here in Oregon, gray is our state color. I'm just kidding, our state colors are actually navy blue and gold, but still there's no sun. This, artificial. **(Jarrett with the sunlight thing on a lawn chair in MU or something)** Here are some food ideas for potassium and vitamin D. Which ones do you regularly eat? Main take away: 4 micronutrients are required on each food label: Calcium, Iron, AND NOW: Vitamin D and potassium. Because this change better matches our nation's current needs. Well, those are the high points! Let's see your food label make-over. That's beautiful! When you start seeing new food labels in your grocery store, we hope that you consider the serving sizes, added sugars, and micronutrient information.	**Click on pictures of sources for Vitamin D**
Don't forget: Read your labels. Stick to your sugar budget. And eat smart. Well, that's it! Thanks for watching! *Casey thumbs up. Jarrett measuring the thumb.* For reference!	**1 slide of epilogue –** **graphic display of label with quiz** (If you want more information, visit these links: FDA, CDC. Links include at the end of this video)

Post-assessment 1. Which of the following are good sources of potassium? a. Mushrooms b. Dark greens (correct answer) c. Apples 2. Which of the following are good sources of Vitamin D? a. Milk (correct answer) b. Apples c. Eggs 3. What part of this video series was the most interesting? (no correct answer) a. The info about serving vs. portion sizes b. The content about added sugars c. The content about changes to the micronutrients listed in the nutrition facts part of the label 4. Do you think what you learned, will influence your future food choices? a. Yes or No (no correct answer)	

Appendix IV: Pre/Post Assessment

Pre-assessment slide (after introduction video)

5. Do you read the nutrition facts on a food label?
    a. Yes or No (no correct answer)
6. If you do read food labels, have you ever changed your food choice after reading the nutrition facts?
    a. Yes or No (no correct answer)
7. If you do read food labels, which information is most important to you? (choose all that you use) (no correct answer)
    a. Serving size
    b. Calories per serving
    c. Amount of fat per serving
    d. Amount of carbohydrate per serving
    e. Amount of protein per serving
    f. Amount of protein per serving
    g. Amount of sodium per serving
    h. Amount of "sugars" per serving
8. What is the difference between a serving size and a portion size?
    a. They're the same
    b. A portion is what you end up eating, a serving is a specific amount of food (correct answer)
    c. One word starts with an S, the other with a P
    d. Got no idea

Post/Pre assessment (after serving size video)

5. Serving sizes listed on the new version of a food label will:
    a. Be larger for all foods
    b. Reflect amounts of food and beverages people usually consume (correct answer)
    c. Decrease to make people eat less
    d. Stay the same as the old label
6. Would it change the food you purchase if you could see the amount of added sugar in a food?
    a. Yes or No (no correct answer)
7. Which package of food do you think contains the most added sugar (Show the foods chosen at checkout from the previous segment - ruffles, iced tea, cookies)
    a. Ruffles
    b. Iced tea (correct answer)
    c. Cookies
8. Is lactose (milk sugar) considered an added sugar or a naturally occurring sugar?
    a. Added sugar
    b. Naturally occurring sugar (correct answer)

Post/Pre Assessment (after added sugars video)

1. Which of the following foods has added sugars?
    a. Plain yogurt
    b. Apple
    c. Lemonade (correct answer)
2. If someone's daily energy needs are 2400 Calories per day, how many Calories from added sugar can they consume to stay within the USDA guidelines of no more than 10% of total daily calories coming from added sugars?
    a. 200
    b. 240 (correct answer) (can we do a popup feedback that this is equivalent to 15 sugar packets /15 tsp added sugar)
    c. 24
3. Which of the four micronutrients listed are Americans most deficient in?
    a. Phosphorus
    b. Sodium
    c. Vitamin E
    d. Potassium (correct answer)

Post Assessment (after micronutrient video)

5. Which of the following are good sources of potassium?
    a. Mushrooms
    b. Dark greens (correct answer)
    c. Apples
6. Which of the following are good sources of Vitamin D?
    a. Milk (correct answer)
    b. Apples
    c. Eggs
7. What part of this video series was the most interesting? (no correct answer)
    a. The info about serving vs. portion sizes
    b. The content about added sugars
    c. The content about changes to the micronutrients listed in the nutrition facts part of the label
8. Do you think what you learned, will influence your future food choices?
    a. Yes or No (no correct answer)