

CDC Science Ambassador Workshop

2015 Lesson Plan

Food for Thought: Making Healthy Food and Physical Activity Choices

Developed by

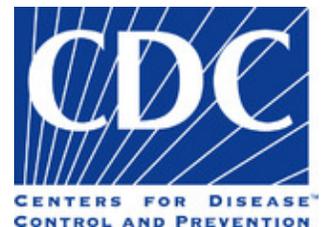
Gwendolyn Barnett, MAT
Southern Indiana Career & Technical Center
Evansville, Indiana

Kathleen Overholt, RN
Elkhart Area Career Center
Elkhart, Indiana

Gwendolyn Coleman, RN
Dresden High School
Dresden, Tennessee

Barbara Alletto Wolcott, RN, NP
Twin Lakes High School
Monticello, Indiana

This lesson plan was developed by teachers attending the Science Ambassador Workshop. The Science Ambassador Workshop is a career workforce training for math and science teachers. The workshop is a Career Paths to Public Health activity in the Division of Scientific Education and Professional Development, Center for Surveillance, Epidemiology, and Laboratory Services, Office of Public Health Scientific Services, Centers for Disease Control and Prevention.



Acknowledgements

This lesson plan was developed by teachers in consultation with subject matter experts from the Office of Scientific Integrity, Office of the Associate Director for Science, Office of the Director, Centers for Disease Control and Prevention

Drue H. Barrett, PhD
CAPT, U.S. Public Health Service
Lead, Public Health Ethics Unit

Leonard Ortmann, PhD
Senior Ethics Consultant
Public Health Ethics Unit

Scientific and editorial review was provided by Ralph Cordell, PhD and Kelly Cordeira, MPH from Career Paths to Public Health, Division of Scientific Education and Professional Development, Center for Surveillance, Epidemiology, and Laboratory Services, Office of Public Health Scientific Services, Centers for Disease Control and Prevention.

Suggested citation

Centers for Disease Control and Prevention (CDC). Science Ambassador Workshop—Food for Thought: Making Healthy Food and Physical Activity Choices. Atlanta, GA: U.S. Department of Health and Human Services, CDC; 2015. Available at: <http://www.cdc.gov/scienceambassador/lesson-plans/index.html>

Contact Information

Please send questions and comments to scienceambassador@cdc.gov.

Disclaimers

This lesson plan is in the public domain and may be used without restriction.
Citation as to source, however, is appreciated.

Links to nonfederal organizations are provided solely as a service to our users. These links do not constitute an endorsement of these organizations nor their programs by the Centers for Disease Control and Prevention (CDC) or the federal government, and none should be inferred. CDC is not responsible for the content contained at these sites. URL addresses listed were current as of the date of publication.

Use of trade names and commercial sources is for identification only and does not imply endorsement by the Division of Scientific Education and Professional Development, Center for Surveillance, Epidemiology, and Laboratory Services, CDC, the Public Health Service, or the U.S. Department of Health and Human Services.

The findings and conclusions in this Science Ambassador Workshop lesson plan are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention (CDC).

Contents

Summary	1
Learning Outcomes	2
Duration	2
Procedures	3
Day 1: Food for thought, Duration 45 minutes	3
Preparation	3
Materials	3
Online Resources	3
Activity	3
Day 2: Making healthy choices ethics bowl, Duration 45 minutes	4
Preparation	4
Materials	4
Activity	4
Conclusions	5
Assessments	5
Educational Standards	6
Appendices: Supplementary Documents	8
Worksheet 1: Food for thought.....	9
Worksheet 1: Food for thought, Answer Key.....	12
Worksheet 2: Making healthy choices ethics bowl.....	15

Food for Thought

Making Healthy Food and Physical Activity Choices



Source: Centers for Disease Control and Prevention. Available at: <http://www.cdc.gov/obesity>.

Summary

Making healthy choices about food and physical activity are not always just a personal choice. Society often plays a role. For example, people generally get the majority of their food from either food retail venues, where they buy foods and beverages to prepare and eat at home, or from food service venues, where they eat away from home. Grocery stores, corner stores, and farmers markets are examples of food retail venues. Restaurants (including quick serve), child care facilities, schools, and hospital and worksite cafeterias are examples of food service venues. Having affordable healthy food available in food retail and food service settings allows people to make healthier food choices. When healthy foods are unavailable, people might settle for foods that are higher in calories and lower in nutritional value. Source: <http://www.cdc.gov/obesity/strategies/healthy-food-env.html>.

The walkability and safety of streets, recreational areas, and infrastructures (e.g., sidewalks, paths, and trails) can affect physical activity. Programs like Safe Routes to Schools improve the safety of children who walk and bike to school. These programs have reported reductions in traffic-related injuries. Communities designed to encourage walking increase the number of people out and about, thus increasing the number of "eyes on the street" and deterring illegal activity. Source: <http://www.cdc.gov/physicalactivity/community-strategies/index.htm>.

Easy access to healthy food and physical activity options still requires a person to make healthier choices. Even if societal barriers to healthy food choices (e.g., access, affordability, and availability) and physical activity (e.g., safe places) are reduced, persons still have personal barriers (e.g., work or school schedule, food preparation, and food preference or taste) to overcome. In this lesson, students will explore these concerns from the individual perspective and from a societal perspective. Then, using a formal debate format, students will create and defend a viewpoint regarding the influence of society on individual choices that reflects scientific knowledge and student-generated evidence.

This lesson plan was developed for students in grades 9–12. Students having background information in basic health sciences and nutrition will be helpful.

Learning Outcomes

After completing this lesson, students should be able to

- describe how individual choices about healthy eating and physical activity can be influenced by societal factors such as access, affordability, and availability of healthy foods and access to safe places to be active;
- examine scientific literature to provide an evidence-based description of the societal influence regarding the obesity epidemic; and
- create and defend a viewpoint regarding the influence of society on individual choices that reflects scientific knowledge and student-generated evidence.

Duration

This lesson can be conducted as one 90-minute lesson or divided into two 45-minute lessons.

Procedures

Day 1: Food for Thought (45 minutes)

Preparation

Before Day 1,

- Make copies of Worksheet 1: Food for Thought (Appendix 1) and Worksheet 2: Making Healthy Choices Ethics Bowl (Appendix 2), one copy per student.
- Ask students to review the resources on Worksheet 1 before class.

Materials

- Worksheet 1: Food for Thought (Appendix 1)
Description: In teams of four, students will use 10 resources to answer questions related to obesity, nutrition, and physical activity in the United States.
- Worksheet 2: Making Healthy Choices Ethics Bowl (Appendix 2)
Description: In teams of four, students will debate the individual and societal influences of making health choices about eating healthy and being physically active.
- Computer and Internet access.

Online Resources

- Video: The Obesity Epidemic (run time: 7:13 minutes)
URL: <http://www.cdc.gov/cdctv/diseaseandconditions/lifestyle/obesity-epidemic.html>
Description: This video explains the multiple factors that have contributed to the obesity epidemic, and showcases certain community initiatives taking place to prevent and reduce obesity. Obesity is a national epidemic and a major contributor to some of the leading causes of death in the United States, including heart disease, stroke, diabetes and certain types of cancer. Changing our communities into places that support healthy eating and active living may help reduce obesity.

Activity

1. Show Video: The Obesity Epidemic.
2. Write *societal* and *individual* on the board. Ask students to propose factors that contribute to the obesity epidemic. As a class, decide whether each is a societal or individual factor. Then, next to each factor, ask the students to come up with intervention strategies to increase healthy eating or physical activity. As a class, establish a consensus concerning one or two solutions that might work in their community. Discuss societal and individual support necessary to make this solution effective.
3. Divide students into teams of four. Hand out Worksheet 1: Food for Thought (Appendix 1). If students did not review the resources before class, assign students to review the resources online. Then, instruct students to answer the questions to the best of their ability. Remind them to provide sources for their answers and to use more than one source to answer each question.
4. As a class, review the answers. Note: the guide provides sample answers.
5. Hand out Worksheet 2: Making Healthy Choices Ethics Bowl (Appendix 2). Explain to students that they will participate in a debate during the next class. Decide which teams will participate in debate number 1 and in debate number 2. Explain that students will need to put together evidence for both the affirmative and the negative for their debate before the next class.

Day 2: Making Healthy Choices Ethics Bowl, 45 minutes

Preparation

Before Day 2,

- Recruit at least five judges for the ethics bowl. You might consider contacting community partners, advisory board members, or school administrators.
- Arrange the classroom to facilitate discussion. Have two tables with chairs in the front of the room, one assigned to the affirmative and one to the negative. Position a speaker's podium between the two tables facing the judges.
- Review scoring sheets and rubrics. Modify if necessary. Print copies of the scoring sheet and rubric, one copy per judge.

Materials

- Worksheet 2: Making Healthy Choices Ethics Bowl (Appendix 2)
Description: In teams of four, students will debate the individual and societal influences on making healthy choices about eating healthy and being physically active.

Online Resources

- Scoring Sheet and Rubric
URL: http://ethicsbowl.org/uploads/3/3/1/4/3314659/2013-2014_nhseb_judges_score_sheet.pdf.
URL: http://ethicsbowl.org/uploads/3/3/1/4/3314659/2013-2014_nhseb_judges_scoring_rubric.pdf.
Description: Judges will be responsible for scoring each debate on the basis of the rubrics provided by HOSA future health professionals (previously called Health Occupations Students of America). Before the debate, modify scoring sheets and rubrics as needed.

Activity

1. Welcome and introduce the judges for the ethics debate.
2. For debate number 1, teams will draw for the affirmative or the negative position. Provide students with two minutes to prepare with their team. Remind students that they will be permitted to bring prepared materials, including notes and printed pages.
3. Begin debate number 1 by using the debate format provided in Worksheet 2. Allow the judges to ask questions of each team at conclusion of presentation. Have each judge submit their scoring sheet for each team. Instruct students to complete peer evaluations.
5. Repeat Steps 1–3 for debate number 2.

Conclusions

The obesity epidemic is influenced by both individual and societal factors. Through reading and analyzing scientific literature, students are asked to consider the complexities of solving the epidemic. At the end of the lesson, students will be able to actively engage in conversations about a priority public health concern in the 21st century.

Assessment

- Worksheet 1: Food for Thought (Appendix 1)

Learning Outcomes Assessed

- describe how individual choices about healthy eating and physical activity can be influenced by societal factors such as access, affordability, and availability of healthy foods and access to safe places to be active; and
- examine scientific literature to provide an evidence-based explanation regarding societal influences concerning the obesity epidemic.

Description: In teams of four, students will use 10 resources to answer questions related to obesity, nutrition, and physical activity in the United States.

- Worksheet 2: Making Healthy Choices Ethics Bowl (Appendix 2)

Learning Outcomes Assessed

- create and defend a viewpoint about societal influences regarding individual choices that reflects scientific knowledge and student-generated evidence.

Description: In teams of four, students will debate the individual and societal influences of making healthy choices about eating healthy and being physically active.

Educational Standards

In this lesson, the following CDC Epidemiology and Public Health Science (EPHS) Core Competencies for High School Students¹, Next Generation Science Standards* (NGSS) Science & Engineering Practices², and NGSS Cross-cutting Concepts³ are addressed:

HS-EPHS 1-1: Describe how epidemiologic thinking is used to provide an evidence-based explanation about the causes and correlations of health and disease.

NGSS Key Science & Engineering Practice²

Constructing Explanations and Designing Solutions

Apply scientific ideas, principles, and/or evidence to provide an explanation of phenomena and solve design problems, taking into account possible unanticipated effects.

NGSS Key Crosscutting Concept³

Cause and Effect

Empirical evidence is required to differentiate between cause and correlation and make claims about specific causes and effects.

HS-EPHS 1-2: Discuss how epidemiologic thinking and a public health approach is used to transform a narrative into an evidence-based explanation.

NGSS Key Science & Engineering Practice²

Obtaining, Evaluating and Communicating Information

Critically read scientific literature adapted for classroom use to determine the central ideas or conclusions and/or to obtain scientific and/or technical information to summarize complex evidence, concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.

NGSS Key Crosscutting Concept³

Cause and Effect

Empirical evidence is required to differentiate between cause and correlation and make claims about specific causes and effects.

HS-EPHS 4-1: Describe a model illustrating how scientific, social, economic, environmental, cultural, and political systems influence intervention performance patterns.

NGSS Key Science & Engineering Practice²

Developing and Using Models

Develop, revise, and/or use a model based on evidence to illustrate and/or predict the relationships between systems or between components of a system.

NGSS Key Crosscutting Concept³

Patterns

Patterns of performance of designed systems can be analyzed and interpreted to reengineer and improve the system.

*Next Generation Science Standards is a registered trademark of Achieve. Neither Achieve nor the lead states and partners that developed the Next Generation Science Standards was involved in the production of, and does not endorse, this product.

- ¹Centers for Disease Control and Prevention (CDC). Science Ambassador Workshop—Epidemiology and Public Health Science: Core Competencies for high school students. Atlanta, GA: US Department of Health and Human Services, CDC; 2015. Not currently available for public use.
- ²NGSS Lead States. Next Generation Science Standards: For States, By States (Appendix F—Science and Engineering Practices). Achieve, Inc. on behalf of the twenty-six states and partners that collaborated on the NGSS. 2013. Available at: <http://www.nextgenscience.org/sites/ngss/files/Appendix%20F%20%20Science%20and%20Engineering%20Practices%20in%20the%20NGSS%20-%20FINAL%20060513.pdf>
- ³NGSS Lead States. Next Generation Science Standards: For States, By States (Appendix G—Crosscutting Concepts). Achieve, Inc. on behalf of the twenty-six states and partners that collaborated on the NGSS. 2013. Available at: <http://www.nextgenscience.org/sites/ngss/files/Appendix%20G%20-%20Crosscutting%20Concepts%20FINAL%20edited%204.10.13.pdf>

Appendices: Supplementary Documents

Worksheet 1

Food for Thought

Name: _____

Date: _____

Directions: Read the “Obesity, Physical Activity, and Nutrition Overview” resources below. With your team, answer the questions on the following page to the best of your ability. If you need additional resources, review the “Ethical aspects of obesity prevention” resources. Remember to provide sources for your answers. You might want to use more than one source to answer each question.

Resources

Obesity, Physical Activity, and Nutrition Overview

- Childhood Obesity. CDC. CDC. <http://www.cdc.gov/obesity/index.html>. Published June 19, 2015. Accessed March 2, 2016.
- The Obesity Epidemic (You Tube). (2011). Centers for Disease Control, <https://www.youtube.com/watch?v=vCORDI4bqDE>.
- Physical Activity. CDC. CDC. <http://www.cdc.gov/physicalactivity/index.html>. Published September 3, 2015. Accessed March 2, 2016.
- Nutrition. CDC. CDC. <http://www.cdc.gov/nutrition/index.html>. Published October 15, 2015. Accessed March 2, 2016.

Ethical aspects of obesity prevention

- Azetsop J and Joy TR. Access to nutritious food, socioeconomic individualism and public health ethics in the USA: a common good approach. *Philosophy, ethics and Humanities in Medicine*, 2013;8(16): 1-13. <http://www.peh-med.com/content/8/1/16>. Accessed March 2, 2016.
- Cummins S and Macintyre S. Food environments and obesity-neighbourhood or nation? *International Journal of Epidemiology*, 2006(35), 100–104. Available at <http://ije.oxfordjournals.org/content/35/1/100.long>. Accessed March 2, 2016.
- Ten Have M. Ethical aspects of obesity prevention. *Best Practice & Research Clinical Gastroenterology*, 2014(28): 303–314. <http://dx.doi.org/10.1016/j.bpg.2014.03.004>. Accessed March 2, 2016.
- Perryman ML. Ethical family interventions for childhood obesity. *Prev Chronic Dis* 2011;8(5):A99. http://www.cdc.gov/pcd/issues/2011/sep/11_0038.htm. Accessed March 2, 2016
- Purcell M. Raising healthy children: Moral and political responsibility for childhood obesity. *Journal of Public Health Policy*, 2010(31): 433–446. <http://www.palgrave-journals.com/jphp/journal/v31/n4/full/jphp201028a.html>. Accessed March 2, 2016
- Ver Ploeg M., Breneman, V., Hopkins, D., Kaufman, P., Lin, B., et al. Access to Affordable and Nutritious Food—Measuring and Understanding Food Deserts and Their Consequences: Report to Congress. *Economic Research Service*, 2009 (AP-036): 1–160. <http://ers.usda.gov/publications/ap-administrative-publication/ap-036.aspx>. Accessed March 2, 2016.

Questions

1. Describe personal consequences of obesity.
2. What are certain strategies that can contribute to healthy food environments?
3. What are societal influences that promote increased consumption of less healthy food and physical inactivity?

Worksheet 1, Answer Key

Food for Thought Answer Key

Name: _____

Date: _____

Directions: Read the “Obesity, Physical Activity, and Nutrition Overview” resources below. With your team, answer the questions on the following page to the best of your ability. If you need additional resources, review the “Ethical aspects of obesity prevention” resources. Remember to provide sources for your answers. You might want to use more than one source to answer each question.

Resources

Obesity, Physical Activity, and Nutrition Overview

- Childhood Obesity. CDC. CDC. <http://www.cdc.gov/obesity/index.html>. Published June 19, 2015. Accessed March 2, 2016.
- The Obesity Epidemic (You Tube). (2011). Centers for Disease Control, <https://www.youtube.com/watch?v=vCORDI4bqDE>.
- Physical Activity. CDC. CDC. <http://www.cdc.gov/physicalactivity/index.html>. Published September 3, 2015. Accessed March 2, 2016.
- Nutrition. CDC. CDC. <http://www.cdc.gov/nutrition/index.html>. Published October 15, 2015. Accessed March 2, 2016.

Ethical aspects of obesity prevention

- Azetsop J and Joy TR. Access to nutritious food, socioeconomic individualism and public health ethics in the USA: a common good approach. *Philosophy, ethics and Humanities in Medicine*, 2013;8(16): 1-13. <http://www.peh-med.com/content/8/1/16>. Accessed March 2, 2016.
- Cummins S and Macintyre S. Food environments and obesity-neighbourhood or nation? *International Journal of Epidemiology*, 2006(35), 100–104. Available at <http://ije.oxfordjournals.org/content/35/1/100.long>. Accessed March 2, 2016.
- Ten Have M. Ethical aspects of obesity prevention. *Best Practice & Research Clinical Gastroenterology*, 2014(28): 303–314. <http://dx.doi.org/10.1016/j.bpg.2014.03.004>. Accessed March 2, 2016.
- Perryman ML. Ethical family interventions for childhood obesity. *Prev Chronic Dis* 2011;8(5):A99. http://www.cdc.gov/pcd/issues/2011/sep/11_0038.htm. Accessed March 2, 2016
- Purcell M. Raising healthy children: Moral and political responsibility for childhood obesity. *Journal of Public Health Policy*, 2010(31): 433–446. <http://www.palgrave-journals.com/jphp/journal/v31/n4/full/jphp201028a.html>. Accessed March 2, 2016
- Ver Ploeg M., Breneman, V., Hopkins, D., Kaufman, P., Lin, B., et al. Access to Affordable and Nutritious Food—Measuring and Understanding Food Deserts and Their Consequences: Report to Congress. *Economic Research Service*, 2009 (AP-036): 1–160. <http://ers.usda.gov/publications/ap-administrative-publication/ap-036.aspx>. Assessed March 2, 2016.

Questions

1. Describe personal consequences of obesity.

Answer: Obesity during childhood can have a harmful effect on the body in different ways. Children who are obese are more likely to become obese adults. Adult obesity is associated with multiple serious health conditions, including heart disease, diabetes, metabolic syndrome, and cancer. If children are obese, obesity and disease risk factors in adulthood are likely to be more severe.

Children who are obese have a greater risk of

- high blood pressure and high cholesterol, which are risk factors for cardiovascular disease (CVD);
- impaired glucose tolerance, insulin resistance, and type 2 diabetes;
- breathing problems (e.g., sleep apnea and asthma);
- joint problems and musculoskeletal discomfort;
- fatty liver disease, gallstones, and gastroesophageal reflux (i.e., heartburn);
- psychological stress (e.g., depression, behavioral problems, and difficulty in school);
- low self-esteem and low self-reported quality of life; and
- impaired social, physical, and emotional functioning.

Source: <http://www.cdc.gov/obesity/childhood/causes.html>

2. What are certain strategies that can contribute to healthy food environments?

Answer: Many different strategies are available that can contribute to healthy food environments.

These include providing incentives for supermarkets or farmers markets to establish their businesses in underserved areas, supporting improvements of the quality, variety, and amount of healthier foods and beverages in existing stores, having nutrition information and caloric content on restaurant and fast food menus, and applying nutrition standards in child care facilities, schools, hospitals, and worksites. **Source:** <http://www.cdc.gov/obesity/strategies/healthy-food-env.html>.

3. What are societal influences that promote increased consumption of less healthy food and physical inactivity?

Answer: American society has become characterized by environments that promote increased consumption of less healthy food and less physical inactivity. This creates difficulties for children to make healthy food choices and get enough physical activity when they are exposed to environments in their home, child care center, school, or community that are influenced by

- advertising of less healthy foods;
- lack of safe and appealing places to play or be active;
- limited access to healthy affordable foods (i.e., food deserts);
- greater availability of high-energy-dense foods and sugar sweetened beverages; and
- increasing portion sizes.

Source: <http://www.cdc.gov/obesity/childhood/causes.html>

4. How does food labeling place the responsibility of making healthy food choices on the person?
Answer: Nutrition labeling can be defined as the provision of nutritional information about standard menu items. This can include disclosing calories on menu boards and making available, upon request, written information about total calories and calories from fat, including amounts of fat and saturated fat, cholesterol, sodium, total and complex carbohydrates, sugars, dietary fiber, and protein. The 2010 Patient Protection and Affordable Care Act established national labeling requirements for specified classes of restaurants and vending machines. Public health studies are beginning to report that menu labeling can influence consumers to choose menu items with a lower number of calories. Because food labeling allows for consumers to make informed choices about food, the responsibility becomes the person's.
Source: http://www.cdc.gov/phlp/winnable/menu_labeling.html.
5. How does access to and affordability of healthy food options at food retail venues (e.g., grocery stores and supermarkets) influence healthy food choices?
Answer: People generally get the majority of their food from either food retail venues, where they buy foods to prepare and eat from home, or from food service venues, where they eat away from home. Grocery stores, corner stores, and farmers markets are examples of food retail venues. Restaurants (including quick serve), child care facilities, schools, hospital and worksite cafeterias are examples of food service venues. Having affordable healthy food available in food retail and food service settings allows people to make healthier food choices. When healthy foods are unavailable, people might settle for foods that are higher in calories and lower in nutritional value.
Source: <http://www.cdc.gov/obesity/strategies/healthy-food-env.html>
6. How does access to safe places to play or be active affect physical activity?
Answer: Streets, recreational areas, and infrastructure (e.g., sidewalks, paths, and trails) that are designed to be walkable and bike-able improve safety for everyone. For example, programs like Safe Routes to Schools improve the safety of children who walk and bike to school. These programs have shown reductions in traffic-related injuries. Communities designed to encourage walking increase the number of people out and about, thus increasing the number of eyes on the street and deterring illegal activity.
Source: <http://www.cdc.gov/physicalactivity/community-strategies/index.htm>
7. Despite efforts to improve access to health food choices and safe places to play or be active, the majority of people living in the United States do not make healthy eating choices or engage in regular physical activity. Explain.
Answer: Education and access to healthy options still requires the person to make the choice. Although decreasing societal barriers to healthy food choices (e.g., access, affordability, and availability) and physical activity (e.g., safe places) may help make healthier choices easier, persons still have personal barriers (e.g., work or school schedule, food preparation, food preference or taste) that cannot be addressed systematically.

Worksheet 2

Making Healthy Choices Ethics Bowl

Name: _____

Date: _____

Directions: In teams of 4 students, you will be assigned one of the two debate options. Learn as much as you can about the topic before the ethics bowl. On the day of the bowl, draw for the affirmative or the negative position. You will have two minutes to prepare with your team. Please note that teams will be permitted to bring prepared materials, including notes and printed pages. Please review both debate prompts and the debate format prior to class.

Debate 1: A public health team identifies that the only food market in a small, lower-income town provides 95% unhealthy food options and 5% healthy food options. When approached about the availability of healthy food choices, the owner simply stated that when he offered fresh fruits and vegetables, they often went unsold. Approximately 46% of persons living in this town are considered overweight or obese. Approximately 90% of persons living in this town only shop at this market for food. In the first debate, you will be assigned to Team 1 or Team 2.

- Team 1 (Affirmative): You will defend the owner's decision. The key argument will be that healthy food options are an individual choice.
- Team 2 (Negative): You will oppose the owner's decision. Your key argument will be that the healthy food options are a societal choice.

Debate 2: In the same town, the public health team identifies that the majority of streets in the downtown area appear to be unsafe and not walkable. They also notice that few persons are taking advantage of the local parks and trails, even during peak hours and during good weather. The team conducted a survey; results were inconclusive. Certain persons responded that they did not have a safe place to be active, although others did not appear to be interested in being active. You bring these results to local government officials. They contend that places are available to be active and that residents have not used them. In this debate, you will be assigned to Team 3 or Team 4.

- Team 3 (Affirmative): You will defend the local government. Your key argument will be that local trails and parks do not bring in enough activity to spend additional government funds on infrastructure to encourage increased physical activity. Thus, physical activity is an individual choice.
- Team 4 (Negative): You will oppose the local government. Your key argument will be that although space is available, it is unsafe, which influences interest in being active. Thus, physical activity is a societal choice.

Debate Format

The ethics debate is based on HOSA future health professionals' biomedical debate. For additional information, please refer to the Teamwork Event: Biomedical Debate guidelines on the HOSA website <http://www.hosa.org/guidelines>.

For the debate, two tables with chairs will be placed in the front of the room, one assigned to the affirmative and one to the negative. A speaker's podium will be positioned between the two tables and will face the judges. The facilitator of the debate will referee and ensure that rules and regulations of the debate are adhered to. The timekeeper will keep time for each part of the debate and will call time at the end of the maximum amount of time allowed. Speakers must immediately stop speaking when time is called.

1. Affirmative Constructive Speech (4 minutes). The speaker from the affirmative will present their arguments. One speaker is permitted and shall stand at the podium.
2. Negative Cross-Examination (2 minutes). The speaker(s) from the negative questions the affirmative speaker on the points made during the affirmative constructive speech. Multiple speakers are permitted. The team member(s) asking the questions will stand at their table and the speaker whose constructive speech is being cross-examined will remain at the podium. Interruption of the speaker by the questioner during the cross-examination is allowed.
3. Negative Constructive Speech (4 minutes). The speaker for the negative presents their arguments. One speaker is permitted and shall stand at the podium.
4. Affirmative Cross-Examination (2 minutes). The speaker(s) for the affirmative questions the negative speaker on the points made during the negative constructive speech. Multiple speakers are permitted. The team member(s) asking the questions will stand at their table and the speaker whose constructive speech is being cross-examined will remain at the podium. Interruption of the speaker by the questioner during the cross-examination is allowed.
5. Affirmative Rebuttal (3 minutes). The affirmative speaker rebuts the points made by the negative speaker. One speaker is permitted and shall stand at the podium.
6. Negative Rebuttal (4 minutes). The negative speaker rebuts the points made by the affirmative speaker. One speaker is permitted and shall stand at the podium.
7. Final Affirmative Rebuttal (1 minute). The affirmative speaker again rebuts. One speaker is permitted.

Note: The full time noted above will be provided. If a team chooses not to use any or all of the time allowed, the opposing team shall still have the full amount of time that would have passed. However, the team whose turn it is can choose to begin their segment of the debate when ready, and the timekeeper will give them the amount of time listed above.

Scoring

Judges will be responsible for scoring each debate on the basis of the rubrics provided by HOSA future health professionals, available at: http://ethicsbowl.org/uploads/3/3/1/4/3314659/2013-2014_nhseb_judges_score_sheet.pdf and http://ethicsbowl.org/uploads/3/3/1/4/3314659/2013-2014_nhseb_judges_scoring_rubric.pdf.

Peer Review

Every student will evaluate their team members by completing a peer review for each member. This should be confidential and only initials of the team members should be present on the form. Each peer review sheet per student team member has a possible total score of 12 points. Remind students that this should be a true reflection of the team member being reviewed. This might be the first time students have been exposed to this type of assessment by others; students might have difficulty reviewing those who they have a closer relationship with, compared with other team members who they do not know personally.

Peer Review Rubric

	3 points	2 points	1 point	Total
Cooperation	Works well, is considerate and willing to compromise with other team members ideas.	Usually works well with team members, is considerate, but lacks certain willingness to compromise on ideas.	Occasionally or rarely helps team members. Needs improvement in compromise and consideration.	
Communication	Helps team members by communicating ideas effectively. Is able to articulate words well in formal debate format.	Usually helps team members by communicating well with ideas, but is lacking in formal debate format.	Listens but does not consistently help team members in the communication of ideas. Did not actively participate in the debate.	
Collaboration	Routinely comes to the team members ready with the required material to work.	Usually comes to team members ready to work but lacking material.	Has late or missing materials and assigned work is incomplete.	
Content	Work is the highest quality and contains strong content knowledge.	Work is of good quality and contains a marginal content knowledge.	Work needs improvement and a greater effort needs to be applied.	
			Total Points	