

Making Nutrition a Priority in School: An overview of School Curriculum

Project Proposal

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Abstract

Middle school adolescents struggle with cognitive, emotional, and psychosocial growth and development, resulting in middle school being foundational for adolescents, especially girls. Decisions made by school personnel to promote nutrition and health is critical to the school culture. Within the past 10 years, the rate of childhood obesity has continued to rise. Although there are national and state health and nutrition standards schools must follow, little is being done to make nutrition a priority in the school setting. This project examines the US Department of Education and State of Ohio K-12 state standards for health and nutrition and recommends areas where school personnel can adopt and implement nutrition components into the already existing school curriculum. These recommendations will be designed toward helping adolescents in 7th and 8th grade make healthier nutritional decisions. Recommendations are for school personnel, parents, volunteers, and any other school stakeholders to make nutrition a priority in school culture by adopting simple nutritional topics and activities into already existing curriculum.

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Section 1

Introduction

Middle school years are a time of important psychosocial, cognitive, and emotional growth and development (Hoelscher 2002). Proper nutrition is not only essential for physical growth but “also a basic requirement for proper brain development” (Noorwood, 1984). The student interactions that occur daily with and school administration, educators, staff, and other stakeholders could be a positive promotion of nutrition and healthy eating behaviors for adolescents. (Hoelscher 2002). Poolton (1972) concluded that a “variety of student-centered activities, focusing on relevant problems and developmentally appropriate, will result in increased knowledge of nutrition and may, in turn, improve eating behavior” (1972, pgs.113-118). According to Lounsbury (1982, pg. 23), “No other age level is of more enduring importance because the determinants of one's behavior as an adult, self-concept, learning interests, skills, and values largely are formed in this period of life.” Hence, the school environment helps to shape student learning (Baxter, 1998). According to stateofchildhoodobesity.org, Ohio has a 15.7% obesity rate for children between the ages of 10-17. The school environments can affect the ability of students to make healthier choices between high-energy foods that makeup a poor diet, and those foods that makeup a proper balanced diet (CDC, 2016).

Background

There is no hiding from the growing obesity epidemic not only in adults but also in youth in the United States. Middle School students spend about 1,190 hours of their year in school (National Center for Educational Statistics, 2020). Instructional practices and teacher expectations contribute to student learning and can clearly be enhanced through effective behaviors (Barrick 2016). Teachers, coaches, and other school staff shape their knowledge (Hendry 1992). Because of this relationship, there is an opportunity for educators to affect

and influence students' positive eating behaviors, self-esteem, and self-efficacy (Hendry 1992). Students look to educators for nutrition information and when they are not getting the positive correct information, they seek outlets such as peers, media, and other outside influences to gain knowledge (McNeill 2010).

It is known that many adolescents' influence of food choices and behaviors are a direct result of parents, peers, and the media (Barwise, 1997; Stratton, 1997; Worsley, Coonan & Baghurst, 1983). The amount of influence of adolescent nutrition behaviors results in issues with eating disorders, negative body image, low self-esteem, low self-efficacy, critical comments about weight and shape, stressful life events, and even early puberty (Strober, 1984; Levine, Smolak, & Hayden, 1994; Welch, Doll, & Fairburn, 1997). The middle school years are so important, especially for girls, and it is critical to teach correct nutrition education and topics in the school setting. To address the obesity epidemic with adolescents, it must be a collective effort from educators, administrators, and other stakeholders, to make nutrition a priority in the curriculum.

Purpose

The purpose of this project is to examine the current National Nutrition Standards from the United States Department of Education as well as the state of Ohio middle school (grades 6-8) core curriculum standards (math, social studies, science, English/language arts), and recommend areas where educators can add nutrition components into lessons. As the citations above show, there is an opportunity to make a positive impact on healthy eating behaviors, self-esteem, and self-efficacy as well as supplying basic nutrition knowledge. The project will examine the current curriculum standards and make recommendations where nutrition topics can be integrated.

Project Objectives

1. Review the National Nutrition Standards and the State of Ohio Core Curriculum (Math, Science, Social Studies, and English/Language Arts) to identify areas for nutrition topics integration.
2. Identify activities for art, and technology that correlate to content standards.

Definitions

The following definitions are common educational and USDA terms relating to this project.

ELA – a term used in education that encompasses English and Language Arts topics.

Core Curriculum - a term used in education that is made up of the areas of Math, Science, Social Studies, and ELA.

MyPlate - the USDA's current nutrition guideline that represents a place setting that includes the five food groups. It replaced the MyPyramid guide in 2011.

School Stakeholders – anyone who has vested interest in a particular school. This could include administration, teachers, support staff, coaches, volunteers, parents, taxpayers, students, community members, business leaders, school board members, families, and elected officials.

Poor Diet – a term used to describe an eating habit that does not have enough vitamins, minerals, carbohydrates, protein, and water that is needed to remain in good health.

Balanced Diet – a term used to describe an eating habit that does have enough vitamins, minerals, carbohydrates, protein, and water that is needed to remain in good health.

High Energy Foods- foods high in calories, typically high in sugar and fats; produces high energy when broken down by the digestive system.

Literature Review

Much of the literature that surrounds the topic of adolescent nutrition gives a variety of ideas on how to increase the education that students are receiving. Marjorie Seidenfeld noted that adolescents experience many changes that happen through one's lifetime because they are changing not only in body shapes but also their cognitive thinking, and even social values (Seidenfeld et al., 2004). The research also shows that the dietary intake of "adolescents are often inadequate when compared with the national guidelines" (Hoelscher et al., 2002).

As noted by Nga, "education at school contributes to raising students' awareness of health and nutrition, hence enables them to make more well-informed food choices and to adopt healthier lifestyles" (2019). Nga also notes that other factors and stressors impact adolescent BMI, "the majority of school obesity intervention strategies in combination seem to produce impressive results as compared to when they are implemented in isolation" (Nga, et al., 2019). One study found that "at least 50 hours of instruction time are needed to produce changes in dietary attitudes and behaviors" (Hoelscher et al., 2002).

Studies have noted that students who are disadvantaged by unhealthy behaviors, "have significantly lower scores on tests of academic achievement, and, conversely, students who are in better physical health are not only more academically successful but are also more likely to have positive self-esteem (Kristjánsson et al., 2010). We know that "schools are the best and the most logical place not only to identify the barriers to a healthy lifestyle in adolescents but also where interventions could be implemented successfully" (Weschler et al., 2001). "Not only is proper nutrition essential for physical growth, but it also serves as a basic requirement for proper brain development and all mental abilities in humans" (Norwood, 1984, p. 1). A proper diet within the school setting can positively affect problem-solving skills, test scores, and school attendance (U.S.

Department of Education. n.d.).

Students choose foods based on their convenience, price, and availability (Pirouznia, 2001). Adolescents' experiences and values are shaped by the relationships with people they meet, including peers, teachers, and school staff (Eckert, 2004). There have been studies done on how youth see significant people in their lives (Hendry et al., 1992). The study of "Adolescents' perceptions of significant individuals in their lives" supports the key role of an adult in the life of a young person. Adults also have a positive influence on the way youth learn and acquire skills (Hendry et al., 1992). Because of the amount of an adolescent's time spent in school, educators, administrators, and all school staff have a large hand in not only students' academic achievements but their personal development. "No single individual is more important to initiating and sustaining improvement in middle grades school students' performance than the school principal" (Jackson & Davis, 2000, p. 157). Schools with healthy physical environments carry the message that students are valued (Wooley et al., 1998).

Some of the literature also shows that having not only educators involved in the interventions but having a peer lead intervention will provide a positive impact for students. A study on 1,000 seventh-grade students in eight different schools was conducted using 272 trained students for peer lead education. "Results show that peer-led nutrition education approaches in schools are feasible and have high acceptability among peer leaders, classroom students, and teachers" (Story et al., 2002).

The literature is lacking when it comes to looking at girls versus boys and their nutrition knowledge and beliefs. Most of the literature looks at adolescents in the range from 10-17, and there is little that has a narrower focus on a specific grade/age. There is also a gap when it comes to looking at the diverse ways students receive their nutrition information. Adolescents today are more tech-savvy than before, and they rely on social media for much

of their information (Chau, 2018). As the Pew Research Center notes, “most already rely on smartphones to search for health information” (2015).

To recommend areas of integration, a review of existing programs and curricula that surround nutrition must first be addressed. The two largest suppliers of education materials include Pearson and McGraw Hill. Reviewing Pearson.com, the company has a section for Health and P.E but focuses on physical education and not nutrition. McGraw Hill offers an entire text on “Teen Health” that includes health and wellness, social health, emotional health, nutrition, physical activity, and many other topics. The text includes the correlation and alignment to the National Health Standards and Performance Indicators (see Appendix D).

Other programs exist that offer nutrition education in addition to the publishing companies. In the State of Ohio, SNAP-Ed offers a nutrition curriculum for middle school, however, this nutrition education is for those that fall within SNAP guidelines. The guidelines for schools require at least 50 percent of the students receive free or reduced lunches (Snap-Ed | Family and Consumer Sciences, n.d.). The SNAP-Ed curriculum “uses evidence-based, behaviorally-focused interventions and maximized its impact by concentrating on a small set of key population outcomes supported by evidence-based direct education, multilevel interventions, social marketing, PSE, and partnerships” (Snap-Ed | Family and Consumer Sciences, n.d.). The SNAP-Ed curriculum is focused on MyPlate.

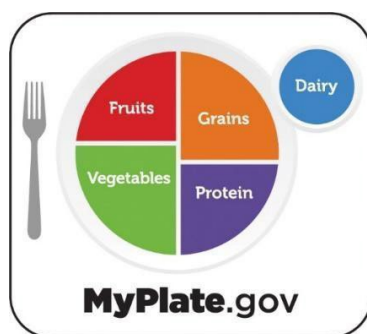


Figure 1.0 MyPlate Visual



Figure 2.0 MyPlate Poster

The Ohio SNAP-Ed curriculum provides the alignment with Common Core Standards for grades K-8. These standards include those for speaking and listening, writing, and math (See Appendix B).

After reviewing the research and literature surrounding nutrition education, it shows that there is not a lack of nutrition content available for school to integrate. Pearson and McGraw Hill offer curriculum for Health and Physical Education, and integrate some curriculum focused solely on nutrition. The topic covered in the “Teen Health” curriculum is relevant for middle school students learning but has minimal focus on nutrition. The basic nutrition information that students lack can be integrated into core curriculum throughout the school day and require minimal changes for current educators. Using the knowledge gained from the above research as well as a review of National and State Health Standards and interviews with various school personnel, I will recommend ways schools can integrate nutrition topics into core curriculum as well as throughout the school community.

Section 2

Methods: Information Gathering Procedures

To gain insight on ways to implement nutritional components into school curriculum and school culture, I began by reviewing the above mentioned national and state standards for health and nutrition, focusing on the nutrition component. After reviewing the standards, I began searching for textbook companies that offered a nutrition curriculum. McGraw Hill does offer a nutrition text for schools to purchase. I reached out to the publisher to request a copy of the text for this project but never received word back. McGraw Hill does offer a document that shows the text correlation to the national standards for health, which is accessible online.

Along with searching for textbook companies, I looked other states who were implementing nutritional components into their curriculum. A workshop that was a collaborative effort of the Food and Nutrition Board, Board on Children, Youth, and Families, and the Institute of Medicine reviewed experiences from California, Wisconsin, and Washington D.C. Speakers from those states shared experiences and included noting that “nutrition standards could be both integrated into other content areas and serve as the basis for stand-alone courses” (2013). A similar proposal was presented in Washington D.C by Carolina Arango titled “Integration Nutrition Education into the School Curriculum” (Arango, 2017). As well as seeking out curriculum that exists, I looked to school personnel to gain further insight on their thoughts on nutrition implementation into CORE curriculum.

Overview of National Health Education Standards

The CDC and U.S. Department of Education developed the National Health Education Standards that provides schools guidance for the expectations for students’ knowledge at grades 2,5,8, and 12. These standards are intended to promote “personal, family, and community health”(National Health Education Standards - Sher | Healthy Schools | Cdc, 2020). Standard three states that “Students will demonstrate the ability to

access valid information, products, and services to enhance health” (National Health Education Standards - Sher | Healthy Schools | Cdc, 2020). This is one standard that educators can easily meet during an ELA course. Students are given various research projects throughout the year including a nutrition focused topic that can easily meet this standard. Students can research the benefits of a specific nutrient or a specific fruit or vegetable. Along with the eight standards, the CDC identifies performance indicators or benchmarks that students should master. These indicators are broken down into PreK-Grade 2, Grades 3-5, Grades 6-8, and Grades 9-12.

Overview of State of Ohio Health Standards

The State of Ohio Health Education Standards come from the guidance from the CDC and the National Health Education Standards. When looking at the State of Ohio standards from Nutrition Education for Middle School students, there are no set curricula simply six bullet points (Ohio Dept. of Education, 2022). The Department of Ohio states on their website that the Ohio Revised Code (ORC) 3313.603 lays out for every school district the “Curriculum and Course Requirement” (See Appendix E). These requirements do include Health education and what is to be included. Included in the revised code is a breakdown of the health education curriculum for grades K-6, 7-8, and 9-12. Because school districts can move grade 6 into a traditional middle school setting, grades K-6, and 7-8 are included in this overview (See Appendix E). The Curriculum Requirements for grades K-6 include four bullet points of topics that schools must address and only one of those bullet-point topics relate to nutrition:

“The nutritive value of foods, including natural and organically produced foods, the relation of nutrition to health, and the use and effects of food additives;”

Similarly, the grades 7-8 Curriculum Requirements include six bullet points, and only one

addresses nutrition:

“The nutritive value of foods, including natural and organically produced foods, the relation of nutrition to health, and the use and effects of food additives;”

Having school staff add in nutrition components and topics throughout the school day along with the CORE curriculum can easily fill in the gaps for student knowledge. This project proposal is meant to give schools recommendations where nutrition components can be added into already existing CORE curriculum and not put more stress of implementation of a new curriculum.

School Personnel Interview

To gain a broader perspective about Nutrition Education in Ohio’s schools, emails were exchanged over a two-month period to staff members from the same school. Those interviewed included a Superintendent, a Curriculum Director (Middle/High School), a Teacher/Coach (Middle School/High School), a teacher (Middle School), and a member of the Support Staff (Middle School). Staff was given a word document with five questions including: Do you feel your school does enough nutrition education for middle school girls? , Does your school(s) have a wellness committee? If so, how many are involved, and what are their primary roles? , Does your cafeteria include info graphs of MyPlate? , Do you feel the school’s food service does enough to encourage healthy eating? , Regarding Core Curriculum for middle school, do you feel there is room to add nutrition components? , Can you see resistance and or issues in implementing nutrition topics into the curriculum? The staff responded to the questions in the word document, and I compiled the answers into a table (see Table 1).

A variety of answers were given to the questions posed, but all had an overlying theme that schools are not doing enough to address nutrition education in middle school. As stated by the high school/middle school teacher and coach “One of my favorite quotes I

tell my student athletes is food is fuel for your body like gasoline is fuel for your car. Your car will not run if there is no gasoline in it and your body will not function without the proper nutrients. If you put bad gasoline in your car, it will not run correctly and the same is said for your body if you put bad food in it” (B. Noes, personal communication, June 24, 2021). The largest issue to note was the amount of instructional time staff has with the students and would like to see more instructional time for these topics. Teachers must cover many topics and their instruction time is valuable. The opportunity to have nutrition incorporated in curriculum would be received better by the staff, administration, parents, and school stakeholders.

Table 1
Interview Questions

<u>Interviewees</u>	<u>Superintendent</u>	<u>Curriculum Director</u>	<u>Middle/High School Coach & Teacher</u>	<u>Middle School Teacher</u>	<u>Support Staff</u>
Question 1: Do you feel your school does enough nutrition education for middle school girls?	Nutrition education is incorporated into our health curriculum in eighth grade for all middle school students. With that being shared, we can always further support the importance of health and nutrition for our students. I am a strong believer that if we want to maximize our students' academic sides, we must also address the physical, social, and emotional conditions.	While we do an excellent job covering nutrition content during our eighth-grade health course, we could always do better. The main barrier that we always face in public education is the amount of instructional time available. By law, we are required to address many different topic areas including teen dating violence and opioid addiction. These unfunded mandates must be addressed first and then we also allow time for other important concepts such as nutrition.	Absolutely not. From my experiences, very few athletes have any idea of what proper nutrition and a proper diet will do for them.	No, only students who can take health or AG have access to this information - eighth grade girls who do not take band or choir.	No, we do not have a specific program.

Question 2: Does your school(s) have a wellness committee? If so, how many are involved, and what are their primary roles?	Yes, our district has a wellness committee and a board approved wellness policy (it is attached). This policy is reviewed, and updates are shared at a board meeting annually. Mr. Campbell has led this process in the past. With his retirement, Mrs. Park will be taking over. As for roles involved, I know we have PE and Health teacher reps, district level administrators, and other food service staff members	Miami Trace does have a Wellness Committee that includes staff members. This group meets annually to review the required wellness plan that is adopted by the Board of Education each year.	No, I am not. Involved.	Wellness Committee Members in coordination with the Adena Health System, Miami Trace Wellness Committee is collecting a variety of data for school community health and wellness.	No, not really. We have our health nurse and the health department along with the superintendent who make decisions for our district along with the CDC guidelines.
Question 3: Does your cafeteria include info graphs of MyPlate? Do you feel the school's food service does enough to encourage healthy eating?	Yes, our cafeteria does include graphs for our student that include calorie intake and ingredients. To get elementary student to try new foods, we even had our director, Mr. Campbell, dress up as Chef Linguini to encourage them explore healthy options.	Yes, Miami Trace has a poster of My Plate hung in the cafeterias. Our school's food service department works tirelessly to offer a large variety of foods for our students. This variety is shared with students through the Meal Viewer App which or shown on the screens in the cafeteria.		Yes, this year has been a struggle with food supply shortages	There are posters in the cafeteria explaining the MyPlate graphs and diagrams. Nutrition information is posted also in the cafeteria.
Question 4: Regarding Core Curriculum for middle school, do you feel there is room to add nutrition components?	It is important that we always reflect and analyze our curriculum offerings for our students. While many areas have state standards which are the basis of the curriculum mapping, we have other areas that model available national standards. I know that instructional time is of the essence, and it is difficult to make a statement about "room" to add, but I do believe that our staff understands prioritizing and providing the best possible instruction needed for our students. Nutritional concepts can be infused in many areas like you have mentioned in the parentheses of this question. In addition, we have art (where foods are drawn and painted - which opens the door for	There is room to add nutrition components to the four main content areas. It would be better received by teachers if the cross-content ideas (as your presented in the question) were provided rather than a whole additional topic. This is also helpful to students as the explicit connections are forced and real-world examples are demonstrated.	Science - Discuss the proper foods to eat before practice and before competition. As well as the importance of proteins, carbohydrates, etc. Math - Correct measurements of portion control during meals. Can also figure out time schedules for when to eat prior to practice and competition as well as how much to eat. Can also use percentages and formulas pertaining to heart rate and optimal beats per minute for proper conditioning. Social Studies - Study and discuss the diets of native people from	Maybe in physical education.	There are some nutrition discussions in science classes. Math uses measurements and social studies talk about grains.

	discussion). We also have a high school course titled, "Strength and Conditioning" - what better way to communicate the importance of nutrition with our students. As a former coach myself, I used to talk with our athletes about "What you put into your body is what you will get out." In conclusion, yes, I do believe we can always find ways to improve our discussion and emphasis of healthy lifestyles with our students.		various cultures and how those diets assisted them in their daily lives. Research the level of fitness of those people for them to survive. ELA - In addition to the example provided, also have students research the importance of eating a proper breakfast. Many girls do not like to eat breakfast at all. This is also true for lunch. Then they go out to practice after school and do not perform up to their ability.		
Question 5: Can you see resistance and or issues in implementing nutrition topics into the curriculum?	I am not sure that I see resistance versus hesitation. This hesitation stems from the need for communication and time. If staff can evaluate and infuse nutritional concepts where most appropriate, I see support and encouragement for our student body in general.	The two-issue that could potentially cause a challenge would be time and resources/materials.	I do not see any resistance or issues getting this implemented. I think it would be easy and could gain support from the administration including the principal, curriculum director, athletic director, coaches, and the school nurse .	Yes, possible body and food shaming for students. Middle school girls have enough body image problems as it is. Some families may not have the availability to fresh foods. Or finances.	It would all depend on what and how it is presented. There is a lot in curriculum now that is hard to be covered.

Section 3

Project Content and Recommendations

The purpose of this project is to review the standards already in place and identify areas of nutrition integration into the core curriculum. After a review of literature, existing nutrition programs, gathering information via email exchange, and reviewing national and state standards, the following recommendations were made for integration of nutrition components for schools (see Table 2). In core curriculum areas, nutrition components can be added to the already existing curriculum. Teachers would not necessarily be producing new materials, rather look to already existing materials.

Table 2

	<u>English Language Arts</u>	<u>Math</u>	<u>Science</u>	<u>Social Studies</u>	<u>Other</u>
Grades 6-8 Example	~ Writing – narrative (ex. social media influence on food choices).	~ Ratios – measurements and conversions (cups, ounces etc.).	~ Nutritional value in foods	~ Early civilizations (types of food, how harvested).	~ Drawing/paintings to include fruits/vegetables.
Grades 6-8 Example	~ Writing - arguments to support claims (specific foods/topics or wellness).	~ Expressions and equations - evaluate expressions with nutrition examples	~ How food grows (plant life cycle).	~ Places and regions – specific regions grow specific foods (looking at maps).	~ 3D representation - recommended daily MyPlate.
Grades 6-8 Example	~ Writing – informative text (specific food/nutrients and effects on body).	~ Unit rate – ratios and fractions (converting common measurements).	~ Food lab (how plants receive their foods).	~ Foods from specific cultures/regions (how have they evolved? What where their nutrients?).	~ Create advertisement for new healthy snack (can tie in with ELA).
Grades 6-8 Example	~ Group research/presentation or visual display on topics in nutrition (fruits/vegetables).	~ Calculating calories in foods (looking at food labels).	~ Photosynthesis – why is it important/what does it give us?	~ Industrial revolution – how did that change food production? Stages of food production.	~ Art contest for school – healthy eating poster etc. Display throughout the school.
Grades 6-8 Examples	~ Vocabulary – inclusion of words such as nutrients, MyPlate etc.	~ Percentages – daily values of foods (reading label and includes ratios and conversions).	~ Chemical reactions in foods and between foods/our bodies.	~ War time foods – what was their nutritional value? How were victory gardens used?	~ Goal setting in Physical Education classes – discussion of healthy eating behaviors ~ Have a school assembly with a speaker on healthy decision making (or other topics).

Math and science

Math and science are the two areas where implementation can easily happen. Examples can include topics when covering ratios, proportions, and percent in Math. This could expand into portion sizes with fractions/ratios and even budgeting for healthy foods. One example from the American Egg Board states, "Eggs are a good source of protein. One large egg has six grams of protein, which is 12% of the U.S recommended daily allowance. How many eggs would a person need to eat to get all his daily protein from eggs? How many grams of protein would this be?" (Eckert, 2004).

ELA and Social Studies

Other areas where nutrition can be implemented are ELA and Social Studies. ELA can incorporate nutritional words into vocabulary units and have essay prompts centered around nutrition and wellness. Along with writing prompts, students could perform research and develop a presentation to further their public speaking and listening skills. Social Studies can incorporate topics into their Colonial/Revolution Early America units by discussing early foods and their values and even exploring early recipes in contrast to current recipes. Another area of implementation is during discussion of the Civil War and the North/South and the variety of ethnic food options as well as discussion of how raced-based slavery contributed into developing the colonies. This includes their knowledge, skills, and traditions such as cultural foods and their influence, which directly correlate to eighth grade standards (Ohio Department of Education Social Studies Standards, n.d.). One indicator from the National Health Standards for grades 6-8 include indicator 2.8.2, "Describe the influence of culture on health beliefs, practices, and behaviors." This indicator can easily be met during Social Studies course with the discussion of diverse cultures. Diverse cultural foods can be examined, and a discussion of health and nutrition behaviors can review similarities and differences (National Health Education Standards - Sher | Healthy Schools | Cdc, 2020).

Art and technology

Art is a perfect area for the implementation of nutrition topics and discussion.

Students can make a healthy food package, flyer, and even an advertisement promotion for healthy eating behaviors. These fall within the art standards for producing and performing and applying art and design principals of three-dimensional artworks (Ohio Department of Education Art Standards n.d). Students can also discuss fruits/vegetables in different artists' work and the significance of including those items. With art, technology is another perfect content area to include nutrition topics. Students can create presentations for other classes centered around nutrition topics using the platforms they are learning in class (i.e., google slides, PowerPoint, etc.). Students can also create a tracking sheet for their diets, water consumption, and exercise.

Other areas of the school

The core curriculum is not the only way nutrition components can be added in a school setting. School personnel can continue to include MyPlate images in the cafeteria as well as have positive food message posters throughout the school. Through the interviews school staff noted there is inclusion of MyPlate images used in the school cafeteria. Schools can also utilize school gardens if there is one available. Administration can also seek out speakers such as a well noted speaker, Jeff Yalden for a school assembly centered around positive body image and the harm of social media on your nutrition behaviors. Schools can even go as far as having a field trip to a local farm/producer or even to the local FFA chapter to discuss agriculture and its importance in nutritional behaviors.

Discussion, and Limitations

The project examined the National and State of Ohio Health Education Standards and presented areas where schools can implement health education topics into Core Curriculum. There is a nutrition-specific curriculum that is available for schools that have the resources to offer the students a whole course, however, this is not viable for most schools due to time

constraints. Taking the steps to implement nutrition-specific ideas into the core curriculum is a starting point for schools and for school stakeholders to address the obesity epidemic of today's youth. The chart of examples outlines ways for nutrition implementation into curriculum (See Table 2).

It is important to note the limitations of this project. The school personnel were one small convenience sample take for inquiry for this project only. The recommendations could be useful to other schools and other subject areas not included in this project such as Family and Consumer Science, Vocational Agriculture, and Health. Further inquire could include boys vs. girls' nutrition knowledge and differences in school's socioeconomic status and the promotion of health and nutrition.

The emphasis placed on the curriculum that is evaluated is just a fraction of the problem. Realizing the importance of nutrition education, especially during adolescence in the most formative years is another part of the problem. The amount of time students spends in school or school-related activities, makes the school the logical place to start the discussion of the importance of good/positive nutrition topics. The continued obesity problem is affecting more youth, and it is crucial more conversations and studies happen to address the issue

References

- Abbott, K. (2021, May 19). *Interview* [Personal communication].
- About cdc healthy schools*. (2019, July 2). <https://www.cdc.gov/healthyschools/about.htm>
- Arango, C. (2017, June 21). *Integrating Nutrition Education into the School Curriculum* [Power Point].
- <https://osse.dc.gov/sites/default/files/dc/sites/osse/documents/Integrating%20Nutrition%20Education%20into%20School%20Curricula.pdf>
- Barrick, R. K., & Thoron, A. C. (2020). Teaching Behavior and Student Achievement: AECV582/WC244, 1/2016. *EDIS*, 2016(1), 6-6.
- Barwise, T. P. (1997). How much does food and drink advertising influence children's diet? In G. Smith (Ed.), *Children's food: Marketing and innovation* (pp. 126-151). New York: Blackie Academic & Professional.
- Baxter, S.D. (1998). Are elementary school teaching children to prefer candy but not vegetables? *Journal of School Health*. 68 (3), 111-113.
- Chau, M. M., Burgermaster, M., & Mamykina, L. (2018). The use of social media in nutrition interventions for adolescents and young adults—A systematic review. *International Journal of Medical Informatics*, 120, 77–91.
- <https://doi.org/10.1016/j.ijmedinf.2018.10.001>
- Defining Childhood Obesity | Overweight & Obesity | CDC*. 24 July 2019, <https://www.cdc.gov/obesity/childhood/defining.html>.
- Eckert G. 'If I Tell Them Then I Can': Ways of Relating to Adult Rules. *Childhood*. 2004;11(1):9-26. doi:[10.1177/0907568204040181](https://doi.org/10.1177/0907568204040181)
- Eggs in the classroom*. (n.d.). American Egg Board. Retrieved December 14, 2021, from <https://www.incredibleegg.org/professionals/k-2-schools/eggs-in-the-classroom/>

Food and Nutrition Board; Board on Children, Youth, and Families; Institute of Medicine.

Nutrition Education in the K-12 Curriculum: The Role of National Standards: Workshop Summary. Washington (DC): National Academies Press (US); 2013 Aug 21. 5, Lessons Learned from State and Local Experiences. Available from:
<https://www.ncbi.nlm.nih.gov/books/NBK202122/>

Goddard , L. (2021, September 26). *Interview* [Personal communication].

Health and academics | healthy schools | cdc. (2021, February 1).

https://www.cdc.gov/healthyschools/health_and_academics/index.htm

Hendry, L. B., Roberts, W., Glendinning, A., & Coleman, J. C. (1992). Adolescents' perceptions of significant individuals in their lives. *Journal of Adolescence*, 15(3), 255–270.
[https://doi.org/10.1016/0140-1971\(92\)90029-5](https://doi.org/10.1016/0140-1971(92)90029-5)

Hoelscher, D. M., Evans, A., Parcel, GUYS., & Kelder, STEVENH. (2002b). Designing effective nutrition interventions for adolescents. *Journal of the American Dietetic Association*, 102(3, Supplement), S52–S63. [https://doi.org/10.1016/S0002-8223\(02\)90422-0](https://doi.org/10.1016/S0002-8223(02)90422-0)

Jackson, A. W. & Davis, G. A. (with Abeel, M. & Bordonaro,A.) (2000). Turning points 2000: Education adolescents in the 21st century. New York: Teachers College Press.
Journal of School Health. 68 (3), 111-113.

K–12 online school curriculum catalog. (n.d.). Retrieved October 26, 2021, from

<https://www.pearson.com/content/one-dot-com/one-dot-com/us/en/prek-12/products-services-teaching/online-blended-learning-solutions/connections-learning/k12-online-school-curriculum/grade-level.html>

Kristjánsson, A. L., Sigfúsdóttir, I. D., & Allegrante, J. P. (2010). Health behavior and academic achievement among adolescents: The relative contribution of dietary habits, physical activity, body mass index, and self-esteem. *Health Education & Behavior: The Official Publication of the Society for Public Health Education*, 37(1), 51–64.

<https://doi.org/10.1177/1090198107313481>

Levine, M.P., Smolak, L., & Hayden, H. (1994). The relation of sociocultural factors to eating attitudes and behaviors among middle school girls. *Journal of Adolescence*, 14, 472–491.

Lounsbury, J. H. (1982). *This we believe*. National Middle School Association. Columbus. Ohio.
(ERJC Document Reproduction Service No. ED 226 5 DJ

Makselan, J. (2021, October 26). *Interview* [Personal communication].

McNeill, B. (2010). The Important Role Non-Parental Adults Have with Youth Learning Leadership. *Journal of Extension* , 48(5).

Middle school health curriculum | teen health. (n.d.). McGraw Hill. Retrieved December 14, 2021, from <https://www.mheducation.com/prek-12/explore/health/teen-health.html>

Middle school motivational speaker. (2012, April 3). Mental Health Motivational Speaker Teen Mental Health Speaker. <https://jeffyalder.com/middle-school-youth-speaker/>

National center for education statistics (Nces) home page, part of the u. S. Department of education. (n.d.). Retrieved March 22, 2022, from <https://nces.ed.gov/>

National Health Education Standards - SHER | Healthy Schools | CDC. 3 Aug. 2020, <https://www.cdc.gov/healthyschools/sher/standards/index.htm>.

New York: Blackie Academic & Professional.

Nga, V. T., Dung, V. N. T., Chu, D.-T., Tien, N. L. B., Van Thanh, V., Ngoc, V. T. N., Hoan, L. N., Phuong, N. T., Pham, V.-H., Tao, Y., Linh, N. P., Show, P. L., & Do, D.-L. (2019). School education and childhood obesity: A systemic review. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews*, 13(4), 2495–2501.
<https://doi.org/10.1016/j.dsx.2019.07.014>

Noes, B. (2021, June 24). *Interview* [Personal communication].

Norwood, G.R. (1984). The relationship of health and nutrition to the learning process. Professional paper presented at A.C.E.I Convention. Vancouver. British Columbia,

Canada (ERIC Document Reproduction Service No. ED 248955).

Ohio Department of Education (2022). *Overall-Health-Education-Curriculum-Requirements*.

<https://education.ohio.gov/getattachment/Topics/Learning-in-Ohio/Health-Education/Overall-Health-Education-Curriculum-Requirements.pdf.aspx>

Ohio Department of Education Language Arts Standards . (n.d.). Ohio Department of Education Language Arts Standards; Ohio Department of Education.

<https://education.ohio.gov/getattachment/Topics/Learning-in-Ohio/English-Language-Art/English-Language-Arts-Standards/ELA-Learning-Standards-2017.pdf.aspx?lang=en-US>

Ohio Department of Education Math Standards . (n.d.-b). Ohio Department of Education Math Standards . <https://education.ohio.gov/getattachment/Topics/Learning-in-Ohio/Mathematics/Ohio-s-Learning-Standards-in-Mathematics/MATH-Standards-2017.pdf.aspx?lang=en-US>

Ohio Department of Education Social Studies Standards . (n.d.). Ohio Department of Education Social Studies Standards; Ohio Department of Education.
<https://education.ohio.gov/getattachment/Topics/Learning-in-Ohio/Social-Studies/Ohio-s-Learning-Standards-for-Social-Studies/SSFfinalStandards01019.pdf.aspx?lang=en-US>

Ohio Department of Education Visual Art Standards. (n.d). Ohio Department of Education Visual Art Standards; Ohio Department of Education.
<https://education.ohio.gov/getattachment/Topics/Learning-in-Ohio/Fine-Arts/Fine-Arts-Standards/Ohio-Visual-Art-Standards-2012.pdf.aspx?lang=en-US>

Pirouznia M. The association between nutrition knowledge and eating behavior in male and female adolescents in the US. *Int J Food Sci Nutr*. 2001 Mar;52(2):127-32. doi: 10.1080/713671772. PMID: 11303460.

Pittser, K. (2021, June 3). *Interview* [Personal communication].

Poolton, M. A. (1972). Predicting application of nutrition education. *Journal of Nutrition*

- Education, 4(3), 110–113. [https://doi.org/10.1016/S0022-3182\(72\)80022-0](https://doi.org/10.1016/S0022-3182(72)80022-0)
- Seidenfeld ME, Sosin E, Rickert VI. Nutrition and eating disorders in adolescents. The Mount Sinai Journal of Medicine, New York. 2004 May;71(3):155-161. PMID: 15164127.
- Shahid, B. (2003). A study of school principals and the promotion of nutritional health in middle grade schools. Education, 123(3), 552. <https://proxy.lib.ohio-state.edu/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=a9h&AN=9557025&site=eds-live&scope=site>
- Snap-ed | family and consumer sciences. (n.d.). Retrieved March 19, 2022, from <https://fcs.osu.edu/programs/nutrition/snap-ed>
- “State Obesity Data.” *The State of Childhood Obesity*, <https://stateofchildhoodobesity.org/states/>. Accessed 15 Feb. 2021.
- Story, M., Lytle, L. A., Birnbaum, A. S., & Perry, C. L. (2002). Peer-led, school-based nutrition education for young adolescents: Feasibility and process evaluation of the teens study. *Journal of School Health*, 72(3), 121–127. <https://doi.org/https://doi.org/10.1111/j.1746-1561.2002.tb06529.x>
- Strober, M. (1984). Stressful life events associated with bulimia in anorexia nervosa. Empirical findings and theoretical speculations. *International Journal of Eating Disorders*, 3, 3–17.
- U.S. Department of Education (n.d.). Children's nutrition and learning. (ERIC Document Reproduction Service No. ED 369 579).
- Wechsler, H., Brener, N. D., Kuester, S., & Miller, C. (2001). Food service and foods and beverages available at school: Results from the school health policies and programs study 2000. *The Journal of School Health*, 71(7), 313-24. <http://dx.doi.org/10.1111/j.1746-1561.2001.tb03509.x>
- Welch, S.L., Doll, H.A., & Fairburn, C.G. (1997). Life events and the onset of bulimia nervosa. *Psychological Medicine*, 27, 515–522.

Wooley, S.F., Marx, E., Lohrmann, D., & Smith, B. (1998). Healthy health education for your school and your students. *National Association of Secondary School Principals*, 82 (601), 27-32

Young Adults Rely Heavily on Their Smartphones for Job Seeking, Educational Content, and Health Information [Internet]. Pew Research Center: Internet, Science & Tech. 2015 [cited 2016 Sep 20]. Available from: <http://www.pewinternet.org>

Table 1
Interview Questions

<u>Interviewees</u>	<u>Superintendent</u>	<u>Curriculum Director</u>	<u>Middle/High School Coach & Teacher</u>	<u>Middle School Teacher</u>	<u>Support Staff</u>
Question 1: Do you feel your school does enough nutrition education for middle school girls?	Nutrition education is incorporated into our health curriculum in eighth grade for all middle school students. With that being shared, we can always further support the importance of health and nutrition for our students. I am a strong believer that if we want to maximize our students' academic sides, we must also address the physical, social, and emotional conditions.	While we do an excellent job covering nutrition content during our eighth-grade health course, we could always do better. The main barrier that we always face in public education is the amount of instructional time available. By law, we are required to address many different topic areas including teen dating violence and opioid addiction. These unfunded mandates must be addressed first and then we also allow time for other important concepts such as nutrition.	Absolutely not. From my experiences, very few athletes have any idea of what proper nutrition and a proper diet will do for them.	No, only students who can take health or AG have access to this information - eighth grade girls who do not take band or choir.	No, we do not have a specific program.
Question 2: Does your school(s) have a wellness committee? If so, how many are involved, and what are their primary roles?	Yes, our district has a wellness committee and a board approved wellness policy (it is attached). This policy is reviewed, and updates are shared at a board meeting annually. Mr. Campbell has led this process in the past. With his retirement, Mrs. Park will be taking over. As for roles involved, I know we have PE and Health teacher reps, district level administrators, and other food service staff members	Miami Trace does have a Wellness Committee that includes staff members. This group meets annually to review the required wellness plan that is adopted by the Board of Education each year.	No, I am not. Involved.	Wellness Committee Members in coordination with the Adena Health System, Miami Trace Wellness Committee is collecting a variety of data for school community health and wellness.	No, not really. We have our health nurse and the health department along with the superintendent who make decisions for our district along with the CDC guidelines.
Question 3: Does your cafeteria include info graphs of MyPlate? Do you feel the school's food service does enough to encourage healthy eating?	Yes, our cafeteria does include graphs for our student that include calorie intake and ingredients. To get elementary student to try new foods, we even had our director, Mr. Campbell, dress up as Chef Linguini to encourage them explore healthy options.	Yes, Miami Trace has a poster of My Plate hung in the cafeterias. Our school's food service department works tirelessly to offer a large variety of foods for our students. This variety is shared with students through the Meal Viewer App which or shown on the screens in the cafeteria.		Yes, this year has been a struggle with food supply shortages	There are posters in the cafeteria explaining the MyPlate graphs and diagrams. Nutrition information is posted also in the cafeteria.
Question 4: Regarding Core Curriculum for middle school, do you feel	It is important that we always reflect and analyze our curriculum offerings for our students. While many areas have state	There is room to add nutrition components to the four main content areas. It would be better received by teachers if the cross-content ideas (as you presented in the	Science - Discuss the proper foods to eat before practice and before competition. As	Maybe in physical education.	There are some nutrition discussions in science classes.

there is room to add nutrition components?	standards which are the basis of the curriculum mapping, we have other areas that model available national standards. I know that instructional time is of the essence, and it is difficult to make a statement about "room" to add, but I do believe that our staff understands prioritizing and providing the best possible instruction needed for our students. Nutritional concepts can be infused in many areas like you have mentioned in the parentheses of this question. In addition, we have art (where foods are drawn and painted - which opens the door for discussion). We also have a high school course titled, "Strength and Conditioning" - what better way to communicate the importance of nutrition with our students. As a former coach myself, I used to talk with our athletes about "What you put into your body is what you will get out." In conclusion, yes, I do believe we can always find ways to improve our discussion and emphasis of healthy lifestyles with our students.	question) were provided rather than a whole additional topic. This is also helpful to students as the explicit connections are forced and real-world examples are demonstrated.	well as the importance of proteins, carbohydrates, etc. Math - Correct measurements of portion control during meals. Can also figure out time schedules for when to eat prior to practice and competition as well as how much to eat. Can also use percentages and formulas pertaining to heart rate and optimal beats per minute for proper conditioning. Social Studies - Study and discuss the diets of native people from various cultures and how those diets assisted them in their daily lives. Research the level of fitness of those people for them to survive. ELA - In addition to the example provided, also have students research the importance of eating a proper breakfast. Many girls do not like to eat breakfast at all. This is also true for lunch. Then they go out to practice after school and do not perform up to their ability.	Math uses measurements and social studies talk about grains.
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<p>Question 5: Can you see resistance and or issues in implementing nutrition topics into the curriculum?</p>	<p>I am not sure that I see resistance versus hesitation. This hesitation stems from the need for communication and time. If staff can evaluate and infuse nutritional concepts where most appropriate, I see support and encouragement for our student body in general.</p>	<p>The two-issue that could potentially cause a challenge would be time and resources/materials.</p>	<p>I do not see any resistance or issues getting this implemented. I think it would be easy and could gain support from the administration including the principal, curriculum director, athletic director, coaches, and the school nurse .</p>	<p>Yes, possible body and food shaming for students. Middle school girls have enough body image problems as it is. Some families may not have the availability to fresh foods. Or finances.</p>	<p>It would all depend on what and how it is presented. There is a lot in curriculum now that is hard to be covered.</p>
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Table 2

	<u>English Language Arts</u>	<u>Math</u>	<u>Science</u>	<u>Social Studies</u>	<u>Other</u>
Grades 6-8 Example	~ Writing – narrative (ex. social media influence on food choices).	~ Ratios – measurements and conversions (cups, ounces etc.).	~ Nutritional value in foods	~ Early civilizations (types of food, how harvested).	~ Drawing/paintings to include fruits/vegetables.
Grades 6-8 Example	~ Writing - arguments to support claims (specific foods/topics or wellness).	~ Expressions and equations - evaluate expressions with nutrition examples	~ How food grows (plant life cycle).	~ Places and regions – specific regions grow specific foods (looking at maps).	~ 3D representation - recommended daily MyPlate.
Grades 6-8 Example	~ Writing – informative text (specific food/nutrients and effects on body).	~ Unit rate – ratios and fractions (converting common measurements).	~ Food lab (how plants receive their foods).	~ Foods from specific cultures/regions (how have they evolved? What where their nutrients?).	~ Create advertisement for new healthy snack (can tie in with ELA).
Grades 6-8 Example	~ Group research/presentation or visual display on topics in nutrition (fruits/vegetables).	~ Calculating calories in foods (looking at food labels).	~ Photosynthesis – why is it important/what does it give us?	~ Industrial revolution – how did that change food production? Stages of food production.	~ Art contest for school – healthy eating poster etc. Display throughout the school.
Grades 6-8 Examples	~ Vocabulary – inclusion of words such as nutrients, MyPlate etc.	~ Percentages – daily values of foods (reading label and includes ratios and conversions).	~ Chemical reactions in foods and between foods/our bodies.	~ War time foods – what was their nutritional value? How were victory gardens used?	~ Goal setting in Physical Education classes – discussion of healthy eating behaviors ~ Have a school assembly with a speaker on healthy decision making (or other topics).

Figures

Figure 1.0 MyPlate



Figure 2.0 MyPlate Poster



Appendices

A: Teen Health Standard Correlations

B: SNAP-Ed Alignment with CORE standards

C: National Health Standards

D: National Health Standards Performance Indicators

E: 7-8 grade State of Ohio Health Education Curriculum

Appendix A: Teen Health Standard Correlations

Teen Health © 2021 Correlation to the National Health Standards

Module #	Module Title	Lesson #	Lesson Title	National Health Education Standards
FM (Module 0)	Your Health and Wellness	1	Your Total Health	1.8.1, 1.8.7
		2	Health Influences and Risk Factors	1.8.1, 1.8.3, 1.8.4, 1.8.5, 2.8.1, 2.8.2, 2.8.3, 2.8.4, 2.8.5, 2.8.6, 2.8.7, 2.8.8, 2.8.9, 2.8.10, 3.8.1, 3.8.2, 3.8.3, 3.8.5, 4.8.2, 7.8.3, 8.8.4
		3	Building Health Skills	1.8.1, 1.8.6, 1.8.7, 3.8.1, 3.8.2, 3.8.3, 3.8.4, 3.8.5, 4.8.1, 4.8.2, 4.8.3, 4.8.4, 5.8.1, 5.8.2, 5.8.3, 5.8.4, 5.8.5, 5.8.6, 5.8.7, 6.8.1, 6.8.2, 6.8.3, 6.8.4, 7.8.1, 7.8.2, 7.8.3, 8.8.1, 8.8.2, 8.8.3, 8.8.4
		4	Making Decisions and Setting Goals	1.8.7, 5.8.1, 5.8.3, 5.8.4, 5.8.5, 5.8.6, 5.8.7, 6.8.1, 6.8.2, 6.8.3, 6.8.4
		5	Choosing Health Services	1.8.7, 2.8.10, 3.8.1, 3.8.2, 3.8.3, 3.8.5
Module 8	Nutrition	1	Nutrients Your Body Needs	6.8.1, 7.8.2, 7.8.3
		2	Creating a Healthful Eating Plan	5.8.4, 6.8.1, 6.8.2, 7.8.1, 7.8.2, 7.8.3, 8.8.1, 8.8.2
		3	Managing Your Weight	1.8.6, 2.8.2, 5.8.2, 5.8.4, 5.8.7, 6.8.1, 6.8.2, 6.8.3, 7.8.1, 7.8.2, 7.8.3
		4	Body Image and Eating Disorders	1.8.9, 3.8.4, 7.8.3
Module 9	Physical Activity	1	Becoming Physically Fit	1.8.6, 5.8.2, 5.8.4, 7.8.1, 7.8.2
		2	Creating Your Fitness Plan	1.8.1, 1.8.2, 1.8.3, 1.8.4, 1.8.5, 1.8.6, 1.8.7, 1.8.8, 1.8.9, 2.8.3, 2.8.4, 2.8.5, 2.8.6, 2.8.7, 2.8.8, 3.8.5, 4.8.2, 5.8.1, 5.8.3, 5.8.4, 5.8.5, 5.8.6, 5.8.7, 6.8.1, 6.8.2, 6.8.3, 7.8.1, 7.8.2, 8.8.2
		3	Performing at Your Best	1.8.1, 1.8.5, 5.8.1, 6.8.1, 6.8.2, 6.8.3
		4	Preventing Sports Injuries	1.8.5

Figure A.1. Teen Health Correlation to the National Health Standards 2021

Appendix B: SNAP-Ed Alignment with CORE standards

Ohio Community Nutrition Education Programs Align with Common Core Standards

The Balance My *Day* nutrition education curriculum developed by the Healthy Kids Challenge used by the Ohio Expanded Food and Nutrition Education and SNAP-Ed programs aligns with Ohio Common Core Curriculum Standards in the following ways:

Kindergarten

- Speaking and Listening standard SL.K.5
- Reading Foundational Skills standard R.K.2
- Language standard: L.K.2
- Math standard K.CC.N.F
- Math standard K.OAT.A.1

1st Grade

- Speaking and Listening standard SL.1.3
- Reading Foundational Skills standard R.1.2
- Language standard L.1.2
- Math standard 1.MD.D.C
- Math standard 1.OAT.P.H

2nd Grade

- Speaking and Listening standard SL.2.1
- Language standard L.2.5
- Reading for literature standard RL.2.1
- Math standard 2.MD.D.B
- Math standard 2.OAT.N.B

3rd Grade

- Speaking and Listening standard SL.3.1a
- Reading for Literature standard RL.3.1
- Language standard L.3.1g
- Math standard 3.OAT.N.J
- Math standard 3.OAT.N.A

4th Grade

- Speaking and Listening standard SL.4.1a
- Language standard L.4.1d
- Reading for Literature standard RI.4.1
- Math standard 4.MD.O.C
- Math standard 4.OAT.N.K

5th Grade

- Speaking and Listening standard SL.5.1a
- Reading for Literature standard RL.5.1
- Math Standard 5.NF.N.1
- Math Standard 5.NO.N.L

6th Grade

- Speaking and Listening standard SL.6.1
- Writing standard W.6.1
- Writing standard W.6.2
- Math standard 6.RP.N.D
- Math standard 6.EE.A.F

7th Grade

- Speaking and Listening standard SL.7.1
- Reading for Literature standard RL.7.2
- Writing standard W.7.1
- Math standard 7.RP.N.I
- Math standard 7.NS.N.F

8th Grade

- Speaking and listening standard SL.8.1
- Writing standard W.8.1
- Writing standard W.8.2
- Math standard 8.F.A.F
- Math standard 8.EE.M.A.

The list provided is not exhaustive. If you would like a more in depth list or more information regarding how our nutrition education program aligns with Ohio Common Core Standards please feel free to contact your local Community Nutrition Education provider



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COMMUNITY NUTRITION

FAMILY AND CONSUMER SCIENCES

DEPARTMENT OF EDUCATION AND HUMAN ECOLOGY

Appendix C: National Health Standards

Standard 1: Students will comprehend concepts related to health promotion and disease

prevention to enhance health.

Standard 2: Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.

Standard 3: Students will demonstrate the ability to access valid information, products, and services to enhance health.

Standard 4: Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.

Standard 5: Students will demonstrate the ability to use decision-making skills to enhance health.

Standard 6: Students will demonstrate the ability to use goal-setting skills to enhance health.

Standard 7: Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.

Standard 8: Students will demonstrate the ability to advocate personal, family, and community health.

<https://www.cdc.gov/healthyschools/sher/standards/index.htm>.

Appendix D: National Health Standards Performance Indicators**Standard 1: Performance Indicators**

- 1.8.1 Analyze the relationship between healthy behaviors and personal health.
- 1.8.2 Describe the interrelationships of emotional, intellectual, physical, and social health in adolescence.
- 1.8.3 Analyze how the environment affects personal health.
- 1.8.4 Describe how family history can affect personal health.
- 1.8.5 Describe ways to reduce or prevent injuries and other adolescent health problems.
- 1.8.6 Explain how appropriate health care can promote personal health.
- 1.8.7 Describe the benefits of and barriers to practicing healthy behaviors.
- 1.8.8 Examine the likelihood of injury or illness if engaging in unhealthy behaviors.
- 1.8.9 Examine the potential seriousness of injury or illness if engaging in unhealthy behaviors.

Standard 2: Performance Indicators

- 2.8.1 Examine how the family influences the health of adolescents.
- 2.8.2 Describe the influence of culture on health beliefs, practices, and behaviors.
- 2.8.3 Describe how peers influence healthy and unhealthy behaviors.
- 2.8.4 Analyze how the school and community can affect personal health practices and behaviors.
- 2.8.5 Analyze how messages from media influence health behaviors.
- 2.8.6 Analyze the influence of technology on personal and family health.
- 2.8.7 Explain how the perceptions of norms influence healthy and unhealthy behaviors.
- 2.8.8 Explain the influence of personal values and beliefs on individual health practices and behaviors.
- 2.8.9 Describe how some health risk behaviors can influence the likelihood of engaging in unhealthy behaviors.

2.8.10 Explain how school and public health policies can influence health promotion and disease prevention.

Standard 3: Performance Indicators

3.8.1 Analyze the validity of health information, products, and services.

3.8.2 Access valid health information from home, school, and community.

3.8.3 Determine the accessibility of products that enhance health.

3.8.4 Describe situations that may require professional health services.

3.8.5 Locate valid and reliable health products and services.

Standard 4: Performance Indicators

4.8.1 Apply effective verbal and nonverbal communication skills to enhance health.

4.8.2 Demonstrate refusal and negotiation skills that avoid or reduce health risks.

4.8.3 Demonstrate effective conflict management or resolution strategies.

4.8.4 Demonstrate how to ask for assistance to enhance the health of self and others.

Standard 5: Performance Indicators

5.8.1 Identify circumstances that can help or hinder healthy decision making.

5.8.2 Determine when health-related situations require the application of a thoughtful decision-making process.

5.8.3 Distinguish when individual or collaborative decision making is appropriate.

5.8.4 Distinguish between healthy and unhealthy alternatives to health-related issues or problems.

5.8.5 Predict the potential short-term impact of each alternative on self and others.

5.8.6 Choose healthy alternatives over unhealthy alternatives when making a decision.

5.8.7 Analyze the outcomes of a health-related decision.

Standard 6: Performance Indicators

6.8.1 Assess personal health practices.

6.8.2 Develop a goal to adopt, maintain, or improve a personal health practice.

6.8.3 Apply strategies and skills needed to attain a personal health goal.

6.8.4 Describe how personal health goals can vary with changing abilities, priorities, and responsibilities.

Standard 7: Performance Indicators

7.8.1 Explain the importance of assuming responsibility for personal health behaviors.

7.8.2 Demonstrate healthy practices and behaviors that will maintain or improve the health of self and others.

7.8.3 Demonstrate behaviors to avoid or reduce health risks to self and others.

Standard 8: Performance Indicators

8.8.1 State a health-enhancing position on a topic and support it with accurate information.

8.8.2 Demonstrate how to influence and support others to make positive health choices.

8.8.3 Work cooperatively to advocate for healthy individuals, families, and schools.

8.8.4 Identify ways in which health messages and communication techniques can be altered for different audiences.

<https://www.cdc.gov/healthyschools/sher/standards/index.htm>.

Appendix E: 7-8 grade State of Ohio Health Education Curriculum
7-8 Health Education Curriculum Legislated

Requirements

The Ohio Revised Code (ORC) [3313.60](#) states that the board of each cooperative education school district shall prescribe a curriculum for all schools under its control for health education.

The health education curriculum must include:

- The nutritive value of foods, including natural and organically produced foods, the relation of nutrition to health, and the use and effects of food additives.
- The harmful effects of and legal restrictions against the use of drugs of abuse, alcoholic beverages, and tobacco.
- Venereal disease education, except that upon written request of the student's parent or guardian, a student shall be excused from taking instruction in venereal disease education; This content should also address ORC [3313.6011](#)
- In grades seven through twelve, age-appropriate instruction in dating violence prevention education, which shall include instruction in recognizing dating violence warning signs and characteristics of healthy relationships.
- In order to assist school districts in developing a dating violence prevention education curriculum, the department of education shall provide on its web site links to free curricula addressing dating violence prevention.

If the parent or legal guardian of a student less than eighteen years of age submits to the principal of the student's school a written request to examine the dating violence prevention instruction materials used at that school, the principal, within a reasonable period of time after the request is made, shall allow the parent or guardian to examine those materials at that school.

- Prescription opioid abuse prevention, with an emphasis on the prescription drug

epidemic and the connection between prescription opioid abuse and addiction to other drugs, such as heroin.

Furthermore, Governor's Cabinet Opiate Action Team has provided [recommendations](#) for instruction in prescription opioid abuse prevention.

*The district should consider age-appropriate content and develop their own curriculum based on the needs of their students and community.