



CHILDHOOD OBESITY

A TOPSS Problem-Focused Unit

PREPARED BY

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TOPSS

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Dear TOPSS Member,

The APA Committee of Teachers of Psychology in Secondary Schools (TOPSS) promotes excellence in the teaching of psychological science at the high school level and is constantly seeking new ways to meet the curricular needs of high school psychology teachers. To that end, we are delighted to offer a new type of unit plan, the problem-focused unit, for teaching the science of psychology.

A “problem-focused” unit is one that takes a common problem facing society and uses the problem as a way to teach psychological content. It provides teachers with an alternative way of teaching the class and could be used to teach a semester or an entire year. It could also be used by teachers after the spring Advanced Placement or International Baccalaureate exams. Additionally, this type of unit provides an easy way to integrate research into the psychology course. The topic could be introduced during the research methods unit, and students could do the suggested research throughout the semester or year, culminating in a research project, proposal, and/or presentation. This first unit investigates the problem of childhood obesity, particularly childhood obesity in the United States. We hope *Childhood Obesity* will be only the first of several such problem-focused units.

We think this problem-focused approach will be useful for discovering how the different domains of psychological science can be understood and applied to help solve many of our modern social problems. As mentioned in the preamble to the *National Standards for High School Psychology Curricula*, most of society’s challenging problems—including crime, poverty, prejudice, violence, and environmental sustainability—are related to human attitudes, values, and behavior.

We have established this template for designing a problem-focused unit:

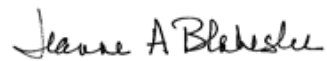
- Establishing that there is a problem,
- Exploring the problem,
- Looking for possible causes,
- Deciding what content in psychological science is related to the problem, and
- Proposing solutions to the problem.

We expect each unit will be modified and updated by teachers as it is used. The current unit is composed of both individual and group activities and ends with students considering ideas for individual, societal, and structural ways to solve the problem of childhood obesity.

We hope you will use this unit plan, modify it to suit your needs, and think of other societal problems that might fit into the template we have proposed. Certainly we know psychological science can contribute toward solutions to many of the problems we face at this time in our history.

If you have any ideas about problem-focused units or would like to contribute to this effort, please do not hesitate to contact APA at topss@apa.org.

Sincerely,







Jeanne A. Blakeslee, MA

TOPSS Member and
former TOPSS Committee Chair



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INTRODUCTION



Why Focus on Obesity?

Introduction was prepared by Caitlin Crowley,
APA Education Directorate

The Centers for Disease Control and Prevention (CDC) states that “‘overweight’ and ‘obesity’ are both labels for ranges of weight that are greater than what is generally considered healthy for a given height. The terms also identify ranges of weight that have been shown to increase the likelihood of certain diseases and other health problems” (Centers for Disease Control and Prevention, 2012, <http://www.cdc.gov/obesity/adult/defining.html>). Obesity has become an epidemic and a public health crisis. Many of the causes of obesity can be related back to environment and human behavior. As the CDC reports, providing safe and appealing environments for people to be active outdoors has become less of a priority. In addition, people are finding it increasingly difficult to gain access to affordable healthy foods. Many people in low-income and rural communities lack supermarkets offering fresh, healthy foods at an affordable price or in reasonable proximity to their homes (Centers for Disease Control and Prevention, 2010). In addition, food companies continue to manufacture foods with addictive qualities, featuring unhealthy combinations of sugar, fat, and salt (Moss, 2013). Focusing on these factors will help inform solutions for this growing problem. As health care costs rise, and numbers of obese children and adults increase, the obesity epidemic must be addressed to protect the health of future generations and our nation.

American Psychological Association (APA) Past President Suzanne Bennett Johnson, PhD, reports rates of obesity have drastically risen since the 1960s. Adult rates of obesity increased from 13% (all U.S. adults) to 32% for males and 36% for females. Childhood obesity rates have also risen—from 5-7% to 17% since the 1960s (Johnson, 2012). Johnson also suggests obesity is currently the second leading cause of death in the United States and is likely to become the first. Johnson says, “not only do obese individuals die earlier, but their quality of life is severely compromised; they are far more likely to suffer from diabetes and its complications—kidney failure, blindness, leg amputations—as well as stroke, breast and colorectal cancer, osteoarthritis, and depression” (Johnson, 2012, <http://www.apa.org/pi/families/resources/newsletter/2012/07/childhood-obesity.aspx>).



Johnson also points out the strong relationship between childhood obesity and obesity later in life, noting that obesity-related health issues in childhood often lead to serious illness and death in adulthood. She stresses obesity is almost entirely the product of an environment that encourages overeating and a lack of physical activity and cannot be blamed solely on biological or genetic factors (Johnson, 2012).

Given the health implications of childhood obesity, the APA Strategic Plan (which emphasizes psychology's role in advancing health and promoting psychology as a science), and the fact that many causes of childhood obesity are related to human behavior, the APA Teachers of Psychology in Secondary Schools (TOPSS) is using childhood obesity as the topic of its first problem-based unit. This unit provides an opportunity for students to use psychological science to create solutions for addressing the epidemic of childhood obesity. Psychology is a health science, and this unit addresses the important role psychological science can play in promoting good health.

References

- Centers for Disease Control and Prevention. (2010). *CDC vital signs: Adult obesity*. Retrieved from <http://www.cdc.gov/vitalsigns/pdf/2010-08-vitalsigns.pdf>
- Centers for Disease Control and Prevention. (2012). *Defining overweight and obesity*. Retrieved from <http://www.cdc.gov/obesity/adult/defining.html>
- Johnson, S. B. (2012, July). The nation's childhood obesity epidemic: Health disparities in the making. *CYF News*, 7(2). Retrieved from <http://www.apa.org/pi/families/resources/newsletter/2012/07/childhood-obesity.aspx>
- Moss, M. (2013, February 24). The extraordinary science of addictive junk food. *New York Times Magazine*. Retrieved from <http://www.nytimes.com/2013/02/24/magazine/the-extraordinary-science-of-junk-food.html?ref=magazine>

CONTENT OUTLINE



PART 1

Establishing the Problem

First, the teacher establishes the problem. Essential questions may be offered to the students to introduce the unit: Why is obesity a major problem in our society today? How is childhood obesity affecting our children? One or more of the following activities (depending on time available) would be an effective way to introduce and frame the problem of childhood obesity for the class. Students might be assigned one of these activities to complete individually, or groups could be assigned one of the activities to complete and then then asked to share their findings during a class discussion, either in small groups or as a whole class. Example resources are provided below.

Explore a website

Centers for Disease Control and Prevention. (2013). *Childhood overweight and obesity*. Retrieved from <http://www.cdc.gov/obesity/childhood/index.html>.

View a presentation

Johnson, S. B. (2012, December). *Childhood obesity: A psychologist's view of the way forward*. Geneva, Switzerland: World Health Organization. Retrieved from <http://www.apa.org/about/governance/president/childhood-obesity.pdf>

Watch a video

Obesity Society. (Producer). (n.d.). *The obesity epidemic* [Video]. Retrieved from <http://www.obesity.org/news-center/the-obesity-epidemic.htm>

Read an article

Johnson, S. B. (2012). The nation's childhood obesity epidemic: Health disparities in the making. *CYF News*, 7(2). Retrieved from <http://www.apa.org/pi/families/resources/newsletter/2012/07/childhood-obesity.aspx>

View a documentary

Prevention Institute. (Producer). (n.d.). *We're not buying it* [Video]. Retrieved from <http://www.preventioninstitute.org/focus-areas/supporting-healthy-food-a-activity/supporting-healthy-food-and-activity-environments-advocacy.html>

PART 2

Exploring the Problem

Next, students explore their understanding of the problem. Have each student explain in an analytic essay why childhood obesity is a problem. Students should use the information provided in Part 1 to analyze why childhood obesity is a problem.

Following the essay assignment, students should be assigned to research/presentation groups to explore and then present on the implications of obesity. Groups should be assigned one of the levels below to research and asked to give a brief presentation on their findings. Rubrics for the essay and group research and presentation assignments are provided in the Appendix. Example resources are provided below as a starting point for research.

IMPLICATION LEVELS OF OBESITY FOR:

The individual

- Health, stress, and longevity
- Cognitive development
- Self-esteem and appearance

MyFoodDiary. (2014). [A website allowing people to track their own diet and exercise.] Retrieved from http://www.myfooddiary.com/?source=g_ds_tracker&OVKEY=diet%20and%20exercise%20tracking&gclid=CJX-a4oaHh7YCFY6e4AodGGGoASQ

Functional units such as the family

- Family budget
- Schedules and time allotment
- Food preparation and mealtime

National Public Radio. (2013). *On the run: How families struggle to eat well and exercise* [Podcast series]. Retrieved from <http://www.npr.org/templates/story/story.php?storyId=172693794&live=1>

Institutions

- Schools
- Hospitals and health care facilities

Khadaroo, S. T. (June 27, 2012). Obesity in America: Schools on the front line of the fight. *The Christian Science Monitor*. Retrieved from <http://www.csmonitor.com/USA/Society/2012/0627/Obesity-in-America-Schools-on-the-front-line-of-the-fight>

Society

- Health care costs
- Economic burden of illness

Hellmich, N. (November 17, 2009). Rising obesity will cost U.S. health care \$344 billion a year. *USA Today*. Retrieved from http://usatoday30.usatoday.com/news/health/weightloss/2009-11-17-future-obesity-costs_N.htm

PART 3

Possible Causes

Next, each of the student groups should select one of the below-listed possible causes for obesity, research the possible cause, and prepare a presentation for the class on their findings. Example resources are provided below as a starting point for research.

Governmental policies and structures

- Tax policies
- Laws and regulations

Grynbaum, M. M. (2013, March 11). Judge blocks New York City's limits on big sugary drinks. *The New York Times*. Retrieved from <http://www.nytimes.com/2013/03/12/nyregion/judge-invalidates-bloombergs-soda-ban.html?pagewanted=all>

Grynbaum, M. M. (2012, September 13). Health panel approves restriction on sale of large sugary drinks. *The New York Times*. Retrieved from http://www.nytimes.com/2012/09/14/nyregion/health-board-approves-bloombergs-soda-ban.html?_r=0

Mudd, M. (2013, March 17). How to force ethics on the food industry. *The New York Times*. Retrieved from <http://www.nytimes.com/2013/03/17/opinion/sunday/how-to-force-ethics-on-the-food-industry.html?pagewanted=all>

Corporate policies and practices

Food for thought: Food companies play an ambivalent part in the fight against flab. *The Economist*. Retrieved from <http://www.economist.com/news/special-report/21568064-food-companies-play-ambivalent-part-fight-against-flab-food-thought>

Moss, M. (2013, February 24). The extraordinary science of addictive junk food. *New York Times Magazine*. Retrieved from <http://www.nytimes.com/2013/02/24/magazine/the-extraordinary-science-of-junk-food.html?ref=magazine>

Media

Federal Communications Commission. (n.d.). *Media and childhood obesity*. Retrieved from <http://reboot.fcc.gov/parents/media-and-childhood-obesity>

Yale Rudd Center for Food Policy and Obesity. (2013, March). *Where children and adolescents view food and beverage ads on TV: Exposure by channel and program*. Retrieved from http://www.yaleruddcenter.org/resources/upload/docs/what/reports/Rudd_Report_TV_Ad_Exposure_Channel_Program_2013.pdf

Institutional, societal, and cultural practices

Just, D. R., & Wansink, B. (2009). Smarter lunchrooms: Using behavioral economics to improve meal selection. *Choices: The Magazine of Food, Farm, & Resource Issues*, *D03, D12*, p. 118. <http://www.choicesmagazine.org/magazine/article.php?article=87>

Lifestyle issues and physiological factors

Mayo Clinic. (2013). *Childhood obesity*. Retrieved from <http://www.mayoclinic.com/health/childhood-obesity/DS00698/DSECTION=causes>



PART 4

Related Psychological Content

Based on the class presentations, hold a discussion on what psychological science content is related to the problem of obesity.

Teachers may want to ask “Why is childhood obesity of interest to psychologists? How can psychology as a health science help address the problem of childhood obesity?” Make sure to cover the following subfields of psychological science when discussing related psychological content.

The domains referred to here are the domains listed in the *National Standards for High School Psychology Curricula* (APA, 2011). The unit lesson plans listed are all available through membership in APA TOPSS. The content of the domains and units will help students understand how psychological science can be used to explain the epidemic of childhood obesity. Psychological science can also play a critical role in promoting healthy behavior.

Biopsychology Domain/*Biological Bases of Behavior* unit lesson plan

- Overall geography of the brain
- Structure and function of the hypothalamus
- Pleasure center/addiction loop
- Neuroscience

Development and Learning Domain/*Life Span Development* unit lesson plan

- Early childhood development
- Neuronal development
- Importance of sound nutritional habits
- Self-esteem and identity

Cognitive Domain/*Memory* unit lesson plan

- Expectation and learning sets
- Sight and smell of food
- Variety of foods available

Development and Learning Domain/*Learning* unit lesson plan

- Theories of learning
- Reinforcement and extinction
- Role models and observational learning

Individual Variations Domain/*Motivation* unit lesson plan

- Motivation
- Appetite
- Set/settling point weight
- Attraction to sweet and salty
- Wariness to novel foods
- Unit bias

Sociocultural Context Domain/*Social Psychology* unit lesson plan

- Idealizing thinness in some cultures
- Attribution theory
- Central and peripheral routes to persuasion
- Conformity
- Norms
- Mere exposure effect



PART 5

Solutions

For the final group presentation, students should propose possible solutions to the problem of childhood obesity. For each cause identified by the groups in Part 3, students should investigate a suggestion that might counteract, overcome, or resolve the problem of obesity. They should also develop a proposal or plan of action for this suggestion, being sure to address how psychological science can help change behavior to address the problem of childhood obesity and using information from psychological science to support their proposed solutions.

This final group presentation could be developed to address a particular audience: peers (presentations could be made to the psychology class or health classes in the high school or to students in middle or elementary school classes), parents (presentations could be developed for PTA meetings or Back to School Night), or the school administration or board of education (presentations could be developed to recommend changes that would be helpful for the school population).

Example resources are listed below, and an assignment rubric is listed in the [Appendix](#).

Cornell University Food and Brand Lab [a website]. Retrieved from <http://foodpsychology.cornell.edu/>

Let's Move. America's move to raise a healthier generation of kids [a website for a White House program]. Retrieved from <http://www.lets-move.gov>

Mayo Clinic [a website]. (n.d.). Childhood obesity. In *Diseases and conditions*. Retrieved from <http://www.mayoclinic.com/health/childhood-obesity/DS00698>

Obesity Society [a website]. Retrieved from <http://www.obesity.org>

The Prevention Institute [a website]. Retrieved from www.preventioninstitute.org

U.S. National Library of Medicine National Institutes of Health PubMed.com [a website]. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/>

(Search for childhood obesity and check “Free full text available” on the

left.)

Yale Rudd Center for Food Policy and Obesity [a website]. Retrieved from
<http://www.yaleruddcenter.org/>

REFERENCES/ ONLINE RESOURCES/ WEBSITES



- American Psychological Association. (2011). *National standards for high school psychology curricula*. Washington, DC: Author. Retrieved from <http://www.apa.org/education/k12/national-standards.aspx>
- American Psychological Association. *Psychology topics: Obesity*. Retrieved from <http://www.apa.org/topics/obesity/index.aspx>
- Centers for Disease Control and Prevention. (2013). *A growing problem: What causes childhood obesity?* Retrieved from <http://www.cdc.gov/obesity/childhood/problem.html>
- Centers for Disease Control and Prevention. (2013). *Child overweight and obesity*. Retrieved from <http://www.cdc.gov/obesity/childhood/index.html>
- Cornell University. (2011). *One-page wonders: Fun in-class activities from the Cornell University Food and Brand Lab*. Retrieved from <http://www.foodpsychology.cornell.edu/toolbox/one-page-wonders.html>
- Cornell University Food and Brand Lab [a website]. Retrieved from <http://www.foodpsychology.cornell.edu/index.html>
- Designed to Move [Infographic]. (n.d.). Retrieved from <http://ahealthieramerica.org/wp-content/themes/pha/pdf/2241.pdf>
- Food for Thought: Food companies play an ambivalent part in the fight against flab. (2012, December 15). *The Economist*. Retrieved from <http://www.economist.com/news/special-report/21568064-food-companies-play-ambivalent-part-fight-against-flab-food-thought>
- Grynbaum, M. M. (2013, March 11). Judge blocks New York City's limits on big sugary drinks. *The New York Times*. Retrieved from <http://www.nytimes.com/2013/03/12/nyregion/judge-invalidates-bloombergs-soda-ban.html?pagewanted=all>
- Grynbaum, M. M. (2012, September 13). Health panel approves restriction on sale of large sugary drinks. *The New York Times*. Retrieved from http://www.nytimes.com/2012/09/14/nyregion/health-board-approves-bloombergs-soda-ban.html?_r=0
- Johnson, S. B. (2012, July). The nation's childhood obesity epidemic: Health disparities in the making. *CYF News*, 7(2). Retrieved from <http://www.apa.org/pi/families/resources/newsletter/2012/07/childhood-obesity.aspx>



- Johnson, S. B. (2012, December). *Childhood obesity: A psychologist's view of the way forward*. Geneva, Switzerland: World Health Organization. Retrieved from <http://www.apa.org/about/governance/president/childhood-obesity.pdf>
- Just, D. R., & Wansink, B. (2009). Smarter lunchrooms: Using behavioral economics to improve meal selection. *Choices: The Magazine of Food, Farm, & Resource Issues*, *D03, D12*, p. 118. <http://www.choicesmagazine.org/magazine/article.php?article=87>
- Kaipainen, K., Payne, C. R., & Wansink, B. (2012). The mindless eating challenge: Evaluation of a public web-based healthy eating and weight loss program. *Journal of Medical Internet Research*, *14*(6), e168. Retrieved from <http://foodpsychology.cornell.edu/outreach/mec.html>
- Keim, B. (2012, August). Antibiotics might be fueling obesity epidemic. *Wired*. Retrieved from <http://www.wired.com/wiredscience/2012/08/antibiotics-obesity/>
- Let's Move. America's move to raise a healthier generation of kids [a website for a White House program]. Retrieved from <http://www.letsmove.gov>
- Moss, M. (2013, February 24). The extraordinary science of addictive junk food. *New York Times Magazine*. Retrieved from <http://www.nytimes.com/2013/02/24/magazine/the-extraordinary-science-of-junk-food.html?ref=magazine>
- Mudd, M. (2013, March 17). How to force ethics on the food industry. *The New York Times*. Retrieved from <http://www.nytimes.com/2013/03/17/opinion/sunday/how-to-force-ethics-on-the-food-industry.html?pagewanted=all>
- National Public Radio. (2013). *On the run: How families struggle to eat well and exercise* [Podcast series]. Retrieved from <http://www.npr.org/templates/story/story.php?storyId=172693794&live=1>
- Obesity Society: Research. Education. Action [a website]. Retrieved from <http://www.obesity.org>
- Page, K., & Sherwin, R. (2013, April). The brain: Our food-traffic controller. *The New York Times*. Retrieved from http://www.nytimes.com/2013/04/28/opinion/sunday/the-brain-our-food-traffic-controller.html?emc=eta1&_r=0
- Robert Wood Johnson Foundation. (n.d.). Childhood obesity [website for a program]. Retrieved from <http://www.rwjf.org/en/about-rwjf/program-areas/childhood-obesity/research.html>
- Teachers Institute of Philadelphia. (2008). *Public health issues of childhood obesity* (Vol. 5). Retrieved from http://www.tip.sas.upenn.edu/2008_volume_05.html
- The Prevention Institute [a website]. Retrieved from www.preventioninstitute.org
- The Prevention Institute [a website]. (n.d.). *The facts on junk food marketing and kids*. Retrieved from <http://www.preventioninstitute.org/focus-areas/supporting-healthy-food-a-activity/supporting-healthy-food-and-activity-environments-advocacy/get-involved-were-not-buying-it/735-were-not-buying-it-the-facts-on-junk-food-marketing-and-kids.html>



The Prevention Institute. (Producer). (n.d.). *We're not buying it* [Video]. Retrieved from <http://www.preventioninstitute.org/focus-areas/supporting-healthy-food-a-activity/supporting-healthy-food-and-activity-environments-advocacy.html>

Yale Rudd Center for Food Policy and Obesity. (2013, March). *Where children and adolescents view food and beverage ads on TV: Exposure by channel and program*. Retrieved from http://www.yaleruddcenter.org/resources/upload/docs/what/reports/Rudd_Report_TV_Ad_Exposure_Channel_Program_2013.pdf

APPENDIX



PROBLEM-FOCUSED UNIT FOR PSYCHOLOGICAL SCIENCE

Group Research/Solution Template Assessment for Analytic Essay

RUBRIC (OUT OF 100 POSSIBLE POINTS)

A good essay will:

- Be composed of five or more paragraphs, including an introduction and conclusion (**5 points**)
- Be clear and concise (**10 points**)
- Start with an engaging thesis (**15 points**)
- Begin each paragraph with a strong topic sentence (**25 points**)
- Use three or more pieces of evidence to support each topic sentence (**25 points**)
- Transition smoothly between paragraphs/topic sentences (**5 points**)
- End with a sound conclusion (**15 points**)

COMMENTS:

Group Research/Solution Template Assessment for Classroom Presentation

PRESENTATION RUBRIC (OUT OF 200 POSSIBLE POINTS)

Content (100 points)

A good presentation will:

- Be relevant and informative **(25 points)**
- Be well organized **(10 points)**
- Relate to improving the quality of life **(5 points)**
- Demonstrate proper use of statistics, definitions, etc. **(10 points)**
- Cite research appropriately **(15 points)**
- Be clear **(10 points)**
- Provide adequate background and critique of studies presented **(10 points)**
- Demonstrate good working knowledge of topic **(15 points)**

Performance (100 points)

A good presenter will:

- Use multimedia, visuals, and/or handouts to supplement content **(25 points)**
- Transition well from medium to medium (e.g., PowerPoint slides to video) and from section to section **(25 points)**
- Interact with the audience in creative ways **(20 points)**
- Have strong delivery (e.g., eye contact, good projection, ease) **(10 points)**
- Use a script and be spontaneous **(5 points)**
- Convey professional manner and dress **(15 points)**

COMMENTS:



T **PSS**



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