Interactive Nutrition Curriculum for College Students

Diana N. Ricketts
Georgia State University

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INTERACTIVE NUTRITION CURRICULUM FOR COLLEGE STUDENTS

By

DIANA RICKETTS
B.S.F.C.S, The University of Georgia, 2018

A Master’s Project Submitted to the Graduate Committee in the Department of Food and Nutrition at Georgia State University in Partial Fulfillment of the Requirements for the Degree

MASTER OF SCIENCE

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2019
The Value of Nutrition Education in College

It is well documented that the transition into college is a time of significant change in the lives of college students.\textsuperscript{1,2,3} Nearly one-third of students entering post-secondary institutions in the United States are overweight or obese,\textsuperscript{2,4} and the literature indicates among the variety of health concerns college students present with, the most common are diet-related.\textsuperscript{4,5,6,7} Literature supports an average weight gain of 1.5-6.8lbs during the first 3-4 months of college, but the percentage of overweight or obese students increases nearly two-fold by the end of a first semester.\textsuperscript{1} Researchers emphasize the college years as a time of great behavior change, and recognize college as a formative period for life-long habits.\textsuperscript{1} For these reasons, developing an interactive, nutrition-focused curriculum for first-year students entering a large, urban university presents a chance to address the unique needs of incoming students. Racette et al. state, “College students represent a readily accessible population in whom assessment and intervention are feasible and important for effecting positive changes in physical activity and dietary behaviors. Preventive measures to reduce the incidence of overweight are critical for improving our nation’s health.” Several health-promoting interventions have been implemented, and research shows that education can positively impact behavior change.\textsuperscript{8,9,10,11}

The mission of Georgia State University (GSU) begins by stating, “Georgia State University, an enterprising public research university, transforms the lives of students, advances the frontiers of knowledge and strengthens the workforce of the future. The university provides an outstanding education and exceptional support for students from all backgrounds” The wellbeing of the student is paramount to the academic and personal success of the student.\textsuperscript{6} According to one report, “Regular physical activity and a nutritious diet are 2 lifestyle behaviors that have been strongly linked to a reduced risk of chronic diseases such as cancer, diabetes, coronary heart disease, stroke, and high blood pressure. Engagement in such behaviors is critical for college-aged adults, because physical activity generally decreases with age, and lifestyle behaviors adopted at an earlier age are more likely to continue through adulthood.” Nutrition education in college can be an influential force in a student’s current health and future risk of disease.\textsuperscript{12} Significant observations in healthy dietary shifts as a result of an interactive curriculum support the value of nutrition education. Researchers identified the advantage of formal nutrition education for promoting student self-efficacy in finding health information. Freshman participants in the trial who had never received such education demonstrated a significant lack in nutrition-related knowledge compared to the upperclassmen counterparts who had passed at least one nutrition course in their college career.\textsuperscript{13} A tailored nutrition curriculum will not only empower students by providing yet another form of exceptional support in the university, but the relevant lessons taught will also give students the practical skills they need to pursue a healthy lifestyle, thus strengthening the workforce of the future.
The curriculum is designed to be administered by graduate or upper-level undergraduate nutrition students. There is promising research associated with peer or near-peer education.\textsuperscript{14,15,16} A study from GSU reported that students enjoyed the informal atmosphere and friendly interactions that their graduate-student teachers facilitated.\textsuperscript{16} Students from a GSU focus group described the peer instructors and “entertaining” and “energetic”.\textsuperscript{16} Opportunities for grad students to gain teaching experience and develop professional skills adds another dynamic to the value-adding potential of this curriculum. Peer educators report that their presentation skills improved after teaching a 30-minute class,\textsuperscript{14} and Kicklighter et al. emphasized the benefit of a course instructor being a role model for the students.\textsuperscript{16}

Areas of Need

College students exhibit a variety of health concerns. researchers report that students entering a university setting display an increased use of alcohol and tobacco, higher rates of unsafe sex, decreased physical activity, and poor diet.\textsuperscript{4} One reports states, “Our findings provide evidence that many students in our sample are neither consuming adequate fruits and vegetables nor limiting their consumption of fried and fast foods to appropriate levels.\textsuperscript{5} Researchers from Purdue University report that 43\% of the participants claimed that they usually or often skipped breakfast.\textsuperscript{7} A pertinent concern for a nutrition education curriculum is the average college student’s apathy toward making healthy lifestyle changes. A study from 2009 revealed that 52\% of college students didn’t use food labels when choosing their foods.\textsuperscript{16} Over half of the participants in a 2005 study were categorized into the precontemplation stage for adopting healthier eating behaviors during the first two years of college.\textsuperscript{5} College students’ impassivity to pursuing healthy lifestyles may be due to their lack of knowledge, but some researchers suggest that young people are prone to experience a sense of invincibility, making them feel invulnerable to later onset health conditions. Researchers argue that making chronic disease prevention relevant to college students is critical for changing this perspective and promoting lifelong healthy habits.\textsuperscript{8} Since younger populations may not view chronic diseases as an immediate threat, focusing on short-term consequences of unhealthy eating, such as feeling lethargic after eating a high-fat fast food meal, is recommended.\textsuperscript{11} One report outlines six general topics that were appropriate for a college curriculum. Among these are: healthy eating on a budget, planning healthy meals, and body image or weight concerns.\textsuperscript{4} The study also revealed student interest in basic nutrition facts and personalization.\textsuperscript{4} Researchers from Brescia University College revealed students’ varied perceptions of their own skill levels regarding food prep and basic cooking skills. First-year students reported lower confidence in their abilities compared to upperclassmen counterparts.\textsuperscript{17}

Education is a popular intervention to alleviate the nutrition problems college students face. Freedman and Waldrop claim that “Nutrition education on a college campus can fill an important role of teaching about adoption of healthful behaviors.”\textsuperscript{2} Specifically, the student
population at GSU has indicated their desire for education on proper portioning, understanding the food pyramid (now MyPlate), and preparing inexpensive snacks and meals. Additionally, with the abundance of eateries near campus, the participants in a GSU focus group demonstrated a need for information about the caloric content of fast food. Drawing attention to healthier food options on campus has been associated with increased consumption of those items. Topics for this curriculum will be informed by the nutrition-specific health concerns outlined in the literature cited above and the interest of students.

Designing an Engaging Curriculum

College students desire educational messages that focus on only a few behaviors and provide concrete examples of how to implement healthy habits. An engaging curriculum must be personalized to meet the needs of the target demographic. For instance, one study reported, “white, female college students are more likely than their African American peers to report that a thin body is attractive and desirable to potential romantic partners. These beliefs, in turn, were associated with greater dietary restriction and lower body mass. It may thus be necessary to identify alternative sources of motivation for women who are less concerned with obtaining a thin body type.” Knowing the students’ motivations for pursuing healthy lifestyles is important for choosing topics for each education module. For the students of GSU, topics such as how to select healthier food choices, portion control, the importance of breakfast, and preparing dorm-friendly meals will be addressed, as students have indicated interest in those topics. Similar nutrition education interventions confirm student interest in these topics, and the complete list of suggested topics for this curriculum is available as an appendix to this literature review.

While the topics may be carefully selected based on demonstrated need and student input, there are a variety of challenges that arise when attempting to implement this curriculum. For instance, student apathy towards an academic subject has been observed to inhibit the effectiveness of education. GSU students have indicated that 75-minute class sessions are too long and that handouts are not always valued. For these reasons, shorter, interactive lessons that engage students will be designed for this curriculum. The most daunting barriers for successfully implementing this curriculum include financial limitations and time restrictions. Instructional time is jealously guarded as academic and career pursuits become more competitive. Literature cites numerous researchers whose interventions were inhibited due to the instructor’s time constraints. This is one reason having a stand-alone curriculum in a non-traditional setting can be more valuable than requesting that professors squeeze in an extra module to an already jam-packed class. More research is needed to support the efficacy of short-term interventions, but less time-consuming (not full-semester) interventions may be more suitable for a college-aged population. While numerous limitations threaten the effectiveness of the program, there is potential to overcome these challenges by implementing creative strategies to increase interest and engagement.
Strategies for Engagement

Learning Activities

A study from GSU reports that college students prefer "hands-on interactive learning with nutrition education topics tailored to their specific needs." Review games, activities, and meaningful projects are just a few examples of ways to promote interactive learning. GSU students found handling food models to be memorable and appreciated being able to visualize a "real world" example of the lessons they were being taught. Freedman and Waldrop created a "Freshman 15" jeopardy game designed to teach skills such as label reading, discerning appropriate portions, and estimating calorie needs. The overall goal was to "increase students’ self efficacy and outcome expectations for adopting healthy lifestyle behaviors during the transition to college." While 3 of the 5 jeopardy categories were general knowledge, other questions were specific to the school. The game featured healthy options in the dining halls and emphasized student support amenities to provide tips for staying healthy on campus. The game was well-received and students gave it an average score of 4.4 out of 5 possible points. Joubert found that an interactive "salad assignment" activity helped students retain information. Students were challenged to build a more nutrient dense salad with the same calories as the display salad and were able to eat their salad afterward. The activity taught students how to make healthier choices and gave them resources for finding information to make informed decisions. This sort of activity builds self-efficacy and is a valuable strategy for promoting engagement in the classroom. Another hands-on activity that brings relevance to lessons is having students fill out risk assessment forms. Researchers have used this activity to demonstrate the importance of nutrition in preventing chronic disease. Making diet and disease relevant to college students is all about personalization. Investigators analyzed the food diaries students were assigned to complete and allowed students to review their results. After comparing their dietary analysis to USDA guidelines, students were able to recognize areas for improvement. One researcher assigned a "happy body log" in which students would make a daily record of healthy choices they made that day. Results were shared in class. Some of the reported entries included not eating while watching TV, reducing portions for condiments, and choosing skim instead of 2% milk. This is a great activity to implement in the college curriculum because not only will it teach students how to recognize healthy habits, but the data collected could be used as an outcome measure for the impact of the class. Chung et al collected reflection journals from their participants. Including this project could be another way to promote deep learning while gathering data on the impact of the class.

Incentives

Research indicates that "Do you want to win a prize?" was the most effective phrase to entice college students to participate in a tabling event. Among the incentives used in this study were raffle tickets for a healthy food basket or a gift card, dried fruit, and candles. No particular
prize resulted in a significant difference in participation, but students were more enticed to approach the table when a prize was offered.\textsuperscript{22} Offering incentives could be an effective strategy to increase attendance and promote engagement during lessons. The GSU study revealed that some students might not have basic cooking equipment.\textsuperscript{16} Simple supplies like measuring cups, chopping mats, and vegetable peelers could be an inexpensive and useful giveaway for participants who attend each session. A small kitchen appliance such as a blender or a crock-pot could be raffled off to students who attend all of the modules in a series.

\textit{Learning styles}

Selecting appropriate learning styles and using relevant educational theories are essential for designing an engaging curriculum. Social cognitive theory has been shown to increase student interaction.\textsuperscript{2,11,23} Likewise, researchers from Utah State University emphasized how interventions designed to build skills and increase exposure were more likely to result in behavior change than an intervention that focuses on improving knowledge alone.\textsuperscript{24} A systematic review from 2013 reported that self-monitoring and goal setting resulted in higher fiber intake.\textsuperscript{11} The same review supports, "the inclusion of education, self-regulation strategies (e.g., goal setting, self-monitoring), and activities to promote self-efficacy for healthy eating to maximize dietary intake outcomes."\textsuperscript{11}

A report from the University of Guelph discusses several different learning styles. Researchers outline the benefits of case-based learning, which allow students to gain a broader perspective. The same report also defines project-based learning, which focuses on encouraging students to solve authentic problems over a period of time and is typically a more creative process. Another promising learning style is community-based learning, alternatively known as service learning. Community-based learning promotes leadership skills and civic responsibility. Research indicates that improving social supports is an effective strategy in nutrition education.\textsuperscript{11,25} Incorporating community-based learning to introduce students to campus resources such as the student food pantry could be a valuable addition to this curriculum.

Literature indicates the benefits of shifting to a student-centered model of teaching.\textsuperscript{25} Student-centered learning models may utilize a “flipped classroom” approach. One intervention utilized video demonstrations which the students watched on their own time and followed up with an in-class tasting of the recipe demonstrated in the video. Participants reported progress in their stages of change as a result.\textsuperscript{7} Issuing regular homework may not be relevant for the design of this curriculum, but student-focused activities are crucial to designing an interactive curriculum. While the teacher-centric model is characterized by lectures to which the students are generally apathetic, a student-centered model is designed to engage learners, resulting in the “development of critical thinking and problem-solving skills and the ability to adapt to changes in information-based environments.”\textsuperscript{25} In the student-centered model, instructors are responsible for guiding the student to understanding. For this reason, the leaders of this curriculum will be referred to as “facilitators,” emphasizing the idea that learning occurs on an individual basis and the instructors’ role is to provide leadership and structure in an environment where education is a
personal responsibility. This method reinforces strategies taught in the patient-centered care model and will give dietetic student facilitators the opportunity to put those ideas into practice.

Promoting the Program

Several strategies can be used to recruit participants for nutrition classes. Researchers have used table tents in dining commons, cartoons on the college tv station, radio skits on the university’s radio station, and print ads in newspapers. Flyers have been posted in high-traffic areas, and digital advertisements can be circulated on Facebook and email listservs. One report presented the benefits of communicating nutrition information via social media. With the majority of college students using at least one form of social media, promoting this curriculum on platforms such as Facebook, Instagram, and Snapchat could reach a significant percentage of the target populations. Digital advertisements offer the advantage of including a hyperlink to allow students to register for a course or find more information about the program immediately upon seeing the promotion.

Program Outcomes

The nutrition curriculums cited in the literature are primarily 15-week interventions aimed at studying weight. Pre-intervention assessments included 24-hour recalls with participants, 3-day diet records, and basic anthropometric measures. Most weight-focused interventions also reported anthropometric data at the end of the study. Interventions most commonly assessed stages of change, nutrition knowledge, self-efficacy, and dietary intakes. A 2018 article reported the findings of Moving On!, an intervention of four 90-minute sessions designed to increase motivation for healthy eating and build self-efficacy in athletes. Researchers from the Moving On! study adapted validated tools to measure their participants’ frequency of certain healthy eating behaviors and their motivations for healthy eating. It may be appropriate to adapt assessment tools for the purposes of a modular pilot curriculum for GSU to make frequent outcome assessments less of a burden on participants. Reflective journals, in the form of “one-minute papers,” at the end of each module may also be useful in assessing program impact.

Conclusion

This curriculum will be informed best practices shown in the literature. Six modules rooted in social cognitive theory will be developed to increase knowledge and improve self-efficacy and behavioral capability of healthy eating patterns. The curriculum will promote reflection and personalized goal setting with the intention of advancing students through the stages of change model. Topics will include MyPlate recommendations, how to eat healthy on a budget, meal planning, label reading, healthy on-the-go snacks for students, and strategies for
making healthy choices while eating out around campus. The use of this curriculum has great potential to add value to the University and promote student wellbeing.
References


# Appendix A

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<td>Jeopardy Game&lt;sup&gt;2&lt;/sup&gt;</td>
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<td>Portion Control&lt;sup&gt;11&lt;/sup&gt;</td>
<td>Jeopardy Game, Draw a healthy plate&lt;sup&gt;31&lt;/sup&gt;</td>
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<td>Identifying and setting SMART goals&lt;sup&gt;31&lt;/sup&gt;</td>
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<td>Energy Balance &amp; weight management&lt;sup&gt;31&lt;/sup&gt;</td>
<td>Salad Assignment&lt;sup&gt;19&lt;/sup&gt;</td>
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<tr>
<td>Tips for eating out&lt;sup&gt;31&lt;/sup&gt;</td>
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Appendix B

Food Skills:

- Peeling, chopping, slicing
- Cooking large batches to be frozen into smaller portions for later
- Planning quick, healthy meal using ingredients already in home
- Adjusting recipe to make it healthier
- Meal planning & coordinating multiple dishes for one meal

Appendix C

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<th>Inquiry-based learning</th>
<th>Reflective Learning</th>
</tr>
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<tr>
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<td>Modify meal plans</td>
<td>Identify areas of improvement for diets</td>
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Appendix D

<table>
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<tr>
<th>Session</th>
<th>Topics</th>
<th>Targeted Constructs</th>
<th>Example Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intro &amp; Expectations</td>
<td>Dietary guidelines/MyPlate Benefits of eating healthy</td>
<td>-Self-perceptions -General Knowledge</td>
<td>-Drawing healthy plate -Hidden Sugar Video</td>
</tr>
<tr>
<td>SMART Goals &amp; Action Plan</td>
<td>-Healthy choices within each food group -Clarifying portion sizes -Ideas for quick, healthy snacks &amp; meals</td>
<td>-Self-determination -autonomy -competence -Self-efficacy</td>
<td>-Identifying goals &amp; practice setting goals -Video- making a healthy meal</td>
</tr>
</tbody>
</table>
OVERVIEW & PURPOSE

The first module in the curriculum is designed to improve students’ nutrition knowledge and challenge them to create a healthy eating goal.

TOPICS

1. MyPlate guidelines
2. SMART goals

OBJECTIVES

1. Students will evaluate current dietary patterns
2. Students will be able to recognize food groups
3. Students will write a SMART goal

ACTIVITIES

1. Diet Scoring
2. Handling food models
3. SMART goal handout
4. Kahoot review game
5. Food Demo: Quesadillas

MATERIALS NEEDED

1. Diet scoring tool
2. Food models
3. SMART Goal template
4. Kahoot Review
5. Food Demo Materials

VERIFICATION

1. Kahoot review answers can indicate students’ understanding
1. Objectives
   a. Students will evaluate current dietary patterns
   b. Students will be able to recognize food groups
   c. Students will write a SMART goal

   **** Activity **** Diet Score Handout
   Allow students time to reflect on their current dietary habits. This tool is meant to allow students to assess the variety in their diet and compare how their current eating patterns align with recommendations.

2. Where do these guidelines come from?
   a. MyPlate replaced the food pyramid as the USDA’s education model for healthy eating in 2011. The plate is beneficial because it is a better visual for portioning food groups in a meal and a balanced diet. MyPlate depicts 5 food groups and includes three key messages which are…

3. Key Messages of MyPlate
   a. Focus on variety, amount, and nutrition
   b. Limit SoFAS and Sodium
   c. Make small changes to shift toward an overall healthy diet

4. Food Groups: Fruits and Vegetables
   a. For fruits and vegetables, the recommendation is to fill half of your plate fruits and vegetables.

5. Fruits
   a. Fruits contain fiber, potassium, and vitamin C. They contain complex carbs which provide energy as well
   b. You may have heard that fresh is best, but frozen, canned, and dried fruit all count in the fruit group too. In fact, if the fruit you’re looking for is out of season, it might be better to get it frozen or canned.

6. Vegetable Group
   a. Vegetables are categorized into 5 subcategories. They are dark green, red and orange, beans and peas, starchy vegetables, and misc. The different colors that vegetables come in help us guess what kind of nutrients they contain. Eating a variety of vegetables helps us to ensure we are getting a variety of nutrients.
   b. What kind of vegetables do you like to eat?

7. Legumes, lentils, and soybeans
   a. Some vegetables can also count in the protein group
b. Plant-based proteins are beneficial because they are low in fat, making them heart-healthy

8. Protein group
   a. Vary your protein routine
   b. Just like with vegetables, getting a variety of protein sources allows us to get a variety of nutrients. Meat, fish, nuts, and seeds can all count toward the protein group
   c. Here are some examples of foods in the protein group
      i. Meat
      ii. Deli meat
      iii. 1 handful of nuts
      iv. Canned protein like chicken or tuna

9. Some examples of plant-based proteins include
   a. ¼ cup beans or peas
   b. 2 Tablespoons hummus
   c. ¼ cup tofu

10. Grains
    a. It is recommended to make half of your grains whole grains
    b. Whole grains contain more nutrients compared to refined grains. Whole grain options include brown rice, whole wheat pasta, and popcorn just to name a few!

11. Grain Group
    a. Grains contain carbohydrates which give us energy
    b. Oatmeal, bread, pasta, and rice are just some examples of foods in the grain group
    c. Use food models to demonstrate other foods in the grain group

12. Dairy Group
    a. The recommendation for the dairy group is to choose low-fat dairy products.
    b. Milk, cheese, and yogurt are great sources of dairy. To count toward your 3 servings of dairy, the food or beverage must be a good source of protein and calcium. For example, one 8-oz glass of milk contains 8 grams of protein and about 30% of your daily value of calcium. Check out these common dairy alternatives to determine if they would count in the dairy group
    c. Rice Milk- fortified with calcium, but not enough protein to count as dairy
    d. Soy milk- natural protein and a good source of calcium- counts as dairy!
    e. Almond milk- high in calcium, low in protein- not dairy
    f. Just because a food comes from a cow does not mean that it is a good source of the nutrients dairy foods provide. For instance, butter and cream cheese are made from milk, but they mostly contain fat and do not provide the calcium and protein needed to be categorized into the dairy group

13. Food Groups
14. Diet Score
   ***Activity*** Allow students to share their thoughts on their diet score handout

15. SMART Goals
   a. SMART goals are specific, measurable, attainable, relevant or realistic, and time bound. Use the handout to create a SMART goal to improve your eating pattern
   b. Remember- making little changes that are sustainable may be more useful than a diet overhaul. The last key message of MyPlate is to make small changes to shift toward an overall healthy eating pattern. Make sure your goal is realistic and important to you!
   ***Activity*** Creating SMART Goals. Help students write a goal based on the results of their food frequency handout. Let volunteers share with group

16. ***Activity*** Food Demo- Veggie Bean Quesadillas
   a. Prepare a quesadilla to demonstrate how to incorporate multiple food groups into a snack
      i. Whole Grain Tortilla (grain)
      ii. Black beans (protein)
      iii. Spinach (veggie)
      iv. Reduced Fat Cheese (dairy)
      v. Discuss substitutions and additions that students could make to personalize their quesadilla

*** Final Activity (time allowing) *** [Kahoot Review Game](https://kahoot.com/)

Results can be used to measure module objectives
**Eating Habits Scorecard**

Instructions: Score your current eating patterns for a typical day based on the point allocations listed below. Give yourself one point for every occasion you eat/drink the following. Include meals and snacks.

<table>
<thead>
<tr>
<th>Category</th>
<th>Instructions</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fruits</strong></td>
<td>How many times each day do you eat fruit?</td>
<td>_____/3</td>
</tr>
<tr>
<td></td>
<td>Include fresh, frozen, canned, and dried fruit</td>
<td></td>
</tr>
<tr>
<td><strong>Vegetables</strong></td>
<td>How many times each day do you eat vegetables?</td>
<td>_____/3</td>
</tr>
<tr>
<td><strong>Whole Grains</strong></td>
<td>How many whole grains do you choose daily?</td>
<td>_____/3</td>
</tr>
<tr>
<td></td>
<td>e.g. Brown rice, whole wheat pasta, quinoa, etc.</td>
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<tr>
<td><strong>Low-Fat Dairy</strong></td>
<td>How often do you consume low-fat dairy?</td>
<td>_____/3</td>
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<tr>
<td></td>
<td>e.g. skim or 2% milk, yogurt, cheese, soy milk</td>
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<tr>
<td><strong>Protein</strong></td>
<td>How many meals contain a source of protein?</td>
<td>_____/3</td>
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<tr>
<td></td>
<td>e.g. meat, poultry, eggs, nuts, tofu</td>
<td></td>
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<tr>
<td><strong>Hydration</strong></td>
<td>How many cups of water do you drink?</td>
<td>_____/5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>_____/20</td>
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</tbody>
</table>

**Guide to SMART Goals**

<table>
<thead>
<tr>
<th>SMART</th>
<th>Specific</th>
<th>Measurable</th>
<th>Attainable</th>
<th>Relevant</th>
<th>Time-Bound</th>
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<tbody>
<tr>
<td></td>
<td>What do you want to</td>
<td>How will you measure your progress and</td>
<td>Considering your current situation,</td>
<td>What are your motivations</td>
<td>How long will you give</td>
</tr>
<tr>
<td></td>
<td>accomplish?</td>
<td>know when you’ve met your goal?</td>
<td>is this goal reasonable?</td>
<td>for working toward this</td>
<td>yourself to achieve this</td>
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<td></td>
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<td></td>
<td></td>
<td>goal? Is it worthwhile?</td>
<td>goal?</td>
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<tr>
<td>My SMART Goal:</td>
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</table>
Food Demo Materials List: Veggie Bean Quesadilla

Supplies:
- Chopping mat
- Knife
- Can opener
- Measuring Spoons
- Measuring Cups
- Pan & Portable Stove
  - ***Alternatively, use aluminum foil & and iron to make quesadilla packets
- Strainer
- Plates
- Napkins
- Recipe Cards

Ingredients- For 8 sample size servings
- 1 Tablespoon Vegetable oil
- 3 Cups Spinach (or substitute veggie)
- 4 Whole Wheat Tortillas
- 1 15 oz Can No salt added black beans
- 1 Cup Reduced fat cheddar cheese
VEGGIE BEAN QUESADILLA

Ingredients:
- 1 tablespoon olive oil
- 3 cups spinach (fresh or frozen)
- 4 whole wheat tortillas (8 in.)
- 1 can black beans
- 1 cup reduced fat cheddar cheese

Optional veggies to include/substitute:
- onion
- green bell pepper
- tomato

Makes 4 servings in about 20 minutes!

VEGGIE BEAN QUESADILLA

Ingredients:
- 1 tablespoon olive oil
- 3 cups spinach (fresh or frozen)
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- 1 can black beans
- 1 cup reduced fat cheddar cheese

Optional veggies to include/substitute:
- onion
- green bell pepper
- tomato

Makes 4 servings in about 20 minutes!
Delicious Additions

This quesadilla is great as a snack or as part of a meal! Check out these options for pairing sides or toppings.
- Corn salad
- Salsa
- Avocado
- Cilantro

INSTRUCTIONS
1.) Heat the oil in the pan over medium heat.
2.) If using fresh spinach, chop roughly and sauté until wilted. Remove from pan and set sauteed spinach to the side.
3.) Drain and rinse the beans
4.) Place a tortilla on the pan and add 1/4 of the spinach, black beans and cheese.
5.) Cook until bottom of tortilla is golden and cheese is melted.
6.) Fold tortilla in half and let cool on plate
7.) Repeat with remaining tortillas and the rest of the beans, spinach, and cheese.
8.) Enjoy!

No stove? Try wrapping your quesadilla in aluminum foil and cooking with an iron!
HEALTHY EATING ON A BUDGET
Lesson Plan for Module 2, Healthy Habits Curriculum
Prepared by Diana Ricketts

OVERVIEW & PURPOSE

The second module in the curriculum is designed to build upon students’ nutrition knowledge and reduce the perception that cost is a barrier to healthy eating.

TOPICS

1. Meal planning
2. Tips for healthy eating on a college budget

OBJECTIVES

1. Students will demonstrate ability to plan meals
2. Students will identify strategies for saving money at the grocery store

ACTIVITIES

1. Meal Planning Template
2. Grocery Store mobile app exploration- students will follow along on their own devices to navigate a local grocery store app to find coupons and sale promotions
3. Students will team up and play a Family Feud-style Review Game
4. Food Demo: Veggie Egg Ramen

MATERIALS NEEDED

1. Meal Planning Handout  
2. Additional Resources Handout  
3. Review Game  
4. Food Demo Materials  
5. Sticky Notes

VERIFICATION

1. “What Stuck?” Feedback of what the student learned from the module will be written on a sticky note and left on the desk or the wall for the facilitator to collect at the end of the session
Prezi: https://prezi.com/uolhw3tsq_s/?utm_campaign=share&utm_medium=copy

1. Start With a Plan
   a. Pose questions to the group: What kinds of meals do you like to eat?
      i. Write responses on board or presentation easel
   b. How can we use MyPlate in meal planning?
      i. Discuss ways to make meals complete by including multiple food groups
      ii. Explain pairing food groups at snacks to fill in gaps where foods didn’t fit in meals

2. Building Meals: Aim for At Least 3 Food Groups
   a. Here is an example of a way to make a more filling meal from
      i. Add a fried egg and a cup of frozen or canned veggies to instant ramen for a more filling, more nutritious meal for just about $1 more
   b. Meals don’t have to be complicated.

***Activity**** Brainstorm meal ideas using foods that students already have in their pantry or are easy to prepare.

3. Select Meals for the Week and Make a List
   a. Explain Meal Planning Template handout
      i. Plan for meal leftovers and dining out
      ii. Make a shopping list- this list is divided into sections by which grocery stores are organized
   b. This is just one option for organizing a meal plan for the week. Suggest other options like using a note on a phone, looking for meal planning apps, going into the store with a general plan and buying what’s on sale.

***Activity*** Have students fill out 1-2 days of food on their meal planning template or complete a few boxes as a group. Share ideas.

4. Smart Shopping Tips
   a. Check your pantry before making your list
   b. Don’t go to the store hungry
   c. Avoid pre-cut & prepared items- they’re usually more expensive and may have a shorter shelf life. Chopping produce or shredding cheese yourself might take a little more time, but it will cost less
   d. Buy generic
   e. Check unit prices to determine better deals
   f. See if your grocery store has a manager’s special section with discounted items, but remember- buying things you don’t need doesn’t save you money :)


g. Look for coupons! Manufacturer’s coupons may be available online, and grocery store apps may have promotions

5. Grocery store Apps
   a. List a few grocery shops in the area and find out where students get their groceries (or where they would)

***Activity*** Invite students to download an app or follow along as you navigate through an app on a screen (if mobile mirroring is available)

6. Kroger App Screenshots
   a. Set for the Edgewood Kroger, discuss how checking to see what’s on sale may inspire meal planning ideas.
   b. Coupons available for rice and hummus may encourage you to make a mediterranean-style meal.

7. Reducing Waste at Home
   a. Store food properly- be sure to look up where your food is best stored. Use cling-wrap or sealed containers to keep it from drying out or getting contaminated
   b. FIFO- use up older food first
   c. Out of sight, out of mind- keep items that need to be used first where you can see them.
   d. Be creative with leftovers- use remnants from last night’s dinner in a new dish like a salad, wrap, or soup for a different meal
   e. Made too much? Frozen produce is great in smoothies and many foods like meat, soups, and casseroles can be portioned in bags and frozen for another time- maybe a week when you have less time to cook!
   f. There is a difference between a manufacturer’s guarantee and an expiration date. Expiry indicates when the food is probably no longer safe to eat. The manufacturer’s guarantee is the date to which the food company can guarantee the quality of the food. Food a few days (or weeks in some cases) past the manufacturer’s guarantee is usually still good to eat. Get rid of any food that has grown mold or has an odor.
   g. Prep food for easy grab & go- if you’re a student, you’re probably living a busy lifestyle. Prep snacks when you have time so that when you need something quick, the healthy option is the easy option!
   h. If you’re cooking vegetables, consider brushing them instead of peeling off the skin

8. Food Demo
   a. Follow recipe card instructions to demonstrate the ramen recipe. Allow students to sample
***Activity*** Family Feud Review Game

Instructions
1. Open the Family Feud Review Game powerpoint. Enable macros.
2. Divide participants into two teams
3. Click “play from start” to begin the game. Sound effects are available if desired
4. Follow prompts to name each team
5. Use mouse, spacebar, or keyboard arrows to advance slides instead of buttons within the presentation (Except for the “Show Question” button in the bottom left corner”
6. When a team guesses an answer correctly, click on the space to reveal the correct answer. Use the answer sheet below to determine where the correct answers are hidden
7. Complete Game Play instructions are available on slide 10 of the powerpoint.

Family Feud Game Answers

Strategies for Saving Money at the Grocery Store

<table>
<thead>
<tr>
<th>Look at Unit Prices/ Buy in Bulk</th>
<th>Skip pre-cut produce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buy Seasonal Produce or Consider Canned/Frozen</td>
<td>Buy Generic</td>
</tr>
<tr>
<td>Stick to your list</td>
<td>Don’t go to the store hungry</td>
</tr>
<tr>
<td>Use Grocery Store Apps to find coupons &amp; sales</td>
<td>Check out Manager’s Specials</td>
</tr>
</tbody>
</table>

Reducing Waste in the Kitchen

<table>
<thead>
<tr>
<th>Check your pantry before going shopping</th>
<th>Brush Vegetables instead of peeling them</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meal Plan</td>
<td>Be Flexible with Manufacturer’s Guarantee</td>
</tr>
<tr>
<td>Freeze or Reuse Leftovers</td>
<td>First In, First Out</td>
</tr>
<tr>
<td>Store Food Properly</td>
<td>Prep ahead for easy grab &amp; go</td>
</tr>
</tbody>
</table>

Cost-Friendly Foods to Keep Stocked in Your Pantry

<table>
<thead>
<tr>
<th>Whole Grains</th>
<th>Vegetable Oil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beans</td>
<td>Canned Chicken or Tuna</td>
</tr>
<tr>
<td>Basic Spices</td>
<td>Hearty Vegetables</td>
</tr>
<tr>
<td>Peanut Butter</td>
<td>Canned Tomatoes</td>
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<tr>
<td>Week of:</td>
<td>Breakfast</td>
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<td>Saturday</td>
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<tr>
<td>Sunday</td>
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</tbody>
</table>

**Shopping List**

**Produce:**

**Deli/Meat:**

**Pantry:**

**Fridge/Freezer:**
FOOD STORAGE SAVVY: YOUR GUIDE TO WHAT GOES WHERE

First comes shopping, then comes putting food away — but where? You may be surprised to learn the best places to store your groceries!

Here’s a helpful guide from the Academy of Nutrition and Dietetics.

- Wrap and label meat, fish, and poultry that you plan to freeze.
- Dairy and eggs should be stored in the coldest part of the fridge, usually near the back and away from the door.
- Put meat in the meat drawer or on the lowest shelf of the refrigerator.
- Use the crisper or produce drawers for veggies!
- Fruits with pits, like peaches and plums, should be placed in a closed paper bag until ripe — then refrigerated. Keep tomatoes in the pantry only if they’ll be eaten within 1-2 days — otherwise, they go in the fridge.
- Canned goods last 2+ years but can be damaged by temperatures above 100°F.
- More and peanut butter can be stored in the pantry: move mayo to the fridge when it’s been opened.
- Keep potatoes in a cool, dark part of the pantry and remove any that start to go bad. Onions like the same conditions, but don’t put them together. Potatoes and onions should be separated!
Food Demo Materials List: 5 Ingredient Ramen

Supplies:
- Can opener
- Measuring Spoons
- Measuring Cups
- Pot
- Pan
- Spatula
- Portable Stove
- Colander
- Plates or Bowls for Serving
- Napkins
- Recipe Cards

Ingredients - For 8 sample size servings
- 2 Packages Instant Ramen
- 2 Cups Frozen or canned mixed vegetables
- 1 Tablespoon oil or butter
- 4 Eggs
- Salt and pepper to taste
5-INGREDIENT RAMEN

Ingredients:
- 1 package ramen
- 2/3 cup frozen or canned mixed vegetables
- 2 teaspoons oil or butter
- 1 egg
- salt & pepper to taste

Optional additions:
- green onion
- sriracha
- soy sauce

Double the veggies & add another egg to make 2 servings

Photo & recipe by sweetphi.com

5-INGREDIENT RAMEN

Ingredients:
- 1 package ramen
- 2/3 cup frozen or canned mixed vegetables
- 2 teaspoons oil or butter
- 1 egg
- salt & pepper to taste

Optional additions:
- green onion
- sriracha
- soy sauce

Double the veggies & add another egg to make 2 servings

Photo & recipe by sweetphi.com
Healthy Habit

Easy on the sodium! The seasoning packet that comes with ramen is high in salt. To reduce your sodium intake, try using only half the packet or use a lower-sodium alternative to season your dish! Try:
- Garlic Powder
- Lite Soy Sauce
- Hoisin Sauce
- Boiling the noodles in a low-sodium broth

INSTRUCTIONS

1.) Fill a small pot half way with water and bring to a boil over high heat.
2.) Add dry ramen noodles and frozen vegetables to the boiling water. Allow to boil for 5 minutes or until the noodles break up easily when poked with a fork.
3.) Drain noodles and vegetables and return to the pot. Sprinkle in packet
4.) Warm the oil/butter in small frying pan and crack the egg into the pan
5.) Sprinkle a pinch of salt and pepper on it and cook on high for 1 minute
6.) Reduce heat to medium and cook for 4 minutes for a sunny side up egg. Cook longer if you don't want a runny yolk.
7.) To serve, add noodles and vegetables to a bowl and top with the egg
8.) Enjoy!
Looking for recipe inspiration? Check out these resources!

**Budget Bytes**

Budget Bytes is a great blog for simple, cost-friendly recipes. With a variety of cuisines to choose from, this resource is perfect if you find yourself making the same dishes over and over.

**Struggle Meals playlist on Tastemade YouTube channel**

The Struggle Meals playlist on the Tastemade YouTube channel is perfect if you’re just starting to learn how to cook. Chef Frankie Celenza walks you through the recipes step-by-step, and each dish costs less than $2 per serving. Videos are entertaining and full of great tips to improve your cooking skills!

**r/EatCheapAndHealthy subreddit**

The Eat Cheap and Healthy subreddit has over 1.5 million users. The extensive community provides recipes, ideas, and support for others who are interested in creating healthy, low-cost meals! It’s a perfect platform for troubleshooting problems.

**Precision Nutrition infographic**

Precision Nutrition has created an impressive infographic to help build the perfect meal. Choose an ingredient from each column, read how to prepare it, and then choose from selected combinations of aromatics and garnishes to create a balanced meal with a delicate flavor profile. Find the guide Here
PANTHERDINING CAMPUS FOOD TOUR

Lesson Plan for Module 3, Healthy Habits Curriculum
Prepared by Diana Ricketts

OVERVIEW & PURPOSE

The third module in the curriculum is designed to expose students to dining options on campus and discuss how to make healthy choices when dining out.

TOPICS

1. Pantherdining eateries
2. Tips for applying nutrition recommendations when dining out

OBJECTIVES

1. Students will be aware of Pantherdining eateries on campus
2. Students will be able to discern healthier options when dining out by applying MyPlate key messages

ACTIVITY

1. Campus food tour- students will follow their facilitator through 5 Pantherdining eateries, sampling healthy options along the way and discussing ways to make healthy choices when dining out

MATERIALS NEEDED

1. Tour Map
2. Samples

VERIFICATION

At the end of the tour students will discuss which eatery they enjoyed the most and will be asked to share their favorite tip.
1. Objectives
   a. Students will be aware of Pantherdining eateries on campus
   b. Students will be able to discern healthier options when dining out by applying MyPlate key messages

*** Activity *** Campus Food Tour

If possible, arrange to provide student with samples of offerings from each eatery. Have students meet at the first stop of the tour, Miss Demeanor’s Cafe in the law building. Use the “Tour Map” handout to make your way through each eatery, discussing healthy options with students. Listed below are suggested talking points.

1. Miss Demeanor’s Cafe- 5th floor Law Building
   a. MyPlate Message Focus: Nutrition- where to find fresh, healthy options on the go
   b. This first stop is a grab & go cafe located in the library in the law building.
   c. Offerings: energy bars, baked goods, salads, sandwiches, pizzas, & soups. Ask students to identify some of the more nutritious snack options
      i. Healthier snack options include:
         1. Stacy’s Pita Chips
         2. Cheese & Fruit Cup
         3. Hummus & Veggie Cup
         4. Whole Fruit
         5. Granola Bars
         6. Yogurt Parfaits
   d. You don’t have to be a law student to study here. This location offers outdoor seating and the environment is more studious than Panther’s Club or the Courtyard

2. Legal Grounds Coffee- Law Building Lobby
   a. MyPlate Message Focus: Amount
   b. This grab & go coffee kiosk is perfect if you need a quick snack or beverage to go
   c. Amount: added sugar- beverages (especially coffee drinks) can be high in added sugar. How do you like your coffee? Do you add sugar every time? What are some healthier habits for reducing sugar intake from beverages?
      i. Healthy drink habits include:
         1. Choose water (or bring a water bottle)
         2. Ask for fewer pumps of sweet flavorings
         3. Request low-fat or skim milk instead of whole
         4. Get the smallest size
         5. Enjoy your drink so you can be satisfied with less
Food Tour Walking Route: Exit law building and start walking down Park Place toward Decatur Street. Turn left onto Decatur St, pointing out the other eateries along the way. Suggest that while many of these establishments serve similar food and beverages, one unique advantage of PantherDining locations is that you can pay with Panther Cash.

Continue walking down Decatur Street until you reach the corner with the cinéfest and Chick-fil-a sign. Turn left and enter through the first door on the right (There is a Panther’s Club Food Court arrow on the ground in front of the door). Climb the stairs to the third floor of Student Center West and begin the tour of Panther’s Club

3. Panther’s Club- 3rd Floor of Student Center West
   a. MyPlate Message Focus: Variety
   b. This food court is open to everyone- don’t let the turnstiles intimidate you! There are so many options to choose from here. You can select grab & go items or you can grab an OZZI container for a meal that you might sit down and enjoy
      i. Explain OZZI container system & show station
         1. Buying into this program is super sustainable! Hang onto those tokens to get reusable containers again and again.
      ii. When you visit a food court such as Panther’s Club, it can be useful to walk around and evaluate all your options before making a selection.
         Check out all that Panther’s Club has to offer!
         1. Pasta & pizza
         2. Pre-made salads
         3. Sushi
         4. Steak & Shake
         5. Southern market- meat and sides **Great for veggies
         6. Garden grill- offers hot breakfast items in the morning!
   c. Variety- if you buy you lunch on campus often, you might get tired of eating the same thing over and over. From a nutrition standpoint, variety in the diet is important for making sure that you get all of the nutrients you need to stay healthy. How could you make sure you make a plate with a variety of food groups while you’re eating at Panther’s Club?
      i. Potential answers:
         1. Buy a salad and a slice of pizza
         2. Get fruits and veggies as sides to a hot entree
         3. Get milk to drink instead of soda or a sports drink
         4. Add veggies to a sandwich
Next stop- The courtyard. Exit out the doors from which you entered and make a right, heading toward the student center plaza. Glance in at the Chick-fil-a. Mention how this is another on-campus eatery option. Discuss pros and cons of eating here vs. one of the eateries you’ve already explored (lines are long, but food is familiar; not as many options, but you just might be in the mood for that particular food, etc.). Enter the side doors near the swings and turf to walk into the Student Center East. Arrive at the Courtyard (just past Panda Express).

4. **The Courtyard- 1st Floor Student Center East**
   a. MyPlate Message Focus: small changes each day for an overall healthy lifestyle
   b. The Courtyard is another great option for drinks and grab & go items. They offer a few pre-made wraps and sandwiches as well as a full coffee bar.
   c. Some talking points as you wrap up the food tour:
      i. Consider supplementing the meals you buy on campus with your own healthy sides from home if money or nutrition is a concern.
      ii. Healthy eating does NOT mean missing out on social events centered around food. Use these tips to make informed decisions, but you shouldn’t feel guilty when you choose more indulgent foods. Consider whether you could benefit from shifting from a perfectionist to a “most of the time” mentality
      iii. What were the biggest take-aways from today’s food tour?
      iv. Which foods did you like sampling the best? **If applicable
10 Healthy Habits for Eating Out

1. Be mindful of portions- split large portions or take half to-go
2. Choose water
3. Bring your own healthy sides
4. Eat until you’re satisfied
5. Order the smallest size for indulgent foods
6. Get sauces and dressings on the side
7. Skip on “supersize bargains”
8. Model MyPlate
9. Choose items that are grilled, baked, or sautéed more often than fried foods
10. If chips or bread are served before the meal, enjoy a small portion to save room for your meal
GROCERY TOUR

Lesson Plan for Module 4, Healthy Habits Curriculum
Prepared by Diana Ricketts

OVERVIEW & PURPOSE

The fourth module in the curriculum is designed to improve students’ self efficacy and give them to opportunity to synthesize the information they’ve learned thus far.

TOPICS

1. Reading food labels
   a. Identifying SoFAS & Sodium
2. Navigating a grocery store

OBJECTIVES

1. Students will demonstrate knowledge of how to read food labels
2. Students will be able to discern healthier options (lower SoFAS & Sodium, whole grains, etc.)
3. Students will know where to find foods from each food group in the grocery store

ACTIVITY

1. Tour a local grocery store, stopping along the way to point out where foods from each MyPlate food group can be found
2. Explain how to read food labels and give students the opportunity to discern the healthier option among similar products

This module is very flexible. If transportation can be arranged to go to a local grocery store, this lesson is ideal for that environment. Alternatively, walking to the Walgreens on campus is another way to teach label reading in an environment where it is most applicable. Adaptations can be made to bring in empty boxes of packaged food products to have a “grocery store tour” in a classroom or conference room.

MATERIALS NEEDED

1. Reading Food Labels Handout
2. Empty Food Packages (maybe)
1. Objectives
   a. Students will demonstrate knowledge of how to read food labels
   b. Students will be able to discern healthier options (lower SoFAS & Sodium, whole grains, etc.)
   c. Students will know where to find foods from each food group in the grocery store

*** Activity *** Grocery Store Tour

If possible, arrange for students to meet at a grocery store. This module is also compatible with the Sweet Auburn Curb Market, or even convenience stores. If there is a preference to conduct this module in a classroom setting, bring in food labels from a variety of products for students to read and compare (this presentation is also available). The following talking points are designed for touring the grocery store, but they can also be applied to the alternative scenarios.

First things first! Bring your list! Remember the grocery list from module 2? Keep that on hand or use a note in your phone to make sure you pick up all the items you need. Sticking to your list may also help you stay within your budget and avoid impulse buys.

1. Produce Section
   a. See what’s in season- hint*- it’s usually the items that are most prominently displayed and marked on sale
   b. Fruits and veggies are great for snacks and side dishes. Think about how long you will wait before going to the grocery store again before selecting only fresh produce. Canned or frozen fruits and vegetables will keep longer and are still nutritious options!
   c. Food typically costs more when it undergoes a process. For instance, if you buy a veggie tray that has pre-cut veggies and dip all arranged beautifully on a ready-to-eat platter, you are going to spend more money for less food than if you were to buy the same items and chop them up yourself. If you don’t have time to prep veggies and you can afford to spend a little more, these convenience items can be great to have on-hand for an easy grab and go option.
   d. Variety- look at all the colors in the produce section! Choosing items from different fruit and vegetable categories can help you round out your diet and get a variety of nutrients
   e. ***have students compare pricing on bagged salad kits vs a head of lettuce
   f. Question for discussion: What prevents you from buying fruits and vegetables? Cost? Lack of knowledge about preparing? How can we troubleshoot that?

2. Deli/Meat section
a. Choose lean meats! Check out the package label for the fat content. Lean meats have less fat. Chicken and turkey are naturally lean, but there are some great cuts of lean red meat available as well. Look for at least 80% lean. Fish are another great source of lean protein.

b. Discussion Questions:
   i. What kind of protein do you like best?
   ii. What produce do you think would pair well with the proteins we’ve seen in this section?
   iii. Animal products are not the only sources of protein available. What kind of plant-based proteins could we purchase? (transition to pantry section)

**Activity** Label reading- explain the label reading handout and discuss the MyPlate key message of reducing SoFAS and Sodium

3. Pantry Items
   a. Dried vs canned- beans and lentils
      i. Conduct a cost-comparison by looking at the unit price difference between canned beans and dried beans. Explain balancing convenience and cost and how sometimes- especially in student life- buying canned really is a good option. Opt for no salt added if available
   b. Balancing Convenience & Cost: Dry rice vs. minute rice
   c. Cereal aisle- comparing added sugar
      i. What are your favorite cereals? How often do you choose cereal to start your day? Take a look at the food labels of some of the cereal options. Compare added sugar, fiber, and protein. Do any contain whole grains? Now, look at a package of old-fashioned oatmeal. 100% whole grain, and you can control the sugar you add to it. The higher fiber content helps you feel fuller longer, too!
   d. Bread- compare added sugar, sodium, and fiber content. Don’t forget to look for 100% whole grain! Labels can be misleading. “Lite” bread or “honey wheat” bread usually don’t list 100% whole wheat flour as the first ingredient.
   e. Snack foods- chips/pretzels vs tortilla chips and popcorn
      i. Compare sodium and fat content of snacks
   f. Beverage Aisle
      i. Sugar-sweetened beverages like soda, sports drinks, and fruit punch can be sources of hidden added sugar
      ii. Lower-sugar alternatives may include flavored sparkling water or kombucha. Water is always best!

4. Fridge/Freezer
a. Dairy- look for low-fat cheese, yogurt, and milk. Compare pricing on shredded vs block cheese. You may save money if you shred it yourself!

b. Unit Pricing- Look at yogurt cups vs quarts. What is the price per ounce? Cups may be convenient, but larger containers typically save you more money.

c. Eggs- check for cracks before selecting a carton. Brown eggs and white eggs are nutritionally equivalent.

d. Freezer section- great place for fruits and vegetables!
   i. Frozen meals can be great to keep on hand for busy nights. Look out for sodium content, though! Try to find options that look balanced and include more than one food group. What are the best options you can find?

5. ***Activity*** Food Demo (if time/location allows)
a. Allow students to make their own peanut butter greek yogurt dip in individual yogurt cups OR make a large batch for students to sample. Provide sliced fruit (apples and bananas work best) or graham crackers for dipping
Guide to Reading Food Labels

The second MyPlate message is to reduce solid fats, added sugar, and sodium.

Food labels provide all the information you need to make healthy choices. Comparing labels of two similar products side-by-side is a great way to determine the healthiest option. Check out the guide below to find out which nutrients promote good nutrition and which should be consumed in moderation.

- Start here to determine an appropriate portion size
- Calories listed are for 1 serving size, not the whole container
- Limit these nutrients
- Balance your carbs. Higher fiber is recommended
- Reduce added sugar
- Make sure to get enough protein, vitamins, and minerals!

A note on % Daily Value: There are recommendations for daily intake of each of the nutrients that have a percentage listed. The percentage tells you how much one serving of the food provides toward your daily recommendation. 5% or less is considered a low amount and 20% or more is a good source of that nutrient.
Peanut Butter Greek Yogurt Dip

Supplies:
- Measuring Spoons
- Measuring Cups
- Bowl
- Fork
- Spoon for serving
- Knife
- Chopping Mat
- Plates or Bowls for Serving
- Napkins
- Recipe Cards

Ingredients- For 4 sample size servings
- ¾ Cup Vanilla Greek Yogurt
- 1 Tablespoon Peanut Butter
- 1.5 teaspoons honey
- ⅛ teaspoon cinnamon
- Sliced apples, bananas, and graham crackers for dipping

Alternative- provide individual cups of yogurt & let students stir in PB, honey, and cinnamon to taste

Talking points: This snack covers several food groups and is packed with protein to keep you feeling full. No special equipment needed to prepare this recipe.
PEANUT BUTTER YOGURT DIP

Ingredients:
- 3/4 Cup vanilla Greek yogurt
- 1 Tablespoon Peanut Butter
- 1.5 teaspoons honey
- 1/8 teaspoon cinnamon

Instructions:
1.) Combine all ingredients in a bowl. Mix well and serve chilled.

For Dipping:
- Apples
- Bananas
- Graham crackers

This quick and easy snack is packed with protein!
Your heart-healthy recipes will taste even better with seasonal produce.

### Seasons of eating

**Spring**
- Artichokes
- Asparagus
- Chives
- Fava Beans
- Green Onions
- Leeks
- Lettuce
- Parsnips
- Peas
- Radishes
- Rhubarb
- Swiss Chard

**Summer**
- Berries
- Corn
- Cucumbers
- Eggplant
- Figs
- Grapes
- Green Beans
- Melons
- Peppers
- Stone Fruit (Apricots, Cherries, Nectarines, Peaches, Plums)
- Summer Squash
- Tomatoes
- Zucchini

**Fall**
- Apples
- Brussels Sprouts
- Dates
- Hard Squash (Acorn, Butternut, Spaghetti)
- Pears
- Pumpkin
- Sweet Potatoes

**Winter**
- Bok Choy
- Broccoli
- Cauliflower
- Celery
- Citrus Fruit (Clementines, Grapefruit, Lemons, Limes, Oranges, Tangerines)
- Collard Greens
- Endive
- Leafy Greens (Collard, Kale, Mustard, Spinach)
- Root Vegetables (Beets, Turnips)

**Year Round:**
- Cabbage, Carrots, Garlic, Onions, Mushrooms

Keep these tips in mind when using and shopping for seasonal produce:

- Freeze fresh produce to add to smoothies, soups and breads.
- Fresh foods are often less expensive during their harvest season. You may even save a bit more by buying in bulk.
- Gardening is a great way to get fresh seasonal produce from your own backyard while getting a little exercise too.
- Shop your farmers’ market. The farmers can share a wealth of information about the foods and might even give you ideas on how to prepare them.
- Frozen and canned fruits and vegetables are also healthy choices. Compare food labels and choose products with the lowest amounts of sodium and added sugars.

The American Heart Association recommends

4-5 servings per day of fruits and vegetables.

For more tips on healthy eating, cooking and recipes:

HEART.ORG/SIMPLECOOKING

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COOKING BASICS

Lesson Plan for Module 5, Healthy Habits Curriculum
Prepared by Diana Ricketts

OVERVIEW & PURPOSE

The fifth module in the curriculum is designed to improve students’ self efficacy and behavioral capability for preparing healthy food.

TOPICS

1. Preparing simple meals & snacks

OBJECTIVES

1. Students will practice reading and following a recipe
2. Students will demonstrate basic knife skills

ACTIVITY

1. Food Demo: Greek-Style Pita Pockets
2. Students will read a recipe and participate in a food demonstration. They will sample their creation.

MATERIALS NEEDED

1. Food Demo Materials
2. Recipe Card
1. Objectives
   a. Students will practice reading and following a recipe
   b. Students will demonstrate basic knife skills

**** Activity **** Teaching Cooking Basics
   This module is designed to be hands-on. Students will actively participate in the creation of the recipe, and discussion of how each ingredient fits into a healthy diet is encouraged.

2. Reading a Recipe
   a. Read the whole recipe before starting to cook
      i. Ensure you have all the ingredients you need - if not, is there something you can use to substitute what you’re missing?
         1. Some people like to measure out all their ingredients and place them on the counter before they start following the recipe directions - like a cooking show. This technique is referred to as \textit{mise en place}. Other people measure their ingredients and add them as they go.
      ii. Common abbreviations
           1. Tablespoon- Tbsp or just “T”
           2. Teaspoon- tsp or just “t”
           3. Pound- lb or #
      iii. Do you understand all the instructions? If there’s a cooking method you’re unfamiliar with, look it up. YouTube is a great resource for quick tutorials

3. Kitchen Safety
   a. Demonstrate proper technique for holding a knife
   b. Cross-contact: explain how foods that are ready to eat should not come in contact with surfaces that have held raw meat

4. Marinade
   a. Marinades are important for giving meat flavor. They can also prevent sticking and can keep your meat tender. When marinating raw meat, leave it in the fridge, not on the counter!
   b. Mincing & measuring- demonstrate crushing and mincing garlic. Let students practice adding the ingredients in the correct quantities.

5. Tzatziki
   a. Prepare Tzatziki sauce. Taste the sauce without the salt before adding. If it needs it, add, otherwise, omit. Discuss how tasting and seasoning as you go along can be a good strategy for reducing sodium. You can always add salt at the table, but you can’t take it away!
6. Vegetables
   a. Demonstrate slicing, dicing, and chopping. Let students practice cuts

7. Cooking Chicken
   a. Minimum internal temperature should reach 165°F. There inside of poultry should never be pink
   b. Letting meat rest before cutting allows for optimal juiciness
   c. Don’t put cooked chicken on the same cutting board you used for raw chicken (if applicable)

8. Assemble Pitas
   a. What would you have added to or omitted from this recipe? What steps could have been simplified if you were short on time?
      i. Using pre-cooked chicken
      ii. Buying pre-made tzatziki
   b. What food groups did we cover? What are we missing?
      i. Fruit→ missing
      ii. Veggies→ plenty :)
      iii. Grain→ whole wheat pita
      iv. Protein→ Chicken (hummus could be a plant-based sub)
      v. Dairy→ tzatziki or feta cheese
Food Demo Materials List: Greek Style Pita with Tzatziki

Supplies:
- Cooler with ice or access to fridge
- Gallon-size Ziplock Bag
- Chopping mats
- Knives
- Measuring Spoons
- Measuring Cups
- Pan & Portable Stove or Electric Skillet
- Bowl
- Spoon
- Box grater
- Strainer
- Plates
- Napkins
- Recipe Cards

Ingredients- For 12 sample size servings (½ pita)
Chicken & Marinade
- ¹/₄ cup olive oil
- ¹/₄ cup lemon juice
- 3 cloves garlic, minced
- ¹/₂ Tbsp dried oregano
- ¹/₂ tsp salt
- Freshly cracked pepper
- 6 boneless, skinless chicken thighs (about 1.8#)

Tzatziki Sauce:
- 1 ¹/₂ cups plain Greek yogurt
- ¹/₂ medium cucumber
- 1 Tbsp minced garlic
- ¹/₄ tsp dill
- ¹/₄ tsp salt

For the Pita:
- 1 pint grape tomatoes
- ¹/₂ cucumber
- ¹/₄ red onion
- 6 whole wheat pitas or tortillas
- 3 ounces Feta cheese (optional)
Greek Style Chicken Pita with Tzatziki Sauce

Recipe Credit: Budgetbytes.com

Ingredients:

Chicken:
- 1/4 cup olive oil
- 1/4 cup lemon juice
- 3 cloves garlic, minced
- 1/2 Tbsp dried oregano
- 1/2 tsp salt
- Freshly cracked pepper
- 6 boneless, skinless chicken thighs (about 1.8#)

Tzatziki Sauce:
- 1 1/2 cups plain Greek yogurt
- 1/2 medium cucumber
- 1 Tbsp minced garlic
- 1/4 tsp dill
- 1/4 tsp salt

For the Pita:
- 1 pint grape tomatoes
- 1/2 cucumber
- 1/4 red onion
- 6 whole wheat pita or tortilla
- 3 ounces Feta cheese (optional)

Instructions:

1. Prepare the garlic chicken marinade first. In a gallon-sized zip top bag combine the olive oil, lemon juice, garlic, oregano, salt, and some freshly cracked pepper. Add the chicken thighs and close the top of the bag. Massage the ingredients to combine. Let the chicken marinate while you prep the tzatziki and vegetables.

2. Prepare the tzatziki.
   1. Peel and remove the seeds from half a cucumber (use a spoon to scrape out the seedy center).
   2. Using a cheese grater, grate the cucumber into the yogurt.
   3. Add the dill, salt and garlic to the yogurt. Stir well.
   4. Refrigerate the yogurt sauce for at least 30 minutes to allow the flavors to blend. Serve cold.

3. Slice the grape tomatoes in half, dice the cucumber, and thinly slice the red onion. Place the red onion in a bowl of ice water and let it soak for 5-10 minutes to take the sharp edge off the flavor.

4. After marinating, cook the chicken thighs in a skillet over medium heat for about 5-7 minutes on each side. Transfer the cooked chicken to a cutting board to rest for 5 minutes before slicing.

5. Assemble pitas by adding chicken, veggies, and then top with a handful of tomatoes, cucumbers, and a dollop of tzatziki.

6. Enjoy!
OVERVIEW & PURPOSE

The sixth module in the curriculum is designed to give students an opportunity to synthesize the information they’ve learned thus far and reflect on their experience.

TOPICS

1. SMART Goals
2. Resources for credible nutrition information
3. MyPlate

OBJECTIVES

1. Students will discuss their SMART goal progress
2. Students will identify on-campus sources of credible nutrition information
3. Student will build a plate that reflects MyPlate guidelines

ACTIVITY

At the end of the session, students will revisit their SMART goals and diet score from module 1. They will reflect on any dietary changes they've noticed or how they've progressed toward their SMART goal. Students will complete a three-minute paper reflection. This module would ideally take place in a dining hall so that after the discussion students can make a plate to demonstrate their knowledge of building balanced meals.

MATERIALS NEEDED

1. 3-minute paper prompts
2. Diet Scoring Tool

VERIFICATION

Three Minute Paper will Include Prompts Regarding:

1. Changes in dietary habits
2. Self-efficacy/Confidence
3. Most significant aspects of the curriculum
1. Objectives
   a. Students will discuss their SMART goal progress
   b. Students will identify on-campus sources of credible nutrition information
   c. Student will build a plate that reflects MyPlate guidelines

*** Activity *** Dining Hall Challenge
If possible, arrange to conduct the final session in a dining hall. Students will be challenged to create MyPlate with using foods they find in the dining hall. Encourage discussion of “good, better, & best” choices and point out stations where these items can be found.

1. SMART Goal Progress
   a. Was making a SMART goal useful? Did anyone notice a change in their eating habits because they were sticking to their goals?
   b. How do you feel about the progress you’ve made toward your SMART goal?
   c. How do you think you could have been more successful?
   d. How do you diet habits score after taking the class?

2. Credible sources of nutrition information
   a. Nutrition counseling through the counseling center! Make an appointment with a dietitian.
   b. Nutrition advice through the student rec center. Meet with a grad student and a registered dietitian to make and monitor nutrition & health goals
   c. Additional resources- handout

3. 3 Minute Paper Reflection
   a. Allow students 3-5 minutes to answer a post-assessment using the 3 minute paper prompt
Additional Resources

1. Counseling & Testing Center

GET NUTRITION SUPPORT
Student Nutrition Services provides nutrition counseling, nutrition education and outreach programming for students at the Atlanta and Perimeter Campuses.

Contact Us
Leslie Knapp, MS, RD, LD
404-413-2171
lknapp2@gsu.edu

Our Locations
Atlanta Campus
75 Piedmont Ave. NE
7th Floor, Suite 731
Atlanta, GA 30303

Clarkston Campus
555 North Indian Creek Dr.
CH Building, Room 1800
Clarkston, GA 30021

Dunwoody Campus
2101 Womack Rd.
NT Building 1500
Dunwoody, GA 30338

2. Student Recreation Center

Nutrition Consultations

3. Online Resources

American Heart Association: www.heart.org
Academy of Nutrition and Dietetics: www.eatright.org
MyPlate: www.choosemyplate.gov
Food Allergy Research & Education: www.foodallergy.org
**Eating Habits Scorecard (Post)**

Instructions: Score your current eating patterns for a typical day based on the point allocations listed below. Give yourself one point for every occasion you eat/drink the following. Include meals and snacks.

<table>
<thead>
<tr>
<th>Category</th>
<th>Instructions</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruits</td>
<td>How many times each day do you eat fruit? Include fresh, frozen, canned, and dried fruit</td>
<td>____/3</td>
</tr>
<tr>
<td>Vegetables</td>
<td>How many times each day do you eat vegetables?</td>
<td>____/3</td>
</tr>
<tr>
<td>Whole Grains</td>
<td>How many whole grains do you choose daily? e.g. Brown rice, whole wheat pasta, quinoa, etc.</td>
<td>____/3</td>
</tr>
<tr>
<td>Low-Fat Dairy</td>
<td>How often do you consume low-fat dairy? e.g. skim or 2% milk, yogurt, cheese, soy milk</td>
<td>____/3</td>
</tr>
<tr>
<td>Protein</td>
<td>How many meals contain a source of protein? e.g. meat, poultry, eggs, nuts, tofu</td>
<td>____/3</td>
</tr>
<tr>
<td>Hydration</td>
<td>How many cups of water do you drink?</td>
<td>____/5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>____/20</td>
</tr>
</tbody>
</table>

How did your score after this course compare with your last score?

How do you feel this course affected your ability to make healthy habits?

How was your experience with your SMART Goal?

Share a reflection on what you learned during these sessions. You may use the back of this page.