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FED UP



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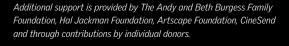


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FED UP

Directed by Stephanie Soechtig 2014 | USA | 60 min

TEACHER'S GUIDE

This guide has been designed to help teachers and students enrich their experience of *Fed Up* by providing support in the form of questions and activities. There are a range of questions that will help teachers frame discussions with their class, activities for before, during and after viewing the film, and some weblinks that provide starting points for further research or discussion.

The Film

This is the movie the food industry doesn't want you to see. Fed Up blows the lid off everything we thought we knew about food and weight loss, revealing a 30-year campaign by the food industry, aided by the US government, to mislead and confuse the American public, resulting in one of the largest health epidemics in history.

Source: http://www.atlasfilms.com

The Filmmaker

Stephanie Soechtig (@StephSoechtig) is an award-winning writer, producer and documentary film director. Her most recent film, *Under the Gun*, received a prolonged standing ovation when it premiered at the 2016 Sundance Film Festival. Lionsgate and Epix acquired the award-winning film, which critics called "masterfully crafted" and "the best film on firearms since the 2002's Oscar-winning doc Bowling for Columbine." Two years earlier, Fed Up premiered at Sundance where it was acquired by Radius/TWC and received a wide theatrical release. A New York Times Critic's Pick, many have likened Fed Up to Al Gore's An Inconvenient Truth for the way we eat. The film spotlighted our addiction to sugar and the ensuing obesity epidemic, and succeeded in bringing the issue into the mainstream. Stephanie's directorial debut documentary, Tapped, focused on the high cost—to both the environment and our health—of the bottled water industry. Hailed by critics as "stunning" and "whip-smart," Tapped swept film festivals across the country while picking up six awards for Best Documentary Feature. Dubbed by Fortune magazine as one of the "Most Innovative Women in Food and Drink," Stephanie has also directed political campaign commercials, short films, and viral videos for nonprofit groups, including the Environmental Working Group and Food and Water Watch.

Source: http://www.atlasfilms.com

Educational package written and compiled by Noelle Morris noellemorris00@gmail.com

VIEWING THE FILM WITH STUDENTS

The following three subsections are intended to provide you with a range of Pre-Viewing,

Viewing and Post-Viewing activities. They are followed by a set of questions based upon the

film's larger thematic domains, some follow-up questions and quotations, sample curricular

outcomes and a page of weblinks for further investigation.

Pre-Viewing Activities

Ask your students for their thoughts on what it means to live a healthy lifestyle. How does healthy living already exist in their lives? Are there things they could do to improve their health?

Have your students bring in the packaging for their favourite snacks and look at the listed ingredients. What ingredients do they recognize? What ingredients are unfamiliar to them? They should also look at the daily values on the nutrition label. Have your students research and make notes on any items that they don't understand, and then discuss their findings as a class. As an extension, have students visit the Government of Canada's website for additional information on how to understand the information on food labels (https://www.canada.ca/ Click on Health, then Food and Nutrition, then Food Labels, then Understanding Food Labels).

Show students the trailer for *Fed Up* (http://fedupmovie.com), as well as the film's tagline: "It's time to get real about food." Have students work in pairs or small groups to try to identify themes or ideas conveyed by the trailer and tagline. As a larger group, discuss with students how effective the trailer is as a media piece, and what the title of the movie could represent.

Individually, in pairs or as a class, have students create a KWL chart for some or all of the following terms: "Big Food," epidemic, Food and Drug Administration (FDA), fructose, Healthy Hunger-Free Kids Act of 2010, hyper-palatable, insulin, McGovern Report, metabolic disease, "Nanny State," obesity, type 2 diabetes, United States Department of Agriculture (USDA) and World Health Organization (WHO). Students can revisit the chart throughout the film or after they have finished viewing the film.

Print several of the questions or quotations from the Extensions Activities section of this guide onto individual

sheets of paper. Have students work in small groups or with partners to discuss if they agree with the ideas.

Viewing Activities

Pause the movie after the opening credits. Ask students to comment on the effectiveness of the introduction and opening credits. Students can also comment on the varied use of multimedia and should consider the questions that Katie Couric asks in her voiceover.

Have students create a timeline of important dates mentioned in the film.

What are some of the "cures" for obesity that are mentioned in the movie? Have students keep track of the "cures" and revisit as a Post-Viewing Activity.

At the end of the film, there is a list of parties who declined to be interviewed. Pause the film when this list appears. Ask students the following questions: who are these parties, and why would they not want to participate in this documentary?

Have students complete the PBS viewing guide on documentaries (http://www.pbs.org/pov/docs/Copies%20 of%20Viewing%20Guide.pdf). Students can revisit their completed documents as a Post-Viewing Activity.

Have students make notes on the different types of footage and techniques that are used throughout the documentary. Students can consider the purpose and effectiveness of archival footage, voiceovers and interviews in their notes.

Have students jot down three to five ideas for discussion, or questions that the film raises in their minds. As an Extension and/or Post-Viewing Activity, students can enter their questions into an online response or polling system and can vote on the questions or issues they would like to explore in further detail. Encourage students to use multiple levels of Bloom's Taxonomy.

Stop the film at various points and have students provide summaries at each point.

Post-Viewing Activities

Show the students their quotations from the Pre-Viewing Activity and see if their opinions were changed, altered or enhanced by the film.

Have students complete an exit note. The exit note should contain one idea that demonstrates what they learned from the film, as well as one question that they still have about the topic.

In the film, Michael Pollan comments, "It's fair to say that the government is subsidizing the obesity epidemic inadvertently through its subsidies of corn, which gets turned into high-fructose corn syrup and all those weird ingredients that you see in processed foods—the maltodextrin, the xanthan gum, all those words you can't pronounce. Basically sugar.... On the one hand, they're subsidizing precisely the foods that are making us sick, and then on the other, are now on the hook to set the standards for school lunch with our kids." Using this as a prompt, have students write a two-paragraph written response.

One of the issues presented in the film is the USDA's conflict between promoting public health and promoting US agricultural products. What was the original purpose of the USDA? What kind of effects does this conflict have on public health? Have students visit Choose My Plate (http://www.choosemyplate.gov/kids/index.html). As they critically explore the interactive website, have your students keep this conflict in their minds. What kind of foods are promoted as being "healthy"? Regroup and discuss.

In the film, Senator Tom Harkin says, "The Federal Trade Commission has less authority to regulate advertising to kids than it does to adults. You would think that it would be the other way around." Have students read the WHO's recommendations on marketing food and non-alcoholic beverages to children (http://www.who.int/en/ Type "Marketing of foods and non-alcoholic beverages to children" into the search function of the website). What are the recommendations in the document? Can your students think of any television food ads that are aimed at children?

For homework, have students watch 30 minutes of television aimed at their age group, for example, a cartoon. Students

should keep track of the commercials that are aired, and the products that are being sold in the commercials. What types of food and drinks are being advertised, and how are these products branded? How else do companies advertise food and drinks for children? Students should also pay attention to any food products that are marketed or consumed in the show itself.

Encourage students to find recipes (in a cookbook or online) that use "real" food. What do they notice about the ingredients and the preparation of the food? If the resources are available, have students select a recipe and create the recipe at your school. Alternatively, find a cooking class for children in your community and arrange for a field trip; many grocery stores now offer cooking classes for children.

In the film, Margo Wootan comments, "Gas stations used to sell gas. Now they're all convenience stores, and there's junk food at the checkout everywhere." After reading "See More, Eat More: The Geography of Fast Food" (http://www.npr.org/ Type the title of the article into the search function of the website), have students use Google Maps or actually venture outside of the school to see the types of food that are available to them within a five- to 10-minute walk in any direction. Where can they purchase junk food? Where can they purchase "real" food? What types of food are easier and more accessible to purchase? Have students compare their results and discuss in relation to the film and the NPR article.

Have students use Canada's Create My Food Guide tool (https://www.canada.ca/ Click on Health, then Food and Nutrition, then Healthy Eating) to customize their own food guides, based on their age, sex, favourite foods and levels of activity. Students can print their guides off for easy reference.

Have students conduct an online news search for "battle against obesity" and compare several initiatives that are happening around the world to tackle the issue. Have any of the initiatives been successful? What are the challenges of implementing these initiatives?

WEBSITES AND ONLINE RESOURCES

About the Film

http://fedupmovie.com

Twitter: https://twitter.com/fedupmovie

Facebook: https://www.facebook.com/FedUpMovie

Instagram: https://www.instagram.com/fedupmovie

Additional Resources

100 Days of Real Food: This resource is a family blog by Lisa Leake that focuses on cutting out processed foods and replacing them with real food. Meal plans and recipes are available for free, and you can try the 10-Day Pledge. http://www.100daysofrealfood.com

American Heart Association: The American Heart Association's website provides recommendations and information on sugar consumption, including added sugars and sweeteners.

http://www.heart.org/HEARTORG/ Type "Sugars, Added Sugars and Sweeteners" into the search function of the website.

Food and Agriculture Organization of the United Nations: This website provides information on a variety of food and agriculture topics for over 245 countries from around the world. Data is available from 1961 to the present. http://www.fao.org/faostat/en/#home

Food N' Me: This website includes a series of interactive games and information for children and families that promote healthy eating with others.

http://www.foodnme.com

Health Canada: The Food and Nutrition resources from Health Canada provide detailed information on Canada's Food Guide. The website includes the "Eat Well Plate" for students to plan meals, toolkits for educators and communicators, and information on how to use the food guide.

http://www.hc-sc.gc.ca/ Click on Food & Nutrition, then Canada's Food Guide.

Heart and Stroke Foundation of Canada: In their 2017 study "The Kids Are Not Alright," the Heart and Stroke Foundation investigates the negative consequences of food and beverage industry marketing to children and youth in Canada. The full PDF of this report is available by conducting an online search for "Heart & Stroke 2017 Report on the Health of Canadians."

http://www.heartandstroke.ca

Ontario Ministry of Education: In 2011, Ontario implemented its School Food and Beverage Policy. The following link provides the policy document, as well as tools and resources to implement the policy.

http://www.edu.gov.on.ca/eng/healthyschools/policy.html

TED Talks: In "Teach Every Child About Food," Jamie Oliver discusses his anti-obesity project in Huntington, West Virginia, and the pressing need to overcome our ignorance about the food that we consume.

https://www.ted.com/ Type the title of the talk into the search function of the website.

The Globe and Mail: In the October 7, 2013, article "From LeBron James to Serena Williams, Study Slams Athletes Promoting Junk Food," David Andreatta investigates the mixed messages professional athletes send to children about healthy living when they promote junk food.

http://www.theglobeandmail.com/ Type the title of the article into the search function of the website.

The Guardian: In the January 3, 2017, article "No Evidence Sugar-Free Soft Drinks Aid Weight Loss—Study," Sarah Boseley presents results from recent academic studies that have found increasing connections between artificially sweetened drinks and obesity.

https://www.theguardian.com/ Type the title of the article into the search function of the website.

World Health Organization: The World Health Organization's website includes detailed information and data on many health topics, including diet, nutrition and obesity. http://www.who.int

EXTENSION ACTIVITIES

Questions for Pre-Viewing or Post-Viewing Activities

What was the purpose of profiling young people in this film?

The media has been covering the problem and solution of obesity for over 30 years. How and why is obesity still an issue? How has the media contributed to the problem of obesity? Consider the news media and other media sources, such as reality television shows or sitcoms.

Brady Kluge talks about how eating is part of the lifestyle in the southern US. What kind of an impact does culture have on what we consume?

What kinds of generalizations are applied to overweight individuals?

What does it mean to "eat healthier"?

Why is a calorie not a calorie? Examine the science behind this claim.

Do we actually have choices in what we consume?

What are some of the marketing initiatives used to sell junk food and fast food to children? Why are these initiatives effective?

In the film, Wesley Randall says, "I make bad decisions when I'm at school at lunchtime and breakfast time.... Either you eat or you starve." Think about the food options that are available to you in your school. What do you have access to? What kind of healthy options are offered, and how many people eat the healthy options? Does your school have exclusive contracts with any food companies?

In the film, there is a discussion of parental responsibility in the fight against childhood obesity. What is the role of a parent in this epidemic? Do parents actually have complete control over what their children consume? How can parents model healthy eating and what are some environmental factors that could compete with this?

In the film, Dr. Robert Lustig says, "This is not just a problem of the obese. It's a problem of everybody." What does he mean by this? What are some of the short-term and long-term consequences of obesity on health, economics and our society as a whole?

What "cues to eat" do you come across in your everyday life?

What do you consider to be "real" food? Where would you find this type of food in the supermarket or grocery store?

How are socioeconomics related to food and nutrition?

QUOTATIONS FROM THE FILM TO EXPLORE

- 1. "Everything in the grocery store is made with less fat and fewer calories and yet our kids keep getting bigger and sicker. It makes no sense." Katie Couric
- "We are not going to exercise our way out of this obesity problem." Margo Wootan
- 3. "As physicians, we know how to take care of a 50 year old or 60 year old with type 2 diabetes. What none of us has done is take care of that 10 year old with type 2 diabetes for five, six, seven decades. We don't know the consequences of that, and that scares me greatly." Dr. David Kessler
- 4. "Food addiction is a real thing. It's not a metaphor. It's a biological fact. Studies show that your brain lights up with sugar just like it does with cocaine and heroin." Dr. Mark Hyman
- 5. "A lot of times, people wonder why it's so hard to lose weight, but a big reason might be because you actually have those foods—the chips and the brownies and the cookies and cakes and ice cream—in your house. It's just like being an alcoholic. Do you think an alcoholic could withstand from drinking that alcohol if he had a bottle of gin sitting next to him? It would be tough to do. When you're close to it, you want it, and it's the same way with food." Brady Kluge
- 6. "If you go to the supermarket, there are 600,000 food products in America, and 80 per cent of them have added sugar." Dr. Robert Lustig
- 7. "The question is whether our government has been complacent or even complicit with this food debacle. And the answer is: absolutely. The sugar industry is extraordinarily powerful and there's a lot of money involved." Dr. Robert Lustig
- 8. "It's common sense—[pizza] is not a vegetable.... Rather than having a deliberative effort, we have special interests inserting these provisions into these bills, contrary to the public health." Rep. Jared Polis
- "The problem is [children] don't see any commercials for bananas, strawberries, zucchinis and broccoli. It shapes the whole way they think about food—what they think food is." Margo Wootan

- 10. "Big Food won the battle." Katie Couric
- 11. "Many people think that if you're thin, you're healthy, but that's not really necessarily true. You can be fat on the inside and skinny on the outside, or metabolically obese normal weight. It's very dangerous and it leads to all the same consequences as being fat, such as heart attacks, strokes, cancer, dementia and diabetes." Dr. Mark Hyman
- *12.* "Soda is the cigarettes of the 21st century." Mark Bittman
- 13. "Right now, healthy eating is like swimming upstream. If you want to eat better, you have to work so hard against the food environment, which is always pushing you to eat more." Margo Wootan
- 14. "This is supposed to be the first generation of American children who are expected to lead shorter lives than their parents did. So we have to ask ourselves, what legacy are we leaving our children and what kind of conditions are we exposing them to that would make this come true?" Kelly D. Brownell
- 15. "We've gotta change the way we produce and consume food." Bill Clinton

CULMINATING ACTIVITY: EXAMINING THE ISSUES

Learning Goals:

We are learning to use the geographic inquiry process so that we can select, organize, interpret and analyze information from sources that are relevant to our investigation.

- An increase in type 2 diabetes among young people
- · Junk food marketing aimed at children
- Misleading food nutrition labels
- The government's conflict between protecting public health and promoting agricultural products

After viewing the film, you will select one of the issues that you would like to investigate in more depth.

- Outline the problem
- Discuss the negative short-term and long-term consequences
- Discuss what has been done or what can be done to combat the issue

You should use a variety of multimedia in your presentation, including images, videos and supporting links. You should also include a works-cited page for all multimedia and information that you use.

As an extension to the presentations, work with your classmates to brainstorm additional ways that the issues within the film can be combatted at the local, national and international levels.

ACTIVITY RUBRIC: EXAMINING THE ISSUES

Knowledge/Understanding

| | 2.5 2.9 | 3.0 3.4 | 3.5 3.9 | 4.0 5.0 | |
|---|---|---|---|---|----|
| Clear understanding of the facts, ideas and concepts in the given task, and persuasively represents the position of the individual or group | Demonstrates limited knowledge of the issue, and communicates with a limited degree of understanding and persuasiveness | Demonstrates moderate knowledge of the issue, and communicates with a moderate degree of understanding and persuasiveness | Demonstrates considerable knowledge of the issue, and communicates with a considerable degree of understanding and persuasiveness | Demonstrates thorough knowledge of the issue, and communicates with a thorough degree of understanding and persuasiveness | /5 |
| Thinking/Inquiry | | | | | |
| | 2.5 2.9 | 3.0 3.4 | 3.5 3.9 | 4.0 5.0 | |
| Uses critical and creative thinking processes to generate and develop ideas | Uses critical and creative thinking processes with limited effectiveness | Uses critical and creative thinking processes with some effectiveness | Uses critical and creative thinking processes with considerable effectiveness | Uses critical and creative thinking processes with a high degree of effectiveness | /5 |
| Application | | | | | |
| | 2.5 2.9 | 3.0 3.4 | 3.5 3.9 | 4.0 5.0 | |
| Making connections within and between various contexts | Makes connections within and between various contexts with limited effectiveness | Makes connections within and between various contexts with some effectiveness | Makes connections within and between various contexts with considerable effectiveness | Makes connections within and between various contexts with a high degree of effectiveness | /5 |
| Communication | | | | | |
| | 2.5 2.9 | 3.0 3.4 | 3.5 3.9 | 4.0 5.0 | |
| | The presentation contains numerous grammatical, spelling or punctuation errors; no multimedia included | The presentation contains some grammatical, spelling or punctuation errors; some multimedia may be included | The presentation is largely free of grammatical, spelling or punctuation errors; multimedia is included | The presentation is free of grammatical, spelling and punctuation errors; relevant and engaging multimedia is included | /5 |
| Delivery (eye contact, audibility, enthusiasm) | The student did not engage the audience | The student engaged the audience for some of the time | The student engaged the audience for most of the time | The student engaged the audience for the duration of the presentation | /5 |

Comments: Total: ____/25 = ____/100

EXAMPLES OF CURRICULUM EXPECTATIONS

| COURSE | OVERALL EXPECTATIONS | | | |
|--|--|--|--|--|
| Grade 7 & 8 Language | generate, gather and organize ideas and information to write for an intended purpose and audience. draft and revise their writing, using a variety of informational, literary and graphic forms and stylistic elements appropriate for the purpose and audience. use editing, proofreading and publishing skills and strategies, and knowledge of language conventions, to correct errors, refine expression and present their work effectively. demonstrate an understanding of a variety of media texts. identify some media forms and explain how the conventions and techniques associated with them are used to create meaning. | | | |
| Grade 7 & 8 Health and Physical Education | demonstrate an understanding of factors that contribute to healthy development. demonstrate the ability to apply health knowledge and living skills to make reasoned decisions and take appropriate actions relating to their personal health and well-being. demonstrate the ability to make connections that relate to health and well-being, how their choices and behaviours affect both themselves and others, and how factors in the world around them affect their own and others' health and well-being. | | | |
| Grade 10 Civics | analyze a variety of civic contributions, and ways in which people can contribute to the common good. analyze a civic issue of personal interest and develop a plan of action to address it. | | | |
| Grades 9–12 English | generate, gather and organize ideas and information to write for an intended purpose and audience. demonstrate an understanding of a variety of media texts. identify some media forms and explain how the conventions and techniques associated with them are used to create meaning. | | | |
| Grade 11 Media Studies | demonstrate an understanding of a variety of media texts. deconstruct a variety of types of media texts, identifying the codes, conventions and techniques used and explaining how they create meaning. | | | |
| Grade 11 Media Arts | analyze, through examination and reflection, their initial response to media art works, using various strategies and modes of communication. identify and explain the messages in and meanings of media texts. describe the characteristics of particular media genres and forms, and explain how they help to convey meaning and influence the audience. demonstrate an understanding of responsible practices associated with producing, presenting and experiencing media art works. | | | |
| Grade 9–12 Healthy Active Living Education | demonstrate an understanding of factors that contribute to healthy development. demonstrate the ability to apply health knowledge and living skills to make reasoned decisions and take appropriate actions relating to their personal health and well-being. demonstrate the ability to make connections that relate to health and well-being, how their choices and behaviours affect both themselves and others, and how factors in the world around them affect their own and others' health and well-being. | | | |
| Grade 11 Introduction to Anthropology, Psychology and Sociology | use a psychological perspective to explain how diverse factors influence and shape human mental processes and behaviour. use a sociological perspective to explain how diverse factors influence and shape individual and group social behaviour. | | | |

| Grade 12 Human Development Throughout the Lifespan | demonstrate an understanding of threats to healthy development throughout the lifespan and of a variety of protective factors that can increase an individual's resilience and reduce the impact of these threats. demonstrate an understanding of social-emotional development throughout the lifespan and of ways of influencing such development. | | |
|--|---|--|--|
| Grade 11 Raising Healthy Children | describe factors that contribute to the healthy development of children before and during birth, and in the first few months after birth. describe patterns in the healthy, social, emotional, cognitive, linguistic and physical development of young children. demonstrate an understanding of the challenges facing parents throughout the early childhood years. describe the roles and responsibilities of society in protecting and supporting children and families, and the responsibilities of caregivers towards children. | | |
| Grade 9 & 10 Food and Nutrition | explore topics related to food and nutrition, and formulate questions to guide their research. create research plans, and locate and select information relevant to their chosen topics, using appropriate social science research and inquiry methods. assess, record, analyze and synthesize information gathered through research and inquiry. communicate the results of their research and inquiry clearly and effectively, and reflect on and evaluate their research, inquiry and communication skills. demonstrate an understanding of the nutritional and health recommendations in Canada's Food Guide. demonstrate an understanding of eating patterns that contribute to optimal physical health. demonstrate an understanding of factors that contribute to a positive body image and healthy attitudes about food. demonstrate an understanding of factors affecting people's food needs and of ways of meeting those needs. demonstrate an understanding of various factors that influence food choices. demonstrate an understanding of how media and advertising messages affect food choices. | | |
| Grade 11 Food and Culture | demonstrate an understanding of the factors that influence food choices, with reference to a variety of cultures. demonstrate an understanding of the key recommendations in Canada's Food Guide and the food and nutrition guidelines of other countries. demonstrate an understanding of the influence of culture on how people obtain, prepare, serve and consume food. | | |
| Grade 12 Nutrition and Health | explore topics related to nutrition and health, and formulate questions to guide their research. create research plans, and locate and select information relevant to their chosen topics, using appropriate social science research and inquiry methods. assess, record, analyze and synthesize information gathered through research and inquiry. communicate the results of their research and inquiry clearly and effectively, and reflect on and evaluate their research, inquiry and communication skills. demonstrate an understanding of nutrients and their connection to physical health. demonstrate an understanding of Canada's Food Guide and its role in promoting physical health. demonstrate an understanding of the physical processes involved in maintaining energy balance. demonstrate an understanding of their nutrient intake and of factors that affect the nutritional status of individuals and groups. demonstrate an understanding of the relationships between nutrition, health and disease. demonstrate an understanding of current Canadian trends and patterns in nutritional guidelines and in food production and consumption. | | |

| Grade 11 American History | • describe various social, economic and political events, trends and developments in the United States since 1945, and analyze their key causes and consequences. |
|---|--|
| | analyze how various events and developments have affected specific groups in the United States, and relations between the United States and other countries, since 1945. |
| | analyze how various groups, trends and cultural developments have affected identity, citizenship and heritage in the United States since 1945. |
| Grade 12 Law | • use the legal studies inquiry process and the concepts of legal thinking when investigating legal issues in Canada and around the world, and issues relating to international law. |
| | analyze various key concepts, legal systems and issues in criminal law, in Canada and internationally. |
| | demonstrate an understanding of the causes and effects of social change. |
| Grade 12 Challenge and Change in Society | demonstrate an understanding of how forces influence and shape social patterns and trends. |
| | demonstrate an understanding of how various social structures and conditions support or limit global inequalities. |
| | • use the political inquiry process and the concepts of political thinking when investigating issues of political importance in various communities and ways to address them. |
| Grade 11 Politics | • explain the political importance of some current issues and analyze various perspectives associated with these issues. |
| | analyze some issues of political importance in terms of their causes, their impact and ways in which they have been addressed. |
| | • identify and analyze a political issue, with the goal of developing a personal plan of action to address this issue. |
| Grade 12 Politics | • use the political inquiry process and the concepts of political thinking when investigating issues, events and developments of national and international political importance. |
| | illustrate the relevance of philosophical theories of ethics to concrete moral problems in everyday life. |
| Grade 12 Philosophy | demonstrate an understanding of the main questions, concepts and theories of social and political philosophy. |
| Grade 11 Economics | analyze how various factors, including the practices of different stakeholders, affect markets and the value of goods. |
| | demonstrate an understanding of supply and demand models, including how to apply these models, and of factors that affect supply and demand. |
| | analyze aspects of economic growth/development, including its costs, benefits and sustainability. |
| Grade 12 Economics | analyze how economic and political ideas and various sociocultural factors affect economic decision making. |
| | demonstrate an understanding of markets and theories of the firm. |
| | analyze economic trade-offs from the perspective of different stakeholders, including those in different countries, and how trade-offs influence economic decisions. |
| | • assess how personal and societal factors affect eating behaviours, and evaluate the social and economic impact of the use of non-nutrient food additives. |
| Grade 12 Science | Investigate chemical components of and energy in food, and the processes by which food is digested. |
| | • assess the impact of scientific research, technological advances and government initiatives on public health. |
| | investigate various strategies related to contemporary public health issues. |
| | demonstrate an understanding of major public health issues, past and present. |
| | analyze a variety of social, ethical and legal issues related to applications of biotechnology in the health, agricultural or environmental sector. |
| | |

| Grade 12 Biology | analyze the role of metabolic processes in the functioning of biotic and abiotic systems, and evaluate the importance of an understanding of these processes and related technologies to personal choices made in everyday life. demonstrate an understanding of the chemical changes and energy conversions that occur in metabolic processes. |
|--------------------|--|
| Grade 12 Chemistry | assess the social and environmental impact of organic compounds used in everyday life, and propose a course of action to reduce the use of compounds that are harmful to human health and the environment. |

The Overall Expectations listed above are from the *Ontario Curriculum*. Complete course descriptions, including all Overall and Specific Expectations can be found at: http://www.edu.gov.on.ca/eng/teachers/curriculum.html