

Tracking Your Physical Health and Fitness

Master's Project

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Introduction

4-H project books have been an instrumental part of the 4-H Youth Development program in some form since around the 1920s (Wessel & Wessel, 1980). Ohio 4-H currently offers over 200 project books, however in the past 20 years it has offered fewer than 10 projects in the category of healthy living. In 2021 a new 4-H project book titled *Tracking Your Health and Fitness* was released. However, prior to the start of writing the project book, its scope and sequence had not been reviewed by anyone with a connection to the 4-H Healthy Living Design Team. Furthermore, it was written with the assumption that those completing the project would use a step counting device to complete the activities. Based on recommendations from the design team's review, it was determined that the project book should be revised, and the 4-H Healthy Living Design Team and this author were the ones charged to complete it.

4-H Youth Development

4-H Youth Development originated in 1902 in Springfield, Ohio, where A. B. Graham started an agriculture experiment club. From there, 4-H has grown into an international youth development program serving all 50 states and over 80 countries; in the U.S. it is administered through over 100 public universities, serving nearly six million youth. Today, 4-H is implemented by over 3,500 professionals and 500,000 volunteers through school and community clubs, in-school and after-school programs, and 4-H camps (4-H, n.d.). Nationally, half of the modern 4-H youth participants are from urban or suburban communities (National 4-H Council, 2015). Regardless of location, 4-H provides experiences that increase the likelihood of members experiencing enhanced well-being and becoming positive, contributing citizens.

4-H has recently begun using the *Thriving Model* as a universal guiding framework for programs and decision-making within the organization. Dr. Mary Arnold and a team have created this model based on extensive research that identifies the processes that facilitate developmental change (Arnold, 2018;

Arnold & Gagnon, 2018, 2020). The 4-H Thriving model predicts that youth who participate in 4-H programs that provide a high-quality developmental context will thrive, and thriving youth become engaged and achieve key developmental outcomes. In turn, achieving developmental outcomes is positive to lead to long-term outcomes in adulthood.

4-H Project Books – Experiential Learning

One tool that 4-H uses across the United States are 4-H projects. Keeping records of project activities was important especially in the early days of 4-H (University of Kentucky 4-H Youth Development, n.d.; Wessel & Wessel, 1982). 4-H uses project-based learning, a teaching method that is aligned with Dewey's (1938) theory of experience in education, which coincided with the emergence of the early days of 4-H projects. Project-based learning is a more learner-centered model in which the student, in collaboration with peers or an adult volunteer, is engaged with the content and problem-solving at their own pace and intensity. A non-lecture format has shown to be better for retaining information, especially if presented in an inquiry-based format (Barab et al., 2001). 4-H's project books do just that, as they present a topic to the youth and challenge them to learn more, practice the skill, and then apply it to their personal life. Youth gain a better understanding of the topic if they are entrusted with the development and implementation of the project from the beginning (Schwartz et al., 2013). You can see this when a 4-H'er may choose to take a livestock project and then raises that animal from birth until market. They are more invested in the learning and skills needed to raise that animal because of its experiential nature than if they were hearing or reading about how to raise the animal.

Tracking Your Physical Health and Fitness

Health is one of the Ohio State University (OSU) and 4-H's main priorities. The 4-H program has addressed healthy food and nutrition since its inception; health was added as the fourth H of 4-H in 1911. More recently, Cooperative Extension issued a national framework for health and wellness in 2014

(Braun et al., 2014) and updated it in 2021 (Burton et al., 2021). OSU has a model of nine dimensions of wellness that guides its health education programs for students (Melnik & Neale, 2018).

The topic of tracking your health has become increasingly important to teach youth so they are ready for adulthood. There are really three main reasons that tracking your health is needed in adulthood: medical screenings, insurance incentives, and knowing you are meeting ideal health recommendations. Doctors, mostly primary care physicians, have expressed a great desire for their patients to be better educated and informed about their personal health (Aita et al., 2005). There are many health factors that contribute to a holistic picture of health, but many of those cannot be recorded during a wellness visit with a doctor. A practical example of this is when a doctor asks screening questions about a patient's health, such as how much water do you consume in a week? Unlike vital signs, there is no easy way for a doctor to measure right then and there about the patient's water intake. It must be self-reported by the patient, which means that to provide an accurate response the patient must be keeping track of their water intake. Physicians want their patients to be prepared to answer self-reported questions (Bourgeois et al., 2007).

The second reason that tracking health behaviors is important is the economic incentives gained from employers and insurance companies. Employers want their employees to be healthy so that they do not have to spend money on workers compensation or insurance costs. Many companies and organizations have started incentive programs that encourage employees to track their health behaviors such as step count, eating habits, water intake, and more. Often employees get some financial discount or rewards for doing these habits and tracking them in a system. Companies and researchers have found that periodic reinforcement of behaviors and large rewards for positive behavior are effective, but it is important to note that there is concern that it decreases the intrinsic motivation to do these behaviors and may not be long lasting without increased reinforcement (Warner & Murt, 1984).

Finally, if anyone—youth or adults—is interested in just bettering their health due to their own personal goals, motivation, or concern for their health, tracking their health behaviors and comparing them to the normative values or other guidelines is a great way for them to combat many illnesses, diseases, and injuries, especially chronic diseases (Chiauzzi et al., 2015). Although wearable tracking devices have increased in popularity (Stiglbauer et al., 2019), the healthy living design team members thought that the reliance on a tracking device could limit participation of those youth with limited financial resources to purchase such devices and thought the focus should be on raising awareness of how these behaviors contribute to overall physical health.

Because of the expectation for adults to be aware of their health for medical screenings, fiscal incentives through employers, and internal motivation for better health, educating teens and youth about adopting these practices now allows them to be better prepared for adulthood. Also, a 2019 study found that if individuals are tracking their health, they are more likely to have better health because they are more informed about where their current health stands (Stiglbauer et al., 2019). Better educating youth to be aware of and engaging with healthy decisions should increase overall health in Ohio, which would contribute to bringing down obesity levels and diseases.

Literature Review

This section reviews the literature, history, and context in which the project book was written. The book is written within the Ohio 4-H Youth Development organization, using the experiential learning model as a guide, and aiming to meet both OSU Extension Publication and National 4-H Peer Review standards. The project book covers the topic of physical health, and a breadth of literature was reviewed to provide accurate, research-based, up-to-date information in the book.

4-H Youth Development

The primary task of youth development organizations is to promote the socialization of youth by helping them reach their full potential (Pittman, 1993). Nationally, one of 4-H's current priorities is on

healthy living, specifically positive mental health with teens; diversity, equity, and inclusion; and civic engagement (National 4-H Council, 2020b).

Ohio 4-H Healthy Living Design Team

Ohio 4-H Youth Development uses a team approach that involves 4-H professionals from across levels and across the state to lead in different areas. The Ohio 4-H Healthy Living Design Team has overseen healthy living programming since its inception in 2013. The design team has been charged by the State 4-H Program Leader to address healthy living issues for Ohio youth, create programs and curricula on healthy living, and further research to gain an understanding of the state of youth health in Ohio. The design team has created subcommittees within the team to focus on the following areas: mental health, accommodating disabilities, and teen leader approaches, with ad hoc subcommittees created as needed.

The 4-H Thriving Model

The 4-H Thriving Model was created by Dr. Mary Arnold, a professor and 4-H Youth Development Specialist at Oregon State University, in 2018 as national 4-H's first organization-wide youth development model (Figure 1). The 4-H Program Leader's Working Group (PLWG) chartered a task force for 3 years to further develop and implement the thriving model across the national 4-H system (Arnold & Gagnon, 2020). The model itself has been received well across the national 4-H system and continues to inspire and create enthusiasm and one voice across the hundreds of universities that implement the 4-H program. The model and vision from Arnold have allowed 4-H to put research and evidence behind the already successful practices 4-H uses and to better align 4-H with positive youth development work (Lerner, 2020).



Figure 1
The 4-H Thriving Model (Extension Foundation et al., n.d.)

As depicted in Figure 1, the thriving model is divided into four parts: (a) the developmental context, (b) the thriving trajectory, (c) developmental outcomes, and (d) long-term outcomes. The developmental context focuses on making sure that 4-H programs have positive and safe spaces for youth to belong to, foster caring and challenging relationships, and encourage youth to explore their personal sparks (Scales et al., 2011). The thriving trajectory focuses on different developmental indicators that can help propel the youth to a more positive identity and outcomes. According to the model, through the experiences they have in 4-H, youth should be more open to challenge and discovery, have a growth mindset, have a hopeful purpose, develop a prosocial orientation, become transcendentally aware, be able to engage positively with their own and others' emotions, and be able to set goals and manage them (Arnold, 2017). The developmental context and thriving trajectory should lead to developmental and long-term outcomes that lead the 4-H'er into becoming a contributing and successful adult. Reviewing evaluation results of past and present 4-H programs, we can see that the context and growth that 4-H creates lead youth to having connections to others; competence and standards; and long-term academic or vocational success, civic engagement, employability, and overall happiness and well-being (Arnold & Gagnon, 2018).

4-H has a longstanding reputation as contributing to the positive development of youth. 4-H has been pointed out by governmental champions, academic pioneers, and other leaders as an instrumental part of youth's overall educational process (Carver & Enfield, 2006). 4-H continues to produce effective youth and continues to adapt and be relevant to the ever-changing world and field of youth development.

Experiential Learning Model

The Experiential Learning Model was first brought into use by David Kolb (1984), following from the work of other theorists including John Dewey (1938), Kurt Lewin (1947), and Jean Piaget (1936). Enfield et al. (2007) noted that Kolb's model was adapted in the late 1980s and 1990s to produce what we more commonly see today in 4-H curriculum. The model now has five modes that learners rotate through. The five steps of the model are experience, share, process, generalize, and apply, and the learner then cycles back to experience as the model is a never-ending cycle of growth and learning (Figure 2).

The national 4-H Cooperative Curriculum System, which produced curriculum in the late 1980s and 1990s, and 4-H curriculum designers at The Ohio State University use a set of design components to create and organize project books (Horton et al., 1999). The project book template is based on experiential education learning theory. Having these consistent project book components helps youth to better make use of the book, as they take learners' needs into consideration, identify skills to be learned and content outcomes, organize the units into different areas of interest, and assist in determining the depth of experience of the learner.

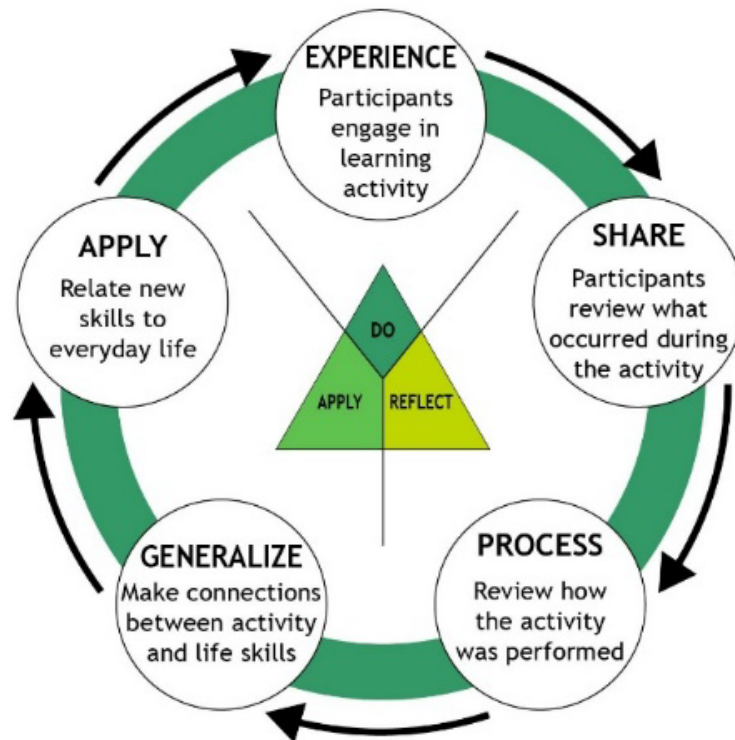


Figure 2
The Experiential Learning Model (Wisconsin 4-H Division of Extension, 2022)

The Experiential Learning Model starts with the participant's experience, whether the youth have any with that specific topic or not (Andresen et al., 2000; Dewey, 1938; Kolb, 1984). 4-H project books create opportunities for youth to experience something through an activity or hands-on approach. Typically, these 4-H project books instruct 4-H'ers to do or make something (Horton & Hutchinson, 1997). However, in more recent years, projects have been more focused on concepts or skills such as the *Your Thoughts Matter: Navigating Mental Health* project book.

Experience alone does not equate to experiential education; that is, experiential education must also include opportunities for reflection and application to solidify the learning (Enfield et al., 2007; Schmitt-McQuitty & Smith, 2007). Once the project books have either captured or created youths' experiences, they have them share by writing down their experiences and processing what they did and how it went by reflecting and responding to a series of questions. Lastly, Norman and Jordan (2006) also

pointed out that when youth generalize what they learn and directly apply it to their own lives they are taught both the subject matter skill but also a life skill. By asking the right questions and encouraging youth to reflect on the content and activities they do in a 4-H project book they are asked to go through the whole experiential learning model.

OSU Extension Publishing

The Ohio State University Extension Publishing unit is responsible for editing, designing, marketing, and distributing 4-H project books, learning lab kits, and OSU Extension fact sheets and bulletins (Ohio State University Extension Publishing, 2022). In the appendices you can find the *Ohio 4-H Project Book Activity Template* (Appendix A) and the *Planning Grid – Project Book with Project Areas* (Appendix B) that walks OSU Extension professionals through the process of creating a 4-H project book. These tools were used in creating the *Tracking Your Physical Health and Fitness* project book. When submitting a document to OSU Extension Publishing one must have the following for it to begin the review process, branding process, and print process:

- Final text document is the one being submitted.
- Text has been approved by all authors.
- Text has been peer reviewed and approval has been received following author's departmental or program area peer review procedure.
- Photos have been obtained or photo needs are identified.
- Permissions for photos and graphics are in place via the CFAES release form.
- Table and graph information is ready to go.

National 4-H Peer Review

Many project books from Ohio are also nationally peer reviewed through the national 4-H curriculum process. Much of the core principles and guiding frameworks are the same between Ohio

and the national process, but if you look at the *4-H Guiding Principles* document in Appendix C, you will find that some of the key differences from OSU the national process has are:

- Supports and advances (National 4-H's) Mission Mandates
- Content is framed around the Essential Elements (Kress, 2004)
- Learning experiences are developmentally appropriate
- Content has a scope and sequence, has objective and standards, and is research based
- High quality with a comprehensive development process
- Individual and group learning are valued; youth and adults are both learners
- Scientific approach to learning, engagement, and change

Background for Tracking Your Physical Health and Fitness Project Book Content

Health is one of the four Hs of 4-H, and 4-H members pledge their “health to better living.” The healthy living subject area is one of three national focus areas for 4-H. It is a very broad area, including the topics of nutrition and physical activity; mental, emotional, and social health; substance use prevention; and safety and injury prevention. Good physical and mental health are important for children and adolescents to thrive today and to lay the foundation for navigating their path into adulthood. Adolescence is a critical period for development because healthy lifestyle behaviors are established during adolescence and have implications for health into adulthood. Adolescent health is among the most powerful predictors of an individual’s future health trajectory (K. Wang et al., 2021). It is crucial for adolescents to develop health literacy—that is, the ability to obtain, process, understand, and use health information in support of one’s health—because of its association with positive health outcomes (e.g., Ghaddar et al., 2012; Oberne et al., 2022). However, studies show adolescents health literacy is often not adequate (Manganello et al., 2015; Park et al., 2017; Sansom-Daly et al., 2016). Therefore, a project book focused on health would help to address this situation.

The World Health Organization (WHO, n. d.) defines health as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.” This definition is important because it indicates that “I’m not sick” does not translate into “I’m healthy.” Physical health, however, is only part of overall health. Health is affected by one’s emotions, thoughts, beliefs, family, friends, and environment. Habits, whether good or poor, often determine one’s physical health and fitness.

Nine Dimensions of Wellness Model

The Ohio State University uses the nine dimensions of wellness as a comprehensive and integrated educational tool for students, to ensure that they are working on their holistic health as a student (Melnik & Neale, 2018). Figure 3 depicts the multidimensional wellness model used by The Ohio State University. Because adolescents may define being healthy just with specific dietary behaviors and not more broadly (Barco Leme et al., 2021), it is important to focus on a multidimensional approach to help them see how all the aspects of health are interconnected. The OSU Health Plan, Office of Student Life, and Student Wellness Center are some of the units and offices that have used this tool for student and staff education. The idea is that each of the dimensions are interconnected, and individuals need to be mindful of all dimensions and how they impact each other when thinking about their health. For example, if someone is low in financial wellness, they might not be able to make healthy decisions about food or purchase educational materials so it may directly impact both their physical and intellectual wellness. The nine dimensions are career, creative, emotional, environmental, financial, intellectual, physical, social, and spiritual wellness. These dimensions align with the eight dimensions of the Substance Abuse and Mental Health Administration (2016) (creative wellness is the additional dimension in OSU’s model). For our purposes here, the number is not as important as the concept that wellness means being healthy in many areas.



Figure 3
Ohio State University's Nine Dimensions of Wellness Model

Dietary Patterns

Overall, the dietary patterns of teens in the U.S. are not aligned with the *Dietary Guidelines for Americans, 2020-2025* (U. S. Department of Agriculture and U.S. Department of Health and Human Services, 2020).

- Consumption of fruits, vegetables, and whole grains is less than the recommended amounts.
- Most diets exceed the recommend limits for fat, salt, and added sugar.
- More than 1/3 of U.S. children regularly consume fast food (Fryar et al., 2020).
- Foods classified as junk foods provided nearly 1 in 5 calories (Liu et al., 2021).
- Consumption of ultraprocessed foods has increased (L. Wang et al., 2021).
- Although young people are consuming less soda than in previous decades, sugar-sweetened beverages remain the single largest source of added sugar in the diets of U.S. adolescents

(Bailey et al., 2018; Hu, 2013; Keller & Bucher Della Torre, 2015; Miller et al., 2017; Parker et al., 2021).

The results of these studies are cause for concern because fast food, ultraprocessed foods, sugar-sweetened beverages, and junk foods have been associated with poorer diet quality. For example, ultraprocessed foods are higher in carbohydrates, added sugars, and sodium and are lower in fiber and protein (Elizabeth et al., 2020). Sugar-sweetened beverage consumption is linked to many adverse health conditions (Bleich & Vercammen, 2018; Krieger et al., 2021).

MyPlate

MyPlate is a nutritional food guide that was developed by the U.S. Department of Agriculture to help people become more aware of what they eat and to assist them in making better food choices (<https://www.myplate.gov>). The MyPlate icon shows the five food groups: fruits, vegetables, grains, protein foods, and dairy. It features a simple picture of a plate, which offers a visual cue that is easy to relate to, with sections of a plate representing how much of each food group people should consume relative to the other groups. MyPlate provides a guide for making healthful choices and is used in many 4-H projects. Therefore, activities that use MyPlate as the benchmark for examining dietary patterns will provide some consistency across projects. This is important because a recent study found that adolescents with more MyPlate knowledge were more likely to not consume sugar-sweetened beverages, but many young people lack knowledge of MyPlate (Westfall et al., 2020).

Overweight and Obesity

Obesity has been a public health issue for the United States and Ohio for years. Nearly 1 in 5 (19.3%) of U.S. children ages 2 to 19 have obesity (Trust for American's Health, 2021). This rate has more than tripled since the mid-1970s. Ohio is currently 14th in the United States in obesity rates, as more than a third of the total population is considered obese or overweight (Figure 4). Furthermore, the

Centers for Disease Control and Prevention issued a report last September linking COVID-19 to an "alarming" rise in childhood obesity (Lange et al., 2021).

Rank ^	State	Adult Obesity Rate 2020	95% Confidence Interval	Trend 1990 - 2020
1	Mississippi	39.7%	+/- 1.6%	
2	West Virginia	39.1%	+/- 1.6%	
3	Alabama	39.0%	+/- 1.8%	
4	Louisiana	38.1%	N/A	
5	Indiana	36.8%	+/- 1.3%	
6	Kentucky	36.6%	N/A	
7	Delaware	36.5%	+/- 2.1%	
7	Iowa	36.5%	+/- 1.2%	
9	Arkansas	36.4%	+/- 2.0%	
9	Oklahoma	36.4%	+/- 1.8%	
11	South Carolina	36.2%	N/A	
12	Texas	35.8%	N/A	
13	Tennessee	35.6%	N/A	
14	Ohio	35.5%	+/- 1.2%	
15	Kansas	35.3%	+/- 1.2%	
16	Michigan	35.2%	N/A	

Figure 4
Adult Obesity Rate by State, 2020, (State of Childhood Obesity, 2021a)

Physical Activity

A sedentary lifestyle is a risk factor for obesity and cardiovascular disease (American College of Sport Medicine, n.d.). *The Physical Activity Guidelines for Americans* recommend that children and adolescents ages 6 to 17 years do 60 minutes or more of moderate-to-vigorous physical activity daily (U.S. Department of Health and Human Services, 2018). However, only about one-quarter (24%) of children 6 to 17 years of age are at this level (Katzmarzyk et al., 2018). As well, there are differences based on demographic variables. Specifically, results from the National Health and Nutrition Examination Survey showed that females were significantly less physically active than their male counterparts (Armstrong et al., 2018). Minority race/ethnicity and low-income status were associated

with lower physical activity in most groups. Physical activity levels tend to decrease with age, from middle school to high school (Kwan et al., 2012). Low levels of physical activity in young people are cause for concern because they have been linked to increased rates of obesity, cardiovascular disease, and poor mental health.

Chronic Disease

Chronic diseases may seem a long way off for teens. However, many young people already have dietary and physical activity patterns that are contributing to increases in chronic diseases, and those conditions are developing at younger ages (Tsao, 2022). This increase is a particular concern with diabetes (Burmeister et al., 2021; Lascar et al., 2018; Mayer-Davis et al., 2017). In another example, according to the American Heart Association (2018), children with high-sodium diets are almost 40% more likely to have elevated blood pressure than those with lower-sodium diets. About 1 in 7 youth aged 12 to 19 years old had high blood pressure (hypertension) or raised blood pressure. Youth with high blood pressure are more likely to have high blood pressure when they are adults (Yang et al., 2020). Raised blood pressure is a major cause of heart disease. Furthermore, research shows that common disorders, such as heart disease, stroke, high blood pressure, and more run in families (Centers for Disease Control and Prevention, 2020a; Weir, 2005) and therefore it is important to know one's family health history (MedlinePlus, 2021).

Sleep

The amount of sleep individuals get affects their physical and mental energy levels and ability to fight off disease. Getting the proper amount of sleep helps individuals to stay focused and concentrate on tasks, which ultimately helps improve academic performance. Over time, getting adequate sleep contributes to disease prevention and overall well-being. Children and adolescents who get the recommended amount of sleep have decreased risk for obesity, type 2 diabetes, injuries, and mental health problems (Centers for Disease Control and Prevention, 2019b; Owens et al., 2014; Paruthi et al.,

2016). The American Academy of Sleep Medicine (Paruthi et al., 2016) recommends that teens get 8 to 10 hours of sleep per 24 hours. However, according to nationwide data from 2015, 7 out of 10 high school students do not get the recommended number of hours on an average school night (Centers for Disease Control and Prevention, 2019a).

Stress

As the country grappled with a global pandemic, economic downturn, and protests over racial injustice, youth were experiencing added stressors and were seeking new ways to cope. The results of the Harris Poll commissioned by the National 4-H Council in June 2020 confirmed this added stress, showing that 7 out of every 10 of the youth surveyed reported struggling with their mental health in the wake of COVID-19. Recently, on December 7, 2021, the U. S. Surgeon General issued an advisory on youth mental health. A surgeon general's advisory is a public statement intended to focus national attention to an urgent public health issue and provide recommendations for how it should be addressed. Specifically, the advisory was issued because of recent national surveys of young people that have shown alarming increases in the prevalence of certain mental health challenges—in 2019, one in three high school students and half of female students reported persistent feelings of sadness or hopelessness, an overall increase of 40% from 2009 (Centers for Disease Control and Prevention, 2020b). All of that was true even before the COVID-19 pandemic dramatically altered young peoples' experiences. Mental health challenges in children, adolescents, and young adults are real, and they are widespread.

Although the focus of the project book is on physical health, not mental health, it was decided to include stress as a topic in the project book for two reasons: (a) stress manifests itself through physical signs and has a negative impact on the body such as elevated heart rate (American Psychological Association, 2018; Cleveland Clinic, 2021; Marks, 2021; MedlinePlus, 2020), and (b) many

of the recommendations for managing stress rely on physical mechanisms (e.g., physical activity, sleep; Mayo Clinic, 2021).

Medical Screening Tests

Screening tests are done to detect potential health disorders or diseases in people. It is a more proactive approach to health as the goal is to detect risk or signs of disorders or diseases early, to treat them more effectively, and to reduce the risk with lifestyle changes or more frequent surveillance. It is important to know that screening tests are not to be considered for diagnostics but instead they help both the patient and doctor better get to a diagnosis and give insight into what further testing needs to be done (Wilken et al., 2012). Screening large populations has been around for years but most notably the United States Commission of Chronic Illness defined screening as

the presumptive identification of unrecognised disease or defect by the application of tests, examinations, or other procedures which can be applied rapidly. Screening tests sort out apparently well persons who probably have a disease from those who probably do not. A screening test is not intended to be diagnostic. Persons with positive or suspicious findings must be referred to their physicians for diagnosis and necessary treatment. (Commission on Chronic Illness, 1957)

Simple but valid questions and forms of tests, the establishment of the theory of screening, and wide access to healthcare have made screening such an easy-to-use and valid way of beginning to see a patient's holistic health (Morbria & Zhang, 2004). It's important to note that the quality of articles that report on the development and validity of the written tests is, at best, mediocre and are not as reliable as say x-rays and blood tests (Reid et al., 1995).

Vital Signs

The four vital signs that are measured by doctors universally are body temperature, pulse rate, respiration rate, and blood pressure. They are the measurements of the body's most basic functions and are useful in detecting or monitoring any medical issues (Johns Hopkins Medicine, n. d). Dr. Rachel Nall (2017) reports in *Healthline* that the current normative values for 12 years old and up are:

- Heart rate: 55 to 105 beats per minute

- Respiration rate: 12 to 16 breaths per minute
- Temperature: 97.8 to 99 degrees Fahrenheit (average is 98.6, but it varies based on age, sex, time of day, activity level, and the method of taking the temperature [Wright & Vandergriendt, 2022])
- Blood pressure: systolic 110 to 113, diastolic 64 to 83

Health Education Standards

The activities in the project book will be aligned with the National Health Education Standards (Centers for Disease Control and Prevention, 2019a). Aligning with standards is part of Extension Publishing's requirements; as well, standards are also necessary for the national peer review process. They are also useful for those who want to use the project book in in-school settings. Because this is an intermediate level book, the standards for Grades 9–12 were used.

Summary

In summary, within the context of 4-H as an organization, and the thriving and experiential learning models as guides, the project book covered many aspects of physical health, including family history, sleep, physical activity, dietary intake, stress, vital signs, body measurements, setting goals, barriers, and tracking those goals. This literature review is unique as it captures a detailed picture of physical health and how to track an individual's health and what goals or normative values one should aim for when trying to make healthy choices.

Procedures and Process

Using the original project book as a guide, the author created an outline; decided which parts of the book to keep, delete, or modify; rearranged the flow of the book, and added other physical health topics that were identified in the literature review. The outline was the following:

- **Note to the Project Helper** (unchanged; standard for project book)
- **Project Guide** (unchanged; standard for project book)

- **Project Area: What is Physical Health & Fitness**

It was logical to have *What is Physical Health and Fitness?* be the first section of the book as the team members wanted an introductory section covering what physical health is and how the youth taking this project can have a frame of reference before going into specific areas of physical health.

- **Activity 1: Influencing Your Physical Health**

The first activity *Influencing Your Physical Health* is taken directly from the original project book with minor edits (for example, the questions in the first column of the activity table emphasize *physical* health). It emphasizes that physical health and fitness are complex and recognizes that one's ability and willingness to make healthy choices are impacted by a variety of factors. Physical health seems easy to understand until we stop and think about how overall health is also affected by mental and emotional, social, environmental, intellectual, occupational, and spiritual factors (Melnyk & Neale, 2018). When all these aspects are taken into consideration, it represents a holistic view of health.

- **Activity 2: Health Self-Check**

The second activity, *Health Self-Check*, is a new activity based on how research and most doctors recommend individuals being more mindful of how their body is physically doing, being aware of symptoms they may be experiencing, and being aware of how past injuries or disease may be impacting them today (Aita et al., 2005). When individuals are more in tune with their own health and how their body is doing, they are more likely to identify signs of disease or disorders earlier, allowing for earlier intervention (Bourgeois et al., 2007). Asking questions like have I been sick, have I had an injury, am I sore, and do my ears or mouth hurt are great things to be constantly

checking in regarding one's health. Also, when individuals are aware of their current and personal health history, they are more likely to make healthier choices in the future.

(Chiauzzi et al., 2015).

This activity will also point out that one's physical health is affected by other behaviors and practices such as using tobacco and e-cigarettes, consuming alcohol, and other drugs, sustaining injuries resulting from physical activity (e.g., sports injuries), and using protective equipment (e.g., bike helmets, seat belts). Although engaging in physical activity is beneficial, it comes with associated risks. Most childhood injuries are preventable; however, injuries remain the leading cause of disability and death for this age group (World Health Organization, 2021). For example, sports injuries are common in this age group (Caine et al., 2006; Costa e Silva et al., 2017; Prieto-González et al., 2021). The most recent estimate is that approximately 2 million youth are current e-cigarette users (Park-Lee et al., 2021). The National Center for Drug Abuse Statistics (2022) reports that nearly 8% of Ohio teens have used drugs in the past month and 10% reported alcohol use in the past year.

- **Activity 3: Family Health History**

The third activity, *Family Health History*, is a new activity based on research and doctors recommending that patients do a better job of tracking and recording their family's health history. Research shows that common disorders and diseases often run in families due to genetic factors, and family health history has even been called "the most important genetic test of all" (Alspach, 2011, p. 14). Discussing medical conditions or diseases with family members will help youth understand their own health and may lead to making healthy choices. It may help them figure out if they have a high risk for a disease. But just because one's parents or other family members have a health

condition does not mean they have it now or will in the future. A family health history provides information about illness and about diseases that run in a family, as well as the eating habits, activities, and environments that a family shares. Many things shape a person's health. Some things—such as genes—are outside of a person's control. Knowing about the diseases that run in a family can help an individual make healthy choices. Families often have similar environments and lifestyles (Alspach, 2011), which can be influenced and changed. In many cases, healthy living habits can reduce the risk for diseases that run in a family. For example, if someone has a family history of chronic diseases, they can benefit right away from developing good lifestyle habits, such as exercising and eating healthy. These habits might help prevent or delay chronic diseases (Aita et al., 2005). Health professionals use this information to develop a plan to help people get better if they are sick and to stay healthy if they are not.

- **Project Area: Tracking Your Measurements and Vital Signs**

The second project area *Tracking Your Measurements and Vital Signs* came from pieces of the original project book and the thought process that when it comes to physical health, there are objective measurements that doctors take to determine how physically healthy you are such as weight, heart rate, temperature, and more. We wanted to introduce these concepts and have the youth taking this project better understand the things a doctor will measure in a physical screening process.

- **Activity 4: Taking Your Body Measurements**

The first activity under this project area is a new activity, *Taking Your Body Measurements*. We wanted to start the youth with simple measurements that were most used in the health care setting. Only measuring your body temperature was in the original project book, but the team members concluded that others should be added.

According to physical health screening procedures, the most logical ones to measure were height, weight, age, and their BMI, noting that charts that are specific for sex and age are used for child and adolescent BMI (Brazier, 2018). There was some research and screening materials that suggested including other measurements such as waist circumference, chest length, abdominal length, and arm circumference (Johnson et al., 1997). However, the combination of these measurements not being widely used and the attachment these measurements may have with body image for our teen audience led to the decision to not include them in the activity.

- **Activity 5: Taking Your Vital Signs**

The second activity in this section was *Taking Your Vital Signs*. Because they just tracked common screening measurements, it was logical that the second activity was focused on more measurements that were not as common to an average youth. This led to the decision of having the youth measure their vital signs, which does happen during a health screening. Vital signs were measured in the original project book, but this version condenses them into one activity.

Vital signs are four specific measurements: body temperature, heart rate, respiration rate, and blood pressure (Johns Hopkins Medicine, n.d.; Nall, 2017). The activity discusses blood pressure, but does not include its measurement, because youth would not be able to measure their blood pressure without a sphygmomanometer (i.e., blood pressure cuff), which most families and youth do not have access to. This left them measuring and recording their body temperature, heartbeat or pulse, and their respiratory rate.

Beginning in the 1990s, pain was promoted as the “fifth vital sign” (Pasero & McCaffrey, 1997), and patients were routinely asked to assess their pain as part of

screening. However, pain is a subjective rather than an objective measurement; it is a symptom, not a sign (Kozol & Voytovich, 2007; for the distinction between the two, see Felman, 2018). An unintended consequence of addressing chronic pain management in this manner led to overprescribing of opioids (Lucas et al., 2007). The association with opioids prompted a reconsideration of medication prescribing practices, which has since clearly removed pain as a vital sign (Mack et al., 2013), thus pain was not included in this section.

Project Area: Tracking Your Behaviors

The third project area is called *Tracking Your Behaviors*. This section focuses more on the things directly in an individual's control such as exercise, sleep, water, dietary intake. For example, one could feel more in control of the amount of sleep they get than their respiratory rate. The focus of this section's activities is awareness of one's behaviors and comparison with recommendations. Knowledge of recommendations is important as it has been associated with behavior change (e.g., lowering intake of added sugar, Jústiz et al., 2020).

- **Activity 6: Tracking Your Sleep**

Getting enough sleep is not just an occasional luxury—it is something everyone needs on a regular basis for good health. The amount of sleep an individual gets affects their physical and mental energy levels and their ability to fight off disease. Therefore, we decided to include a new activity in this section about *Tracking Your Sleep*. Getting the proper amount of sleep helps individuals to stay focused and concentrate on tasks, which ultimately helps improve academic performance. Over time, getting adequate sleep contributes to disease prevention and overall well-being. Children and adolescents who get the recommended amount of sleep had decreased risk for obesity, type 2

diabetes, injuries, and mental health problems (Centers for Disease Control and Prevention, 2019b; Owens et al., 2014; Paruthi et al., 2016).

- **Activity 7: Tracking Your Physical Activity**

The second activity in this section focuses on *Tracking Your Physical Activity*, which is modified from the original version. The *Physical Activity Guidelines for Americans* recommend that teens get 60 minutes of moderate-to-vigorous physical activity a day (U.S. Department of Health and Human Services, 2018), however, many fail to meet this recommendation. It is important to include different types of physical activity to focus on different aspects of physical health and fitness (Nemours KidsHealth, 2019). Aerobic, strength-building, and bone-strengthening movements are each necessary for overall physical health. Stretching is also important for muscle health, flexibility, and recovery (Harvard Medical School, 2022). It is important to vary the intensity and type of physical activity. Taking steps for recovery after activity is also an important part of being physically safe and healthy. A common way to measure physical activity is to count the number of minutes spent being active each day. Some smart devices can help with this, but instead all that is needed is a simple timer to keep track of active time, which allows for meeting the physical activity recommendation with a variety of activities, not just steps. Teens particularly value having choice in the activities they engage in, which could improve sustainability of physical activity (James et al., 2018).

- **Activity 8: Tracking Your Dietary Intake**

Tracking Your Dietary Intake is a new activity in the revised project book. Ohio 4-H already uses tools like MyPlate and nutritional guidelines in other healthy living and

food and nutrition project books. Following research-based healthy eating guidance like MyPlate and the *Dietary Guidelines for Americans 2020-2025* (U.S. Department of Agriculture and U.S. Department of Health and Human Services, 2020) will help individuals perform at their best, maintain a desirable weight, build strong bones, and avoid diseases like diabetes. It is possible to eat a wide variety of foods and stay within recommended levels for calories, sugar, salt, fat, and water. We wanted to give youth a tool to record their dietary intake. Photos have been used to track dietary intake (Fowler et al., 2018; McCloskey et al., 2019; Norman et al., 2020). The activity will have participants track meals consumed for 4 days with photos and then indicate whether each meal met the recommended standard for proportion of fruits and vegetables and for healthy beverage consumption. They will then evaluate based on MyPlate (a) Was half the meal fruits and vegetables (combined)? and (b) Did the meal include milk or water (unsweetened)?

- **Activity 9: Tracking Your Stress**

The last activity in this project area is focused on *Tracking Your Stress*. The earlier version had an activity on “taking your emotional temperature,” but it was based on a subjective measurement, not an objective one. Putting the topic of stress in the book was debated back and forth, as stress and stress management is typically placed under the umbrella of mental health. The stress response of fight, flight, or freeze prepares the body to be ready to act if needed. This is the body's way of protecting itself from potential danger. In the short term, these reactions are good because they can help handle the situation causing stress. However, research shows that stress negatively impacts physical health and being aware of what stress a person is under and how they are responding can help to positively cope and have better physical health. Suls et al.

(1994) pointed out that different stressors have different effects on bodily functions, such as irritable bowel syndrome. Furthermore, the recommended coping strategies typically involve practices that are part of physical health such as being more physically active, eating healthy foods, and getting enough sleep (Mayo Clinic, 2021). Therefore, the activity and section contents will be mindful of keeping the focus on physical health.

- **Project Area: Where to Go from Here**

The last project area is about taking all the information tracked thus far using the activities presented in the project book and putting it to applicable use. This would be following the book's experiential learning model. The activities in this section encourage youth to understand what resources are available to them to learn about health and to evaluate their health to see what type of access they have to health resources. Youth are then encouraged to set realistic and time-sensitive goals, and then lastly, they track their goal progression and hopefully establish a habit and behavior of tracking their health and goals, leading to behaviors that enhance health.

- **Activity 10: Barriers to Your Goals**

Barriers to Your Goals is a new activity created for the revised project book. It is important for youth to understand that although individuals may have similar goals, diseases, or disorders, it doesn't mean that everyone has the same support systems to reach those goals or treat those diseases and disorders. As defined by Paula Braveman (2006),

healthy disparity/inequality is a particular type of difference in health or in the most important influences on health that could potentially be shaped by policies; it is a difference in which disadvantaged social groups (such as the poor, racial/ethnic minorities, women, or other groups that have persistently experienced social disadvantage or discrimination) systematically experience worse health or greater health risks than more advantaged groups.

The access youth have to parks, facilities, professionals, and mentors can change their health trajectory for their adult lives (Roemmich et al., 2006). An activity that gets youth to think about the access they have to resources such as facilities, fresh fruits and vegetables, and medical professionals may allow them to recognize how much effort they may need to put into reaching their physical health goals. It will also serve to connect the other dimensions of wellness to physical health, which connects back to content in the first section.

Furthermore, it is important that youth can distinguish between reliable sources of information and those that are questionable sources or are promoting misinformation. The proliferation of health information on the internet and social media means that youth need a way to evaluate these sources for accuracy (Benigeri & Pluye, 2003; Eysenbach, 2008; Fox & Fallows, 2003).

○ **Activity 11: Setting Your Health Goals**

The *Setting Your Health Goals* activity is carried over from the original project book. Simply writing a goal can be a powerful motivator, especially if written as a SMART goal. SMART goals must be specific, measurable, attainable, relevant, and time bound (Genewick, 2020). SMART goals help students meet health recommendations (Martin et al., 2019).

- **Specific.** Be specific about what you are going to accomplish. It is one thing to improve. It is another to say by how much.
- **Measurable.** How will you know when you accomplish this goal? What will be the evidence? You must be able to track or measure your progress.
- **Attainable.** Is what you are asking of yourself even do-able? Make sure your goals are achievable and realistic.

- Relevant. Your goal should mean something to you. Does it align with the things you think are important?
 - Time bound. How soon is the goal going to be accomplished? Unless you give yourself a deadline, it may not get done.
- **Activity 12: Tracking Your Health Goals**

Setting SMART goals is a major step on an individual's journey toward physical health and fitness. The *Tracking Your Health Goals* activity was added to take goal setting a step further, because simply setting the goal is not enough. Long-term success depends on tracking progress toward those goals on a regular basis and reflecting on progress made. Regular tracking and reflection not only pave the way for achieving physical health and fitness goals, but they also build trust and confidence in our ability to make lasting change. Tracking goal progress also gives us the chance to learn and create future goals (Genewick, 2020).

- **Glossary** (some words changed as new topics and definitions needed to be added)
- **Sources** (most sources were new and discovered in the literature review)
- **Summary of Learning Outcomes** (new outcomes were matched to the National Health Education Standards)

Summary

Most of the project book had to be either rewritten or completely new pieces had to be added. Using the literature review and the 4-H Healthy Living Design Team as guide, the writing process was regularly reviewed and edited even before it was received by OSU Extension Publications for final review and editing. The layout of the project book did change and topics, such as vital signs, were condensed into sections in which similar information was being presented. The goal of the writing was that the

information in the project book would build or scaffold on each other to present a whole picture of physical health before broaching the topic of setting goals.

Results

The project book was written collaboratively with around two thirds of the work done by the author and the rest was done by other members of the Ohio 4-H Healthy Living Design Team. The author researched and created a logical outline so that the information presented built on previous topics so readers would move toward a stronger understanding. Design team members, along with the author, wrote new activities to be used in the book. Finally, the author added the remaining sections (note to the project helper, project guide, glossary, sources, and summary of learning outcomes), added some content to activities (e.g., projects skills, health education standards, more challenges sections, did you know sections), and reviewed the book to have it written in one voice and to ensure that it met all requirements for publishing. Table 1 lists authors for each activity and project area.

Table 1
Authors by Section of Project Book

Project Areas and Activities	Author
Note to the Project Helper	Justin Bower
Project Guide	Justin Bower
PROJECT AREA: What is Physical Health & Fitness?	Justin Bower
1. Influencing Your Physical Health	Tyler Kessler
2. Health Self-Check	Justin Bower
3. Family Health History	Theresa Ferrari
Talking It Over	Justin Bower
PROJECT AREA: Taking Your Measurements & Vital Signs	Justin Bower
4. Taking Your Body Measurements	Justin Bower
5. Taking Your Vital Signs	Rachael Fraley
Talking It Over	Justin Bower

PROJECT AREA: Tracking Your Behaviors	Justin Bower
6. Tracking Your Physical Activity	Tyler Kessler
7. Tracking Your Dietary Intake	Carol Smathers
8. Tracking Your Sleep	Carol Smathers
9. Tracking Your Stress	Theresa Ferrari
Talking It Over	Justin Bower
PROJECT AREA: Where to go from Here	Justin Bower
10. Barriers to Your Goals	Justin Bower
11. Setting Your Health Goals	Rachael Fraley
12. Tracking Your Health Goals	Tyler Kessler
Talking It Over	Justin Bower
Glossary	Justin Bower
Sources	Justin Bower
Summary of Learning Outcomes	Justin Bower

After submitting the book to OSU Extension Publishing, they will have the book go through a peer review process, will create or find the photos or graphics needed, will properly brand and format it, and then pass it on to printing.

Discussion and Recommendations

Add

This author recommends that there is a series of promotional opportunities for this revised project book so 4-H professionals are aware of the new book and the differences from the previous version. This could be presented at one of the statewide updates such as *Koffee with Kirk*, *Hot Topics*, or annual in-services.

OSU Extension and Ohio 4-H should also set in place a reviewing process for the publications and project books so the book may be reviewed every 3 to 5 years for accuracy and relevancy. The project book's success should be evaluated annually based on sales and reviews of the books.

Implementing the book into the already-in-place 4-H project judging structure would also provide more immediate feedback on the book itself.

This author recommends that 4-H healthy living leadership and the 4-H Healthy Living Design Team find other ways to use the content captured in this project book. Perhaps this could be done by disseminating the same information through a workshop or an after-school program using the project book as a reference and guide. It may be used to train the Health HEROES (statewide teen health living advocacy group) in physical health and tracking. Sessions or workshops may be created from this project book for the Ohio 4-H Conference, National 4-H Healthy Living Summit, or the National Association of Extension 4-H Youth Development Professionals (NAE4-HYDP) conference.

It should also be recommended that the team and leadership think about how this book may be expanded to increase Ohio 4-H's resources on physical health and how the book fits within the larger breadth of healthy living resources. Perhaps this book has pointed out other needs for curriculum or project book topics such as physical exercise, stress management, or sleep education. Perhaps a Leader's Guide for Health Projects may be created to help 4-H volunteers better support their 4-H members when taking healthy living projects. It is important to note that the 4-H Healthy Living Design Team may have the interest to continue producing curriculum but not necessarily the time, skill, or expertise in every single area of health. The design team could provide oversight, but additional resource people should be sought to produce the necessary materials.

I recommend that the team and leadership continue to solidify a model or framework with which to guide this work so it is easier to understand and allows the 4-H Healthy Living Design Team and Ohio 4-H leadership to see the gaps in health projects they might be missing. One such possible framework would be the Nine Dimensions of Wellness already adopted by The Ohio State University.

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Appendix A

Ohio 4-H Project Book Activity Template

CFAES

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Ohio 4-H Project Book Activity Template

Curriculum developers nationwide recognize the value of a standard activity template for developing instructionally sound project books. As noted by Williamson (1995), activity templates are a common tool for framing the learning and facilitating the experiential process consistently. Instructional materials that are systematically designed lead to more intentional adult/child interactions and more predictable learning outcomes. In addition, materials produced consistently increase consumer confidence, provide greater opportunity for adoption, reduce management and production costs, assure quality control, and make it easier for others to be part of the writing process.

Ohio 4-H has adopted this flexible template for creating and revising curriculum. It applies at the *activity* level and is valuable only after a comprehensive scope and sequence of content. It also can be customized to a content area by adding items such as journal pages, recipe review pages, pages for photos, budgets, etc.

- 1. Catchy title** of the activity. You may want to list several possibilities. If the content is divided into interest or project areas, include the name of the project area too.
- 2. Learning Outcomes.** State the activity's goals in these four ways, with just ONE item each:
 - Project skill.** Use an -ing phrase to describe the project skill.
 - Life skill.** Indicate the general life skill area, such as "making decisions." The life skill also may target a science process skill, a workforce preparation skill, or some other internal asset.
 - Educational standard.** As much as possible, an appropriate national or Ohio educational standard must be identified.
 - Success indicator.** Create a simple statement of 5 to 10 words that describes what the youth does to complete the activity. Start with an action verb, and indicate the life skill and subject matter involved, e.g., "Decides between two alternatives to select a product."
- 3. Introduction (60 to 80 words).** In second person, build interest about the topic to be explored in this activity. This is your opportunity to connect the content with the skill to be practiced. Extended content discussion takes place in part 8. That's key! The activity takes place *before* a lot of explanation.
- 4. What to Do.** Give directions for the activity, and provide a means for the youth to show some aspect of the activity on the page. Include directions for exactly what youth does—completes a chart or checklist, describes an experience, keeps records, etc. If needed, include a note to fellow authors, reviewers, and the graphic designer. If appropriate, include an estimate of the time it takes to complete the activity.



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5. **Talking It Over.** Create questions for each of the reflection steps of the experiential cycle (Share, Reflect, Generalize, and Apply) *that focus on the life skill and activity more than on the content.* Opening questions can be included, but typically only the *last question* in the group is answered. Avoid yes, no, and single answer questions. The project helper or parent discusses each question with the youth after the activity is completed. If the content is divided into interest or project areas, use one set of questions to cover all the activities.
 - a. **Share.** Include questions that anyone who does the activity can answer. Share questions should generate data for the process questions. Include questions that ask what was done, how the youth felt, etc.
 - b. **Reflect.** Include questions that ask about important aspects of the subject matter content, the experience, and the life skill practiced.
 - c. **Generalize.** Include questions that make the experience real for the youth in terms of everyday life experiences. Ask questions about the life skill practiced and the content being addressed.
 - d. **Apply.** Include questions that ask how the life skill and content applies to other likely situations.
 6. **More challenges (10-20 words).** Outline one additional activity that further explores the content or life skill. If possible, involve practicing the targeted life skill designated for the original activity. Include asking the youth to share the experience with someone.
 7. **Background information (100–200 words).** This information enhances the content of the activity but is not necessary to complete it. It's better to include too much than not enough copy in the first draft; 3 to 4 short paragraphs is a minimum. Attach additional information and realistic art.
 8. **Did you know? (10-20 words).** Include one or more facts related to the topic that youth would find interesting.
 9. **Glossary words.** List new content words and their definitions. These words appear bolded in the activity and are listed and defined in a glossary that appears at the end of the book.
 10. **Resources.** List print and online resources (web, printed material, etc.) for youth interested in exploring the topic further.
 11. **Sources.** Provide information for any outside source, including subject matter content, tables, recipes, etc. Sources must be current and research-based.
 12. **Acknowledgments (if needed).** Indicate any person(s) who made a significant contribution to the development of this activity. They will be acknowledged on the inside front cover.
 13. **Answer key (if needed).** Include answers for any puzzles, games, quizzes, etc.
 14. **Artwork (optional).** Indicate what drawings, photos, or other artwork is needed for this activity. Include samples if possible. Be specific about exactly what the images should communicate.
- NOTE:** 4-H food and nutrition also include a food safety tip, recipe, nutrition facts label, and recipe evaluation.
- Thank you helping "making the best better" by contributing to Ohio 4-H project books!*

Appendix B

Planning Grid – Project Book with Project Areas

Planning Grid—Project Book with Project Areas
XXX Title

Scope and Sequence, including intended audience:					
Activity # and Title	What To Do	More Challenges	Background	Did you know?	Resources
Project Area:					
Project Area:					
Project Area:					
Project Area:					

Appendix C

4-H Curriculum Guiding Principles



4-H Curriculum Guiding Principles

4-H Youth Development seeks to promote positive youth development, facilitate learning, and engage youth in the work of the Land Grant Universities and in their communities to enhance the quality of life. The educational foundation for 4-H lies in three mission areas tied to the knowledge base and scientific research of learning and youth development of the Land Grant University and USDA: science, healthy living and citizenship. 4-H National Curriculum has three components: content and educational learning opportunity designs, professional development, and evaluation.

4-H Curriculum is key to the 4-H positive youth development program. 4-H National Headquarters defines **curriculum as the sum total of all *intentional* learning experiences**. Curriculum includes:

Outputs such as activities, events, workshops, trainings, field trips;

Contexts such as club, school enrichment and special interest camps, and after-school; and

Print and on-line intentional learning materials that are intentional for youth and adults.

4-H Curriculum Philosophical Framework

The development of curriculum should incorporate the following elements:

- **Support and advance Mission Mandates through foundational, critical, and emerging issues**
Science (including engineering, technology and applied mathematics), Healthy Living, and Citizenship provide the content framework for 4-H curriculum. These content areas provide for strong development of subject matter knowledge and high competency of demonstrable skills.
- **Content is framed around the Essential Elements, inclusivity, and life skills**
The contextual framework for positive youth development programming includes Belonging, Mastery, Independence, and Generosity. Inclusivity means curriculum is relevant and fair to multiple groups, builds and strengthens relationships and fosters respect across various differences. Life skills are those skills one needs to be ready for life and career prepared with an emphasis on decision-making, responsibility, communication, and leadership.
- **Learning experiences are developmentally appropriate**
Human and positive youth development theory and research shapes intentional learning experiences relevant to age and is cognizant of physical, emotional, social, and mental development.
- **Content has a scope and sequence; has objective and standards; and is research-based**
Curriculum is based upon the experiential learning model with opportunities to experience/explore, share/process, generalize, and apply. Curriculum has a process based upon educational standards for learning design from start to finish.
- **High-quality with a comprehensive development process**
Peer review is critical to maintaining quality throughout the curriculum development process. Evaluation and research studies enhance and promote evidence-based program practices.
- **Individual and group learning are valued; youth and adults are both learners**
Based upon the assumption that learning is life-long, youth and adults are both actively engaged in learning. Through individual and group settings, intentional learning experiences are explored.
- **Scientific approach to learning, engagement, and change**
The inquiry process is nested within or overlapped with the experiential learning process. When the scientific inquiry learning objectives are primary in curriculum design, the inquiry process is central within the experience. The focus on inquiry-based learning includes opportunities for experimentation, investigation, questioning, and argumentation.

H E A D , H E A R T , H A N D S , H E A L T H

Appendix D**Centers for Disease Control and Prevention
Health Education Standards
Grades 9–12****Standard 1: Students will comprehend concepts related to health promotion and disease prevention to enhance health.**

- 1.12.1 Predict how healthy behaviors can affect health status.
- 1.12.2 Describe the interrelationships of emotional, intellectual, physical, and social health.
- 1.12.3 Analyze how environment and personal health are interrelated.
- 1.12.4 Analyze how genetics and family history can impact personal health.
- 1.12.5 Propose ways to reduce or prevent injuries and health problems.
- 1.12.6 Analyze the relationship between access to health care and health status.
- 1.12.7 Compare and contrast the benefits of and barriers to practicing a variety of healthy behaviors.
- 1.12.8 Analyze personal susceptibility to injury, illness, or death if engaging in unhealthy behaviors.

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

- 2.12.1 Analyze how the family influences the health of individuals.
- 2.12.2 Analyze how the culture supports and challenges health beliefs, practices, and behaviors.
- 2.12.3 Analyze how peers influence healthy and unhealthy behaviors.
- 2.12.4 Evaluate how the school and community can affect personal health practice and behaviors.
- 2.12.5 Evaluate the effect of media on personal and family health.
- 2.12.6 Evaluate the impact of technology on personal, family, and community health.
- 2.12.7 Analyze how the perceptions of norms influence healthy and unhealthy behaviors.
- 2.12.8 Analyze the influence of personal values and beliefs on individual health practices and behaviors.
- 2.12.9 Analyze how some health risk behaviors can influence the likelihood of engaging in unhealthy behaviors.

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

- 3.12.1 Evaluate the validity of health information, products, and services.
- 3.12.2 Use resources from home, school, and community that provide valid health information.
- 3.12.3 Determine the accessibility of products and services that enhance health.
- 3.13.4 Determine when professional health services may be required.
- 3.12.5 Access valid and reliable health products and services.

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

- 4.12.1 Use skills for communicating effectively with family, peers, and others to enhance health.
- 4.12.2 Demonstrate refusal, negotiation, and collaboration skills to enhance health and avoid or reduce health risks.
- 4.12.3 Demonstrate strategies to prevent, manage, or resolve interpersonal conflicts without harming self or others.
- 4.12.4 Demonstrate how to ask for and offer assistance to enhance the health of self and others.

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

- 5.12.1 Examine barriers that can hinder healthy decision making.
- 5.12.2 Determine the value of apply a thoughtful decision-making process in health-related situations.
- 5.12.3 Justify when individual or collaborative decision making is appropriate.
- 5.12.4 Generate alternatives to health-related issues or problems.
- 5.12.5 Predict the potential short-term and long-term impact of each alternative on self and others.
- 5.12.6 Defend the healthy choice when making decisions.
- 5.12.7 Evaluate the effectiveness of health-related decisions.

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

- 6.12.1 Assess personal health practices and overall health status.
- 6.12.2 Develop a plan to attain a personal health goal that address, strengths, needs, and risks.
- 6.12.3 Implement strategies and monitor progress in achieving a personal health goal.
- 6.12.4 Formulate an effective long-term personal health plan.

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

- 7.12.1 Analyze the role of individual responsibility for enhancing health.
- 7.12.2 Demonstrate a variety of healthy practices and behavior that will maintain or improve the health of self and others.
- 7.12.3 Demonstrate a variety of behaviors to avoid or reduce health risks to self and others.

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

- 1.12.1 Utilize accurate peer and societal norms to formulate a health-enhancing message.
- 8.12.2 Demonstrate how to influence and support others to make positive health choices.
- 8.12.3 Work cooperatively as an advocate for improving personal, family, and community health.
- 8.12.4 Adapt health messages and communication techniques to a specific target audience.

Appendix E

Tracking Your Physical Health & Fitness Project Book Final Review Draft

Tracking Your Physical Health and Fitness

**4-H Project Book
Review Draft**

April 2022

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Contents**Note to the Project Helper****Project Guide****PROJECT AREA: What is Physical Health & Fitness?**

Activity 1: **Influencing Your Physical Health**

Activity 2: **Self-Health Check**

Activity 3: **Family Health History**

Talking It Over

PROJECT AREA: Taking Your Measurements & Vital Signs

Activity 4: **Taking Your Body Measurements**

Activity 5: **Taking Your Vital Signs**

Talking It Over

PROJECT AREA: Tracking Your Behaviors

Activity 6: **Tracking Your Physical Activity**

Activity 7: **Tracking Your Dietary Intake**

Activity 8: **Tracking Your Sleep**

Activity 9: **Tracking Your Stress**

Talking It Over

PROJECT AREA: Where to Go from Here

Activity 10: **Barriers to Your Goals**

Activity 11: **Setting Your Health Goals**

Activity 12: **Tracking Your Health Goals**

Talking It Over

Glossary**Sources****Summary of Learning Outcomes**

Note to the Project Helper

Congratulations! A 4-H member or other youth has asked you to serve as a project helper. You may be a parent, relative, project leader, friend, club advisor, or another important person. Your duties begin with helping the youth create and carry out a project plan, as outlined in the Project Guide.

As a project helper, it is up to you to encourage, guide, and assist. How you choose to be involved helps to shape their life skills and knowledge of the importance of physical health and fitness.

Your Role as Project Helper

Your contributions are critical to deliver of the 4-H program, which is committed to providing experiences that strengthens a young person's sense of belonging generosity, independence, and mastery. Your interactions should support positive you the development within the framework of the Eight Essential Elements (also known as the Eight Key Elements):

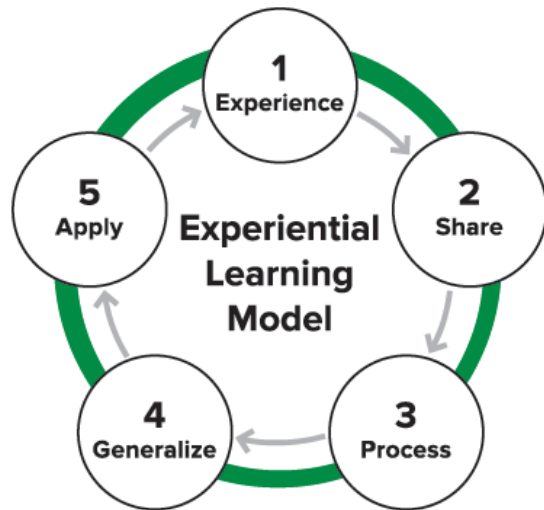
1. A positive relationship with a caring adult
2. An inclusive environment
3. A safe emotional and physical environment
4. Opportunity for mastery
5. Engagement in learning
6. Opportunity to see oneself as an active participant in the future
7. Opportunity for self-determination
8. Opportunity to value and practice service to others

For more information on the Eight Essential Elements, please refer to the *Ohio 4-H Volunteer Handbook* available online at **ohio4h.org**. On a practical level, your role as a project helper means you will strive to do the following:

- Guide the youth and provide support in setting goals and completing this project.
- Encourage the youth to apply knowledge from this project book.
- Serve as a resource person.
- Encourage the youth to go beyond the scope of this project book to learn more about physical health and fitness.

What You Should Know About Experiential Learning

The information and activities in this book are arranged in a unique, experiential fashion (see model). In this way, a youth is introduced to a particular practice, idea, or piece of information through an opening (1) **experience**. The results of the activity are recorded on the accompanying pages. The learn then (2) **shares** with the project helper what was done and (3) **processes** the experience through a series of questions that allow for (4) **generalizing** and (5) **applying** the new knowledge and skill.



Pfeiffer, J.W., and J.E. Jones, *Reference Guide to Handbooks and Annuals*. © 1983 John Wiley & Sons, Inc. Reprinted with permission of John Wiley & Sons, Inc.

What You Can Do

- Review the Learning Outcomes (project skill, life skill, educational standard, and success indicator) for each activity to understand the learning taking place. See the inside back cover for the Summary of Learning Outcomes.
- Become familiar with each activity and the related background information. Stay ahead of the learner by trying out activities beforehand.
- Begin the project by helping the learner establish a plan. This is accomplished by reviewing the Project Guide.
- After each project area is completed, conduct a debriefing session that allows the learner to answer the review questions and share results. The important step improves understanding from an experiential learning perspective.
- Help the learner celebrate what was done well and see what could be done differently. Allow the learner to become better at assessing his or her own work.
- In the Project Guide, date and initial the activities that have been completed.

Project Guide

Welcome to *Tracking Your Physical Health and Fitness*. Learning about health and fitness is interesting and fun.

Tracking Your Physical Health and Fitness is an intermediate-level project for youth who are interested in physical health. In this project, you will learn about many aspects of physical health -- body measurements, vital signs, sleep, physical activity, dietary intake, stress, and how to set goals to maintain and improve your health.

Check your county's project guidelines (if any) for completion of requirements in addition to the ones below, especially if you plan to prepare an exhibit for the fair.

The amount of time for each activity varies, but the project is easily completed within one year.

Project Guidelines

Step 1: Complete all 12 activities and the Talking It Over questions.

Step 2: Take part in at least two learning experiences.

Step 3: Become involved in at least two leadership/citizenship activities.

Step 4: Complete project review.

Step 1: Project Activities

Complete all 12 activities and the Talking It Over questions. Each activity will have a More Challenges section that is optional. As you finish activities, review your work with your project helper. Then ask your project help to initial and date your accomplishments.

Activity	Date Completed	Project Helper Initials
PROJECT AREA: What is Physical Health & Fitness?		
1. Influencing Your Physical Health		
2. Health Self-Check		
3. Family Health History		
Talking It Over		
PROJECT AREA: Taking Your Measurements & Vital Signs		
4. Taking Your Body Measurements		
5. Taking Your Vital Signs		
Talking It Over		
PROJECT AREA: Tracking Your Behaviors		
6. Tracking Your Physical Activity		

7. Tracking Your Dietary Intake		
8. Tracking Your Sleep		
9. Tracking Your Stress		
Talking It Over		
PROJECT AREA: Where to go from Here		
10. Barriers to Your Goals		
11. Setting Your Health Goals		
12. Tracking Your Health Goals		
Talking It Over		

Step 2: Learning Experiences

Learning experiences are meant to complement project activities, providing the opportunity for you to do more in subject areas that interest you. What are some learning experiences you could do to show the interesting things you are learning about? Here are some ideas:

- Attend a clinic, workshop, demonstration, or speech related to physical health and fitness.
- Go on a related field trip or tour.
- Prepare your own demonstration, illustrated talk, or project exhibit.
- Participate in a county fair or other judging event.
- Plan your own learning experience.

Once you have a few ideas, record them here. Complete **at least two** learning experiences. Then, describe what you did in more detail. Ask your project helper to date and initial in the appropriate spaces below.

Plan To Do	What I Did	Date Completed	Project Helper Initials
<i>Demonstration</i>	<i>Created and shared a poster about vital signs.</i>	<i>5/5/YR</i>	<i>S.K.</i>

Step 3: Leadership and Citizenship Activities

Use what you learn to give back to your community. Choose **at least two** leadership/citizenship activities from the list below (or create your own) and write them in the table. Record your progress by asking your project helper to initial next to the date as each one is completed. You may add or change these activities at any time. Here are some examples of leadership/citizenship activities:

- Teach someone about vital signs or another physical health topic.
- Help someone else prepare for project judging.
- Host a workshop to share information about physical activity and exercise.
- Encourage someone to enroll in a healthy living project.
- Arrange for a health care professional to speak to your group.
- Plan your own leadership/citizenship activity.

Leadership/Citizenship Activity	Date Completed	Project Helper Initials
<i>Led a short club meeting activity about how to measure one's own heart rate.</i>	<i>5/12/YR</i>	<i>S.K.</i>

Step 4: Project Review

All finished? Congratulations! After you have completed the activities in this book, you are ready for a project review. This process will help assess your personal growth and evaluate what you have learned.

Use this space to write a summary of your project experience. Be sure to include a statement about the skills you have learned and how they might be valuable to you in the future.

Now, set up a project evaluation. You can do this with your project helper or another knowledgeable adult. It can be part of a club evaluation or part of your county's project judging.

PROJECT AREA: What is Physical Health & Fitness?

As the 4th H in 4-H, health is very important, but it is a very broad topic. According to the World Health Organization (WHO), **health** is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. Your health has to do with the food you eat, the feelings you have, the relationships you have, and so much more. **Wellness** is the active pursuit of activities, choices, and lifestyles that lead to a state of **holistic health**. One dimension of your overall health and wellness is your **physical health**, which is the state of your physical body and how well it is functioning.

Physical fitness is a subset of physical health. It refers to your ability to execute daily activities with a set of attributes (endurance, strength, body composition, flexibility, agility, balance, coordination, power, speed, and reaction time) that people have or achieve that relate to their ability to perform physical activities. These attributes allow you to do **physical activity** and **exercise**. Physical activity is bodily movement produced by the skeletal muscles and which requires energy expenditure, whereas exercise is also activity requiring physical effort, but it is carried out with the purpose of sustaining, or improving some aspect of health and fitness. It's important to remember that it's not just exercise and physical activity that help make you physically healthy, but also it is also about making healthy choices and a lack of injury or diseases. **Diseases** are any harmful deviation from the normal structural or functional state of an organism, generally associated with certain signs and symptoms. It can be hard to zero in on your physical health as it is connected to the rest of your health, your choices, your history, and the environment around you. Let's learn more about that.

Activity 1: Influencing Physical Health

Learning Outcomes:

- **Project Skill:** Understand influences on physical health and fitness.
- **Life Skill:** Self-awareness.
- **Educational Standard:** NHES 1.12.3: Analyze how environment and personal health are interrelated.
- **Success Indicator:** Provides examples of different kinds of physical health influences.

What to Do

Estimated time: 30 minutes

Think about your activities and surroundings during a typical day, week, or month. Fill in your own answers under the examples in the table below using the questions in the first column to think about when you have “good” versus “poor” influences on physical health.

	Good Health	Poor Health
Look around your room, home, and school. What affects your physical health?	<i>Water bottle filling station at school.</i>	<i>Junk food in the pantry.</i>
Consider the people around you. How do they influence your physical health and fitness?	<i>Parents go on walks to get exercise.</i>	<i>Friends keep me up past midnight and I only sleep for four hours.</i>
Think about what you do each day. How does each situation affect your physical health?	<i>I choose to take the stairs instead of the elevator.</i>	<i>I keep sitting on the couch, letting Netflix start the next episode.</i>
Consider your physical sensations (e.g., breathing, muscle strain, sweat, or heartbeat). What do these tell you about your physical health and fitness?	<i>When I get hot and sweaty, I know I am exercising vigorously.</i>	<i>When my stomach is growling, it is because I skipped breakfast.</i>
List a specific activity or event where you notice good vs. poor health.	<i>Visiting a doctor for my annual check-up.</i>	<i>Drinking lots of pop/soda at the basketball game.</i>

Background

Physical health and fitness are complex. They are affected by many things. Your ability and willingness to make healthy choices are influenced by a variety of factors. Physical health seems easy to understand until you stop and think about how your overall physical health is also affected by other dimensions. Ohio State University uses a nine dimensions of health approach to overall wellness. These dimensions are **em**otional, career, social, spiritual, physical, financial, intellectual, creative, and environmental.



From Dr. Bernadette Melnyk and Anita Neale, “9 Dimensions of Wellness” from *American Nurse Today* (2018) and illustrated by Ohio State’s Buckeye Wellness Team

- **Physical Wellness:** The physically well person gets an adequate amount of sleep, eats a balanced and nutritious diet, engages in exercise for 60 minutes per day, and attends regular medical check-ups.
- **Emotional Wellness:** The emotionally well person can identify, express, and manage the entire range of feelings and would consider seeking assistance to address areas of concern.
- **Career Wellness:** The professionally well person engages in work to gain personal satisfaction and enrichment, consistent with values, goals, and lifestyle.
- **Social Wellness:** The socially well person has a network of support based on interdependence, mutual trust, and respect and has developed a sensitivity and awareness towards the feelings of others.
- **Spiritual Wellness:** The spiritually well person seeks harmony and balance by openly exploring the depth of human purpose, meaning, and connection through dialogue and self-reflection.
- **Financial Wellness:** The financially well person is fully aware of their financial state and budgets, saves, and manages finances to achieve realistic goals.
- **Intellectual Wellness:** The intellectually well person values lifelong learning and seeks to foster critical thinking, develop moral reasoning, expand worldviews, and engage in education for the pursuit of knowledge.

- **Creative Wellness:** The creatively well person values and actively participates in a diverse range of arts and cultural experiences as a means to understand and appreciate the surrounding world.
- **Environmental Wellness:** The environmentally well person recognizes the responsibility to preserve, protect, and improve the environment and appreciates the interconnectedness of nature and the individual.

When you take all these dimensions into consideration you are taking a **holistic** approach to health.

More Challenges

Focus more closely on one of the 'good' or 'poor' health examples you listed in the activity. Which of the other eight dimensions of health impacts those activities or surroundings? For example, visiting your doctor for your annual check-up can also be connected to emotional wellness because the doctor might ask how you are feeling and about your mental health.

Did You Know

An approach to holistic health is older than the 9 Dimensions of Wellness. According to *Health Practices of Ancient Greece*, before there was modern medicine, the ancient Greeks used music, drama, and prayer as treatment for illness. The ancient Greeks knew that physical and mental/emotional health were interrelated.

Activity 2: Health Self-Check

Have you ever had a check-up by your doctor? You should see a **primary care physician**, a doctor who provides care to the patient as point of first contact and takes responsibility for the patient's comprehensive care, once a year for a check-up. During your visit, your primary care physician will ask you questions and take some measurements so they can better understand your health. You should still see your doctor, but you can ask yourself questions ahead of time so you can be better prepared for your check-up. If you do a health self-check regularly, you may also identify other times that you may need to go to a doctor.

Learning Outcomes:

- **Project Skill:** Understand what may be asked in an annual check-up and take stock of own health.
- **Life Skill:** Being responsible
- **Educational Standard:** NHES 3.12.4: Determine when professional health services may be required.

- **Success Indicator:** Evaluates personal physical health and prepares to communicate with a health professional.

What to Do

Estimated time: 30 minutes

Ask yourself the following questions. Answer them truthfully and to the best of your ability. Write down your answers.

Question	Answer
Do you have any past hospitalizations, medical tests, or surgeries?	
Have you ever had an injury?	
Do you take any medication currently?	
Do you have any allergies?	
Do you smoke, vape, drink, or use any illicit drugs?	
Do you play any sports?	
What does your daily physical activity look like?	
Have you been exposed to any diseases or sickness recently?	
Are you feeling any pain?	
What is your diet like?	
What vaccinations have you had?	

Background

Doctors ask patients questions to get a better understanding of what may be going on with the patient's body or life in general. The doctors are often looking for your **signs** and **symptoms**. A sign is the objective evidence of a disease that they can see, like a rash or cough. A symptom is something only the person experiencing it can identify, such as a headache or stomachache. They may ask about signs, symptoms, or many of

the questions listed in this activity because they are trying to figure out what tests, **diagnosis**, treatment, and recommendations they may give you. For example, if you say you have a lot of pain in your chest and you are breathing hard, they may ask you to do a screening test to figure out what treatment may be needed.

Medical screening tests are examinations or procedures that can be applied rapidly to better understand a potential diagnosis and what further testing may be needed. They are done to detect potential health disorders and diseases in people. It is important to recognize that a screening test shouldn't be considered for diagnostic purposes or the official identification of an illness. It is up to the doctor to take that information into account along with other information they gather. Depending on the results, they may recommend that you see a **specialist**.

Some common screening tests you might have heard about are:

- Cholesterol screenings are a blood test to see if your cholesterol level is elevated and therefore you have a higher risk for cardiovascular disease.
- Diabetes screenings are tests of your blood sugar level to see if you have prediabetes, Type 1 diabetes, or Type 2 diabetes.

More Challenges

Identify a specific illness, disease, or injury you have had or know someone who has had. Research what questions you should ask a doctor about that illness, disease, or injury. Remember to use reputable sources such as websites that end in .gov or .edu.

Did You Know

Primary care physicians must complete a four-year undergraduate degree, four years of medical school, and three to eight years in a residency program to be a physician. They must also pass an exam by the United States Medical Licensing Examination (USMLE). According to the U.S. Bureau of Labor Statistics, in 2021 the average annual salary for a primary care physician is \$235,930. If you are interested in becoming a doctor, ask a primary care physician about it.

Activity 3: Family Health Interview

Do you ever wonder why you have brown eyes or curly hair? Just like we inherit these traits from our parents, health conditions run in families too. A **family health history** is information about **illnesses** and **diseases** that **run in your family**. Discussing medical conditions or diseases with family members will help you understand your own health and make healthy choices. It may help you figure out if you have a high risk for a disease. But just because your parents or other family members have a health condition doesn't mean you have it now or will in the future. In this activity interview your parents or other family members about the history of your family's health.

Learning Outcomes:

- **Project Skill:** Gathers information about family members' health
- **Life Skill:** Communication; keeping records
- **Educational Standard:** NHES 1.12.4 Analyze how genetics and family history can impact personal health.
- **Success Indicator:** Records family health history.

What to Do

Does your family have a history of heart disease? Is there cancer in your family? How did your grandparents or great grandparents die? A family health history includes this sort of information and can also include the eating habits, activities, and environments that your family shares, because they can also affect your health.

Part 1: Prepare for the interview

Estimated time: 30 minutes

Read through the questions and select which questions you want to ask.

Select a family member or members to interview. This can be a parent or grandparent or another family member that you feel comfortable talking to.

Explain the purpose of the family health interview.

Set up a time for the interview.

Asking some general questions about lifestyle and environment may be a good way to get the conversation started.

It can be scary to find out about a health concern in your family. The information you gain from your family history is something to share with your doctor or other healthcare provider. They can help you understand if you are at risk and what you should do to be healthy.

Health information is personal, and some people do not want to talk about their health problems or medical history. It is important to respect your family members' privacy if they don't want to talk about it. Some relatives may not know their family history (e.g., because they were adopted).

Sidebar

General Family Health Interview Questions

- What country did our relatives come from? What is our ethnic heritage? (Ethnicity is important because some genetic diseases are more common in certain ethnic groups.)
- Where has our family lived?
 - Did our family always live in this state?
 - Did they grow up in the city, town, or farm?
- What did our family members do for work?
- What type of food does our family eat?

- What activities did our family members enjoy doing?
- What characteristics are common in our family? (e.g., height, hair color)

Family Health History Questions

- Did you have any health problems as a child? Did you or other relatives have any childhood illnesses that are no longer common today? (e.g., measles, polio). Did your parents or grandparents have any health problems?
- Are there health problems or diseases that you think might run in our family?
 - Do you or did anyone in our family (parents, grandparents, great-grandparents) have any long-term health problems or diseases? This could be heart disease, diabetes, kidney disease, bleeding disorder, or lung disease?
 - How old were they when they developed this medical condition or disease?
 - Do other people in the family have the same conditions and diseases?
- Did any our deceased relatives have health problems? What were the issues and when were they diagnosed?
- How old were deceased relatives when they died and what did they die of?
 - How old were they when they died?
 - What were the reasons for their deaths?

Part 2: Interview

Estimated time: 60 minutes

Supplies needed: paper, pencil, device or app for audio or video recording

1. Record basic information about the interview:
 - Name of the person you interviewed
 - Relationship to you
 - Age, birthdate, and place of birth
 - Date of interview
 - Length of interview
2. Using the questions you prepared, conduct the interview. Take notes. You can also record the interview using a device or app, so you can go back later and listen to it.
3. Organize the information you collected.

Background

A family health history is information about illness and about diseases that run in your family, as well as the eating habits, activities, and environments that your family shares. A family health history can:

- Reveal early warning signs of a condition or disease
- Provide health care providers with information so they can recommend treatment, and assess and possibly reduce risk

- Help improve family members' lifestyles to reduce risk

Your parents and grandparents pass on family culture and values in many ways—through stories, photos, recipes, spiritual practices, and music. You also inherit how you look—for example, how tall you are and the color of your eyes. Small structures in cells called **genes** carry information for these characteristics and for how your body works. Your genes were passed on to you from your parents. When family members share characteristics, we say that something “**runs in the family**.” Family health history is the first step on the road to better health. Although you can’t change what happened to your relatives, you can use the information to manage your health better and lower your risk disease.

Health conditions and diseases can run in a family too. Some genes can make it more likely that you will get certain diseases. When members of your family have the same health problems, you might be at risk for getting the same health problems in the future. This is because family members can have genes, lifestyle, and environmental factors in common. In many cases, healthy living habits can reduce your risk for diseases that run in your family. If you have a family history of **chronic diseases** you can benefit right away from developing good lifestyle habits, such as exercising and eating healthy. These habits might help prevent or delay chronic diseases.

Your doctor’s office will ask about your family’s health when they take your health history. Health professionals use this information to come up with a plan to help you to stay healthy and to get better if you are sick.

More Challenges

Look for more information on a condition or disease that runs in your family. Use reliable sources of information. For example, if you find that heart disease runs in your family, go to the American Heart Association website.

Did You Know

At the beginning of the 20th century, the leading causes of death were from infectious diseases like pneumonia and tuberculosis. Now most people die from chronic, lifestyle-related illnesses. Heart disease is the nation’s leading cause of death. Three health-related behaviors—tobacco use, lack of physical activity, and poor nutrition—greatly contribute to heart disease.

PROJECT AREA 1: Talking It Over

Share

Give an example of how your physical health influences one of the 9 Dimensions of Wellness (besides physical wellness).

Reflect

Has the information you learned in these activities changed how you view health? Is so, how?

Generalize

Does having more information about your family history help or hurt you? Explain.

Apply

What are some ways that you can figure out the current state of your physical health?
How can you use the information you've learned to maintain or improve your physical health?

PROJECT AREA: Taking Your Measurements and Vital Signs

In the previous section, you learned about preparing for an annual check-up with a primary care physician. During your check-up, medical professionals will take measurements of your body to better understand your health. They often measure your weight, your height, your temperature, and more. Although doctors use some specialized equipment to take these measurements, you can take many of them on your own.

Activity 4: Taking Your Body Measurements

Some basic measurements are taken during a medical check-up called **body measurements**. The nurse might measure your height using a **stadiometer**, which is the long ruler attached to the wall, so they can calculate your **body mass index (BMI)**. They then compare your height and weight to how other youth with the same age and gender are growing. Let's take some basic measurements to get started.

Learning Outcomes

- **Project Skill:** Measuring height, weight, and BMI.
- **Life Skill:** Comparing to standards.
- **Educational Standard:** NHES 3.12.1: Evaluate the validity of health information, products, and services.
- **Success Indicator:** Measures, records, and compares own measurements to percentiles and BMI.

What to Do

Estimated time: 30 minutes

Supplies: pencil or tape, measuring tape, ruler, and scale

Follow the instructions to take each measurement and compare your measurements to the different percentiles and categories. Write down which percentiles or category you fall in in the appropriate column.

AGE: What is your current age? Write it in the table below.

HEIGHT: Find a flat section of floor next to a flat section of wall. Stand with your feet flat on the floor, make sure your head, shoulders, and buttocks are touching the wall. Stand up straight with your eyes looking straight ahead. Have someone place a ruler against the wall and have them lower it until it gently rests on top of your head. Lightly mark the wall with a pencil or tape and then measure the distance from the floor to the mark on the wall. Once you have your height, record it in the table below.

WEIGHT: Place a scale on a hard, even surface, and not on carpet. Stand still, with your weight distributed evenly on both your feet. You should weigh yourself in the morning after you empty your bladder and before you eat or drink anything, wearing as little clothing as possible. Once you have your weight, record it in the table below.

Body Mass Index: Body mass index (BMI) is calculated using height and weight.

The formula is $BMI = \frac{kg}{m^2}$, where kg is kilograms and m^2 is height in meters squared. To use this formula, you will need to convert your weight from pounds to kilograms and your height from inches to meters.

You can use the formula below instead of converting your weight and height.

$$\text{weight (pounds)} / \text{height (inches)}^2 \times 703$$

My weight is ____ pounds

My height is ____ inches. The square of my height is ____ inches x ____ inches = ____

My BMI is ____ (my weight in pounds) x ____ (my height in inches squared) x 703 = ____ BMI

Once you have your BMI, record it in the table below.

Measurement	My Measurement	Categories				Which category do you fall in?
Age		N/A				N/A
Height (in inches)		Male				
		Age	5 th Percentile and Below	5.1 st - 94.9 th Percentile	95 th Percentile and Above	
		13	56.52 inches	56.53 – 66.71 inches	66.72 inches	
		14	59.27 inches	59.28 – 69.68 inches	69.69 inches	
		15	61.68 inches	61.69 – 71.82 inches	71.83 inches	
		16	63.30 inches	63.31 – 73.01 inches	73.02 inches	
		17	64.21 inches	64.22 – 73.61 inches	73.62 inches	
		18	64.66 inches	64.67 – 73.93 inches	73.94 inches	
		19	64.88 inches	64.89 – 74.11 inches	74.12 inches	
		Female				
		Age	5 th Percentile and Below	5.1 st - 94.9 th Percentile	95 th Percentile and Above	
		13	57.44 inches	57.45 – 66.37 inches	66.38 inches	
		14	58.92 inches	58.93 – 67.44 inches	67.45 inches	
		15	59.55 inches	59.56 – 67.96 inches	67.96 inches	
		16	59.82 inches	59.83 – 68.19 inches	68.20 inches	
		17	59.95 inches	59.96 – 68.33 inches	68.34 inches	
		18	60.03 inches	60.04 – 68.40 inches	68.41 inches	
		19	60.07 inches	60.08 – 68.45 inches	68.46 inches	
Weight (in pounds)		Male				
		Age	5 th Percentile and Below	5.1 st - 94.9 th Percentile	95 th Percentile and Above	
		13	75.45 lbs.	75.46 – 145.72 lbs.	145.73 lbs.	

		14	84.82 lbs.	59.28 – 69.68 lbs.	160.25 lbs.					
		15	94.83 lbs.	94.84 – 173.77 lbs.	173.78 lbs.					
		16	104.31 lbs.	104.32 – 185.82 lbs.	185.83 lbs.					
		17	112.02 lbs.	112.03 – 195.75 lbs.	195.76 lbs.					
		18	117.35 lbs.	117.36 – 202.92 lbs.	202.93 lbs.					
		19	120.81 lbs.	120.82 – 207.34 lbs.	207.35 lbs.					
		Female								
		Age	5 th Percentile and Below	5.1 st – 94.9 th Percentile	95 th Percentile and Above					
		13	76.30 lbs.	76.31 – 149.01 lbs.	149.02 lbs.					
		14	83.58 lbs.	83.59 – 159.59 lbs.	159.60 lbs.					
		15	89.88 lbs.	89.89– 167.16 lbs.	167.17 lbs.					
		16	94.70 lbs.	94.71 – 172.07 lbs.	172.08 lbs.					
		17	97.96 lbs.	97.97 – 175.29 lbs.	175.30 lbs.					
		18	100.00 lbs.	100.01 – 178.03 lbs.	178.03 lbs.					
		19	101.35 lbs.	101.36 – 180.82 lbs.	180.83 lbs.					
		Body Mass Index (BMI)		Male						
				Age	Underweight		Healthy		Overweight	Obese
				13	15.2 or under		15.3-21.5		21.6-25	25.1 and over
				14	15.9 or under		16-23.5		23.6-25.9	26 and over
15	16.6 or under			16.7-23.3	23.4-26.7	26.8 and over				
16	17.2 or under			17.3-24.1	24.2-27.4	27.5 and over				
17	17.6 or under			17.7-24.8	25-28.1	28.2 and over				
18	18.1 or under			18.2-25.5	25.6-28.8	28.9 and over				
19	18.6 or under			18.7-26.2	26.3-29.8	29.7 and over				
Female										
Age	Underweight			Healthy	Overweight	Obese				
13	15.2 or under			15.3-22.5	22.6-26.2	26.3 and over				
14	15.7 or under			15.8-23.2	23.3-27.1	27.2 and over				
15	16.2 or under			16.3-23.9	24-28	28.1 and over				
16	16.7 or under			16.8-25.5	25.6-28.8	28.9 and over				
17	17.1 or under			17.2-25.1	25.2-29.5	29.6 and over				
18	17.4 or under			17.5-25.6	25.7-30.2	30.3 and over				
19	17.7 or under			17.8-26	26.1-30.9	31 and over				

Background

As you grow, your height and weight are tracked and compared to clinical growth charts put out by the Center for Disease Control. Because adolescence is a period characterized by changes in physical growth, these charts take into account an individual's sex and age. There is no ideal **percentile** for height and weight. Being in a high or a low percentile doesn't necessarily mean that a child is healthier or has a growth or weight problem. You may just be smaller or larger than average. This could be fine, especially if your parents and siblings are smaller or larger than average too.

So why do doctors track these numbers? These measurements show your pattern of height and weight gain over time and whether you are growing proportionally, because

such changes may indicate a health problem. Your BMI places you in a category called a percentile. Percentiles are the measurement that shows where you are compared to other youth in the same age and sex category. The higher the percentile number, the larger you are compared to other youth. For example, you might hear that an infant's weight placed them in the 90th percentile. That means compared to other babies, that infant weighs more than 90% of other babies that age. When a child's weight or height percentile changes from the pattern it has established, that could indicate a health problem. It can also be a problem if a youth is suddenly increasing in one percentile but not the other. For example, if a youth starts to get much taller but doesn't increase in weight, that could be a health concern.

Body mass index is better than height and weight alone to indicate your health. However, it is not perfect either. BMI does not take in account ethnicity, body fat, muscle, or bone density. BMI is based entirely on White European populations, and Asian, Black, and Hispanic peoples have been found to be healthy in slightly different BMI ranges and at risk for diabetes at different points than White people. Also, because BMI doesn't consider body fat, muscle, or bone density, it can wrongly categorize athletes with lots of muscle or elderly individuals who have a lesser bone density.

It's important to note that your height, weight, and BMI alone do not determine if you are physically healthy or not. Just like health in general, many things make up your physical health and you should get a whole picture of your health by taking many measurements over many days, tracking your habits, and talking about all of it with your primary care physician. If you have concerns about your height or weight, ask your doctor about it.

More Challenges

Another way to determine if your weight is healthy for your height and age is called **waist-to-height ratio** (WHtR). Look up how to calculate your waist-to-height ratio, record it, and talk to your doctor about it.

Did You Know

What is considered normal weight and height has changed over time. According to a team from the Ohio State University, when they analyzed skeletons from 800 A.D. to 1100 A.D. in Northern Europe they were just as tall as modern people. By the late 1700s Northern Europeans had lost an average of 2.5 inches and weren't back to that height until the 1950s.

Activity 5: Taking Your Vital Signs

Medical professionals use **vital signs** as a first impression of your health. **Body temperature, heart rate, respiratory rate, and blood pressure** are the four vital signs checked at a health care visit. These numbers are then compared to **normative values**. Normative values are the data from a similar population that the doctor compares your measurements to. It is the target that you should be aiming toward to be considered healthy and to reduce **risk factors** for disease or disorders.

Learning Outcomes:

- **Project Skill:** Record vital signs.
- **Life Skill:** Keeping records and working with numbers.
- **Educational Standard:** NHES 6.12.1: Assess personal health practices and overall health status.
- **Success Indicator:** Measures and records own vital signs and compares to normative values.

What to Do

Estimated time: 30 minutes

Supplies Needed: body thermometer and stopwatch

For this activity, you will be tracking three of the four vital signs: body temperature, resting heart rate or pulse, and respiratory rate, which are easy to track from home. However, blood pressure requires a specialized piece of equipment called a **sphygmomanometer**, also called a blood pressure cuff, so you will not track it for this activity. Once you complete each of the measurements, write it in the chart below, then check if you are within the normative value.

Body Temperature: Using your thermometer and its instructions, take your temperature and track it in the chart below.

Resting Heart Rate or Pulse: First, find your pulse at your wrist while in a relaxed state. Using your index and middle finger of one hand feel your pulse on the inside of the opposite wrist. Using the stopwatch, find your pulse and count the number of beats you feel for 1 minute. Record your heart rate or pulse, as **beats per minute (bpm)**, on the chart below.

[Images of how take pulse at carotid and wrist]

Respiratory Rate: Using your stopwatch, track the number of times your chest or abdomen rises for 1 minute and track below as breaths per minute. Once you've tracked your breaths yourself, give the stopwatch to someone else and have them track the number of times your chest or abdomen rises for 1 minute.

Vital Sign	My Measurement	Normative Value for Adolescents (12–18 years old)	Within the Normative Value (yes/no)
Body Temperature		97.8° F to 99° F	
Heart Rate		55-105 beats per minute	
Respiratory Rate (Yourself)		12-16 breaths per minute	
Respiratory Rate (Someone else)			

Background

Visits to the doctor are important when you are sick, but they are also to make sure you are growing and developing normally. During a regular checkup you will receive a **physical examination**. Health professionals take vital signs during the physical exam to obtain **baseline** information about how your body is working. This information is then compared to normative values so the nurse, doctor, or other health professional can make judgements about your health.

Typically, a health professional will use a **thermometer** to get your body temperature, a **stethoscope** to get your heart rate and respiratory rate, and a **sphygmomanometer** or blood pressure cuff to get your blood pressure.

Blood Pressure is a way to measure how hard a heart must work to do its job. It tells how much pressure is in a person's arteries when a heart beats (called the **systolic pressure**) and when it rests (the short time between beats, called the **diastolic pressure**). That is why blood pressure is reported as two numbers, like 100/60 for a child and 120/80 for an adult. Reach out to a medical professional to check your blood pressure.

More Challenges

Track one or more of your vital signs at different times of the day. Record the time of day what activity you were doing. What are some reasons this vital sign might differ?

If you have a fitness tracker, compare the heart rate taken manually with the one obtained from your fitness tracker. How do they compare?

Did You Know

The heart is a powerful organ. A normal heart beats 100,000 times a day and each minute your heart pumps 1.5 gallons of blood. Also, a woman's average heartbeat is faster than a man's by almost 8 beats a minute.

PROJECT AREA 2: Talking It Over**Share**

What are the four vital signs?

Reflect

Does one measurement taken at one time determine if you are healthy or not? Why or why not?

Generalize

How is knowing the information in this section and having it on hand helpful when you go visit your doctor?

Apply

What are ways that you can change or influence your vital signs, height, or weight?

PROJECT AREA: Tracking Your Behaviors

Have you ever tried to gain or lose a few pounds? It can often be discouraging to just focus on your weight as an indicator for good physical health. Sometimes it can lead to cycles of losing and regaining weight, lower self-esteem, and becoming obsessed with food and body image. It is better to if you focus more on healthy behaviors and lifestyle choices than weight. **Healthy lifestyle behaviors** are actions an individual takes to impact their health. They include actions such as sleeping, eating, drinking, physical activity, and more. Just like some of the measurements your doctor may take, there are guidelines for you to compare your lifestyle behaviors to. Let's figure out how to track these behaviors and compare them.

Project Activity 6: Tracking Your Physical Activity

Taking a brisk walk, running, weight training, and playing sports can all count toward your daily **moderate-to-vigorous** activity time. It is important to include different types of **physical activity** to focus on different aspects of physical health and fitness.

Aerobic, **strength-building**, and **bone-strengthening** movements are each necessary for overall physical health. **Stretching** is also important for muscle health, flexibility, and recovery. To stay safe, you want to make sure you vary the intensity and type of physical activity you do. Making sure you are being mindful of recovery after doing activities is also an important part of being physically safe and healthy. Stretching, drinking plenty of water, and getting enough sleep are simple ways to recover and ensure that you are preparing your body to move like you need it to. A common way to measure physical activity is to count the number of steps you take. However, in this activity you will track the number minutes you spend being active each day, so you can account for many different types of physical activity. Some smart tracking devices can help with this, but all you really need is a simple timer to keep track of how much time you are active.

Learning Outcomes:

- **Project Skill:** Records physical activity.
- **Life Skill:** Making healthy lifestyle choices.
- **Educational Standard:** NHES 7.12.1 Analyze the role of individual responsibility for enhancing health.
- **Success Indicator:** Records physical activity and learns new ways to be active.

What to Do

Estimated time: 60 minutes a day for 1 week

Use a timer or a fitness tracking device to record the total number of minutes you are active each day for a week. Be sure to also record the type of physical activity (aerobic, strength-building, bone-strengthening) you did. Stretching is important, but does not

Bone-Strengthening activities strengthen bones with movements that involve impact with the ground. Walking, running, jumping rope, basketball, tennis, and hopscotch are all great ways to strengthen bones while being active. You build almost all your bone density by age 20. Adding these movements now leads to less injury and greater strength later in life.

60 minutes of physical activity a day is recommended, and most of that activity should be aerobic. This activity should be moderate-to-vigorous activity. In other words, when you are being active your lungs, heart, and muscles should *feel* like you are moving with effort.

Use the “talk test” to determine the level of intensity for an activity:

- Moderate activity: You can talk but not sing during the activity.
- Vigorous activity: You will not be able to say more than a few words without taking a breath.

More Challenges

The 60 minutes a day guideline refers to **moderate-to-vigorous physical activity**. Moderate activity requires some effort and raises your heart rate to a degree you notice it, but your breathing stays steady. Vigorous activity demands a large amount of energy and raises your heart rate considerably. Look back at the physical activity you did in the week you recorded. Write down how much was moderate or vigorous for each day.

Did You Know

You can help the environment while improving your physical wellness. **Plogging** is an activity that originated in Sweden – it involves picking up litter while jogging. It comes from the words *plocka upp*, which is Swedish for “to pick up,” combined with *jogging*. Plogging is now gaining interest in the U.S. Learn how the University of Delaware 4-H is integrating plogging into their program at <https://sites.udel.edu/4h-prevention>. Maybe you could organize plogging with your club as a service activity!

Project Activity 7: Tracking Your Dietary Intake

Following research-based healthy eating guidance like **MyPlate** and the *Dietary Guidelines for Americans 2020-2025* will help you perform at your best, maintain a desirable weight, build strong bones, and avoid diseases like diabetes. You can eat a wide variety of foods while staying within recommended levels for **calories**, sugar, salt, **fat**, and water.

Learning Outcomes:

- **Project Skill:** Compare foods eaten to the MyPlate guidelines.
- **Life Skill:** Evaluating personal decisions.

- **Educational Standard:** NHES 7.12.2: Demonstrate a variety of healthy practices and behaviors that will maintain or improve the health of self or others.
- **Success Indicator:** Tracks meals consumed for 4 days with photos and indicates whether each meal met the recommended standard for proportion of fruits and vegetables and for healthy beverage consumption.

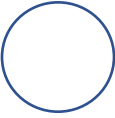
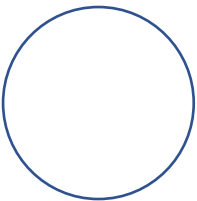
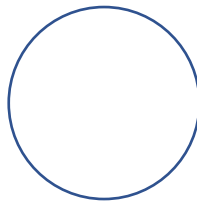
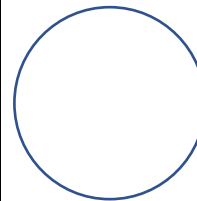
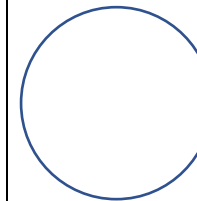
What to Do

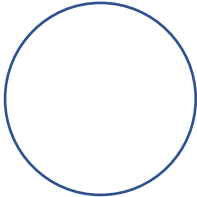
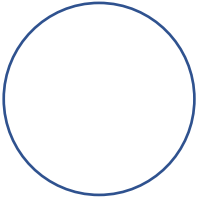
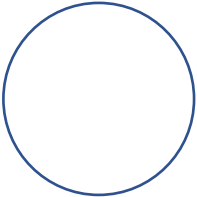
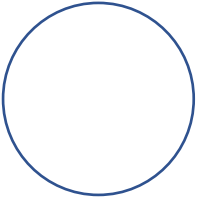
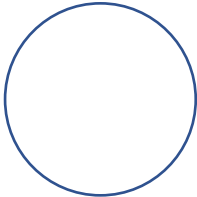
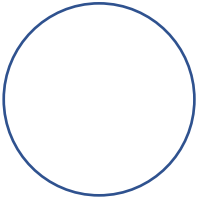
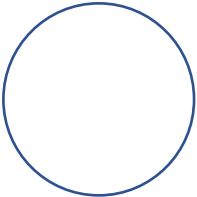
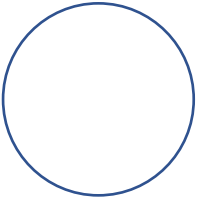
Estimated time: 90 minutes over 4 days

There are many ways to set dietary goals and many ways to track whether you are meeting them. The U.S. Department of Agriculture's MyPlate website (MyPlate.gov) provides tools (online and print) for making a healthy eating plan based on an individual's age, height, weight, and activity level. The *Start Simple with MyPlate* app is a fun tool for setting daily food goals, seeing real-time progress, and earning badges as you go.

Here are steps you can take to create a photo journal and track basic nutrition goals:

1. Take a photo of your meals and snacks for 4 full days. If possible, include a sign in your photo that identifies Day 1, 2, 3, or 4 and Breakfast, Lunch, or Dinner.
2. In the "Match Your Plate to MyPlate" table, divide each circle to show approximately how much of your meal was fruit, vegetable, grain, protein, and other (snacks or other food offering little nutritional value) based on each photo.
3. For each meal, circle yes or no to indicate:
 - Was half the meal fruits and vegetables (combined)?
 - Did the meal include milk or water (unsweetened)?

Match Your Plate to MyPlate					
		Day 1 Date: Day of the Week:	Day 2 Date: Day of the Week:	Day 3 Date: Day of the Week:	Day 4 Date: Day of the Week:
Breakfast	Divide the plate and label the proportions that were: - Vegetables - Fruits - Protein - Grain - Dairy - Other  Example				
	Was half your plate fruits and vegetables?	YES / NO	YES / NO	YES / NO	YES / NO

	Did you drink water or milk?	YES / NO	YES / NO	YES / NO	YES / NO
Lunch	Divide the plate and label the proportions that were: - Fruits - Vegetables - Protein - Grain - Dairy - Other				
	Was half your plate fruits and vegetables?	YES / NO	YES / NO	YES / NO	YES / NO
	Did you drink water or milk?	YES / NO	YES / NO	YES / NO	YES / NO
Dinner	Divide the plate and label the proportions that were: - Fruits - Vegetables - Protein - Grain - Dairy - Other				
	Was half your plate fruits and vegetables?	YES / NO	YES / NO	YES / NO	YES / NO
	Did you drink water or milk?	YES / NO	YES / NO	YES / NO	YES / NO

Background

Overall, the dietary patterns of teens in the U.S. are not aligned with the *Dietary Guidelines for Americans, 2020-2025*.

1. Consumption of fruits, vegetables, and whole grains is less than the recommended amounts.
2. Most diets exceed the recommend limits for fat, salt, and added sugar.
3. More than 1/3 of U.S. children regularly consume fast food.
4. Foods classified as junk foods provided nearly 1 in 5 calories.
5. Consumption of ultraprocessed foods has increased.
6. Although young people are consuming less soda than in previous decades, sugar-sweetened beverages remain the single largest source of added sugar in the diets of U.S. adolescents.
7. Obesity is increasing. Nearly 1 in 5 (19.3%) of Americans ages 2 to 19 have obesity. This rate has more than tripled since the mid-1970s.

8. Current nutrition and physical activity behaviors are contributing to increases in chronic diseases, and to those conditions developing at younger ages. This is a particular concern with diabetes.

More Challenges

Review the photos of your meals. Estimate how closely your daily intake met the recommendations for specific amounts of whole fruits, vegetables, proteins, whole grains, and dairy.

Are You Getting the Recommended Amounts of Fruits, Vegetables, Grains, Proteins and Dairy?				
	Day 1 Date: Day of the Week:	Day 2 Date: Day of the Week:	Day 3 Date: Day of the Week:	Day 4 Date: Day of the Week:
Fruits (not from juice)				
Recommended	1 ½ cups	1 ½ cups	1 ½ cups	1 ½ cups
Estimated intake				
Vegetables				
Recommended	2 ½ cups	2 ½ cups	2 ½ cups	2 ½ cups
Estimated intake				
Grains				
Recommended	6 oz.	6 oz.	6 oz.	6 oz.
Estimated intake				
Proteins				
Recommended	5 oz.	5 oz.	5 oz.	5 oz.
Estimated intake				
Dairy				
Recommended	3 cups	3 cups	3 cups	3 cups
Estimated intake				

Did You Know

Did you know that plastic water bottles have both financial and environmental costs? According to a study done at Harvard University, bottled water is about 3,000% more expensive per gallon than tap water, and the United States must use 17 million barrels of oil to produce enough plastic water bottles annually to meet the demand for bottled water. Because water is a better option than most drink choices, keeping a reusable water bottle in your bag and skipping the soda, fruit drinks, energy drinks, and sports drinks is a win-win-win, for your body, for your wallet, and for the environment!

Project Activity 8: Tracking Your Sleep

Getting enough sleep is not just an occasional luxury—it is something everyone needs on a regular basis for good health. The amount of sleep you get affects our physical and mental energy levels and your ability to fight off disease.

Learning Outcomes:

- **Project Skill:** Recording a sleep pattern for a week
- **Life Skill:** Keeping records and working with numbers
- **Educational Standard:** NHES 5.12.7 Evaluate the effectiveness of health-related decisions.
- **Success Indicator:** Tracks and records hours of sleep each night for a week

What to Do

Estimated time: 8 to 10 hours a day for 7 days (Pick a week when you will be able to track for 7 days in a row.)

Record the approximate time you go to sleep each night and the approximate time you wake up and each morning in the table provided. You can start on any day of the week, just be sure to record times for 7 days in a row. If you have a device that digitally records the hours you sleep, you can use it to track your time.

Track Your Sleep							
	Sunday night	Monday night	Tuesday night	Wed night	Thurs night	Friday Night	Sat night
Approximate time you went to sleep							
	Monday morning	Tuesday morning	Wed morning	Thurs morning	Friday morning	Sat morning	Sun morning
Approximate time you woke up							
Total hours of sleep (minus any time you were up in middle of the night)							
Did you get at least the recommended 8 hours of sleep?							

Background

If you ever “pulled an all-nighter,” you probably did not feel so well the next day. Getting the proper amount of sleep helps individuals to stay focused and concentrate on tasks, which ultimately helps improve academic performance. Over time, getting adequate sleep contributes to disease prevention and overall well-being. Children and adolescents who get the recommended amount of sleep have decreased risk for obesity, type 2 diabetes, injuries, and mental health problems. However, according to

nationwide data from 2015, 7 out of 10 high schoolers do not get the recommended hours of sleep on an average school night.

How Much Sleep Do You Need?

The amount of sleep you need depends on your age. The American Academy of Sleep Medicine recommends the following amounts of sleep for children and teens:

Age Group	Recommended Hours of Sleep
6–12 years	9 to 12 hours per 24 hours
13–18 years	8 to 10 hours per 24 hours

More Challenges

Note whether you got the recommended amount of sleep each night that you tracked. If you met the recommendation, jot down a couple things that made it possible to sleep for as long as you did (finished homework right after school, slept in because it was a weekend, etc.). If you did not meet the recommendation, jot down some of the things that got in the way of a good night's rest (noise, homework, social media, etc.). Use actions from the list of positive sleep hygiene behaviors below.

Good **sleep hygiene** can improve your sleep patterns:

- Be consistent. Go to bed at the same time each night and get up at the same time each morning, including on the weekends
- Create a relaxing environment. Make sure your bedroom is quiet, dark, and at a comfortable temperature
- Create a device-free environment. Remove electronic devices, such as TVs, computers, and smart phones, from the bedroom
- Limit foods and beverages. Avoid large meals, caffeine, and alcohol before bedtime
- Get some exercise earlier in the day. Being physically active during the day can help you fall asleep more easily at night. Avoiding vigorous activity an hour before going to bed can help you get to sleep better.

Did You Know: There is growing concern that early school start times result in most adolescents not getting enough sleep and thus having negative effects on students' health. The American Academy of Pediatrics recommends that middle schools and high schools start no earlier than 8:30am to allow adolescents to get the sleep they need. Many school districts across the country have changed to later start times in agreement with this recommendation.

Project Activity 9: Tracking Your Stress

Stress symptoms can affect your body, your thoughts and feelings, and your behavior. Being able to recognize common stress signs and symptoms can help you manage them. Stress that's left unchecked can contribute to many health problems, such as high blood pressure, heart disease, obesity, and diabetes.

Learning Outcomes

- **Project Skill:** Identifying the body's reaction to stress.
- **Life Skill:** Coping with stress.
- **Educational Standard:** NHES 1.12.2: Describe the interrelationships of emotional, intellectual, physical, and social health.
- **Success Indicator:** Identifies effects of stress on the body and identifies constructive ways to manage this stress

What to Do

Estimated time: 1 week

For each of the next seven days, keep a journal of the stress you felt, your body's reactions, and how you responded. Fill out the chart below at the end of each day.

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Date							
What happened today?							
Did you feel stressed?							
What was your body's reaction to this stress?							
What might have caused your stress?							
How did you react to the stress?							

Background

Stress is the body's reaction to harmful situations -- whether they're real or imagined. When you feel threatened, a chemical reaction occurs in your body that allows you to act in some way to prevent injury. Stress triggers a surge of a hormone called

adrenaline that temporarily affects the nervous system. This reaction is known as **"fight-or-flight,"** or the stress response. Another response when stressed is to **freeze**.

Stress often shows up as physical signs and symptoms—it affects all systems of the body. During the stress response, you experience physical changes: your heart rate increases, breathing quickens, muscles tighten, and blood pressure rises. Your body is ready to act if needed. In the short term, these reactions are good because they can help you handle the situation causing stress. This is your body's way of protecting itself from potential danger.

A little stress is OK. For example, it may inspire you to put in extra effort to meet a deadline. Your body is designed to handle small doses of stress. But you are not equipped to handle long-term, chronic stress without negative consequences. Too much stress can wear you down and make you sick, both mentally and physically.

Not everyone experiences stress in the same way. The same **stressor** may be manageable for one person and overwhelming for another. Unlike the four vital signs, there is no objective way to directly measure stress. However, because your body reacts to stress, those reactions can be measured—your heart rate, respiration rate, and blood pressure. In the chart below, you can see the effects stress can have on your body, your mood, and your behavior. Many of these reactions affect your physical health. This is another example of how the different dimensions of health are connected.

[Image of body]

Common effects of stress

On your body	On your mood	On your behavior
Headache	Anxiety	Overeating or undereating
Muscle tension or pain	Restlessness	Angry outbursts
Chest pain	Lack of motivation or focus	Drug or alcohol misuse
Fatigue	Feeling overwhelmed	Tobacco use
Stomach upset	Sadness or depression	Exercising less often
Sleep problems		

More Challenges:

When you are stressed, practice a simple breathing technique by breathing in through your nose for four counts, hold that breath for four counts, and breathe out for four

counts. Repeat several times. Did this help you feel calm? Teach this and other breathing techniques to a friend, your 4-H club, or your family.

Did You Know:

Sometimes people blame diseases or disorders on only one thing, but health is more complex than that. For example, the cigarette industry in the 1950s supported research to discover the Type A Personality (someone with high achievement, competitiveness, and impatience) to prove coronary heart disease and cancer were risks related to high-stress personality types instead of tobacco use. Stress is a risk factor for coronary heart disease and cancer, but smoking is also a risk factor. Both stress and smoking can negatively impact your health.

Sidebar or Pullout Section**Act to manage stress**

You will experience stress throughout your life. Coping with stress is a valuable life skill to have now and in the future. If you have stress symptoms, taking steps to manage your stress can have many health benefits.

Explore stress management strategies, such as:

- Getting regular physical activity
- Eating a balanced diet and drinking water
- Practicing relaxation techniques, such as deep breathing, meditation, or yoga
- Getting enough sleep
- Limiting screen time
- Keeping a sense of humor
- Spending time with family and friends
- Setting aside time for hobbies, such as reading a book or listening to music

Practicing stress relievers like breathing exercises and meditation can calm you down quickly, returning your body to a normal state. This doesn't necessarily solve the challenges that triggered your stress response in the first place, but it does help you to move into a frame of mind where you are better able to handle these challenges with a clear head.

Aim to find active ways to manage your stress. Inactive ways to manage stress—such as watching television, surfing the internet, or playing video games—may seem relaxing, but they may increase your stress over the long term. Avoid tobacco use, excess caffeine, and the use of alcohol and illegal substances.

Stress management techniques are applicable not only to people who are dealing with stress, but also as part of your daily routine. You can see from the list above that the stress management strategies suggested are also ways to maintain and improve your physical health. This section of the project book has focused on these health practices in more detail. These practices can help you maintain and improve your health.

When to seek help

Stress is subjective — it is not measurable with tests, like measuring your blood pressure or heart rate, although increased heart rate and blood pressure can be signs of stress. A healthcare provider may use questionnaires to understand your stress and how it affects your life. But only the person experiencing the stress can determine whether it's present and how severe it feels.

If you're not sure if stress is the cause or if you've taken steps to control your stress but your symptoms continue, see your doctor. Your healthcare provider may want to check for other potential causes. Or consider seeing a professional counselor or therapist, who can help you identify sources of your stress and learn new **cop**ing skills.

PROJECT AREA 3 Talking It Over**Share:**

Were you already doing some of the health behaviors and meeting the recommendations in this section? Which ones?

Reflect:

Which healthy behavior (sleep, diet, physical activity, or stress management) do you need to work on more to be healthier?

Generalize:

What are the benefits of tracking your health behaviors? Are there other things you could track to improve other aspects of your life?

Apply:

What type of barriers might you face if you want to make changes in your physical health? How are these barriers connected to other aspects of health?

PROJECT AREA: Where to Go from Here

Achieving good health is a dynamic process and being healthy requires your active participation. Because there is a clear connection between lifestyle and health, your health status can change over time. Just tracking your measurements, vital signs, and behaviors means nothing for physical health if you don't learn from the information and try to do better. Creating goals gives you something to aim for when working on your health. Yet, it's important to recognize that everyone has different access to health resources and differs in their ability to change their health. Let's figure out what resources you might have around you and what health goals may be helpful for you.

Project Activity 10: Barriers to Your Goals

Before you create goals and track them, you should understand the resources and barriers you have around you. **Health equity** is the idea that when every person can achieve their full potential health. Sadly, this isn't always true, as people might have **health barriers** due to the place they live, their gender, their ethnicity, or the amount of money they make. It is important for people to look around their lives and see what resources they do or do not have that can either help them reach their goals or present barriers.

Learning Outcomes:

- **Project Skill:** Identify health resources barriers.
- **Life Skill:** Self-awareness of health access
- **Educational Standard:** NHES 5.12.1 Examine barriers that can hinder healthy decision making.
- **Success Indicator:** Identifies health resources and barriers.

What to Do

Estimated time: 15 minutes

Answer each of the yes or no questions below to see what health resources or barriers you may have.

Question	Yes/No	Question	Yes/No
Do you or your family not seek medical or dental care due to cost?		Are you able to easily get access to fresh fruits and vegetables?	
Does anyone in your family receive or are eligible for SNAP benefits?		Are you able to sleep enough so you can focus on your schoolwork?	
Do you or your family have easy access to open grassy or park space?		Have you or your family ever been denied medical assistance?	

Are you and your family able to be transported where you need to go when you need to?		Do you have the recommended immunizations for your age?	
Do you have a primary care physician?		Do you perceive yourself as having little to no health inequities?	
Does your family have access to health insurance?			

Background

Health disparities are sometimes hard to see. If you think back to the 9 Dimensions of Wellness, you remember that health is interconnected to many things. Because of that, an individual's mental health, financial situation, and career might impact their health different than you.

More Challenges

Sit down with your family and ask them if you have easy access to health resources. Have a discussion about what barriers might face your family and what things you may do as a family to help overcome some of those barriers.

Did You Know

Health centers that are integrated into school facilities have been recently becoming a popular method of administering a holistic health care approach to teenagers. As of March 2022, according to the Ohio Department of Health, there are over 100 school-based health centers in Ohio.

Project Activity 11: Setting Your Health Goals

Throughout this project, you have been taking your body measurements and vital signs; and tracking your sleep, physical activity, and diet while evaluating where they align with the normative values and recommendations. The next step is to begin setting **SMART goals** to improve your physical health. Thinking about your vital signs and health measures, what areas stand out to you? What areas do you want to improve? Why is making change important to you?

Learning Outcomes:

- **Project Skill:** Setting fitness goals
- **Life Skill:** Achieving goals
- **Educational Standard:** NHES 6.12.2: Develop a plan to attain a personal health goal that addresses strengths, needs, and risks.
- **Success Indicator:** Sets 3 SMART goals

What to Do:

Estimated time: 15 minutes

In this activity, you will set 3 **SMART** goals. First, set a short-term goal, which is one you can accomplish within the next few weeks. Second, set an intermediate-term goal, one that you can reach in 1 to 3 months. Last, set a long-term goal, which is a goal you can obtain 3 to 6 months from now.

Your goals should be based on the information you collected in the earlier parts of this project book.

1. Short Term Goal: _____
2. Intermediate Term Goal: _____
3. Long Term Goal: _____

Background

Simply writing a goal can be a powerful motivator, especially if written as a SMART goal. **SMART goals** must be specific, measurable, attainable, relevant, and time bound.

Specific. Be specific about what you are going to accomplish. It is one thing to improve. It is another to say by how much.

Measurable. How will you know when you accomplish this goal? What will be the evidence? You must be able to track or measure your progress.

Attainable. Is what you are asking of yourself even do-able? Make sure your goals are achievable and realistic.

Relevant. Your goal should mean something to you. Does it align with the things you think are important?

Time bound. How soon is the goal going to be accomplished? Unless you give yourself a deadline, it may not get done.

Now go back to the goals that you wrote. Did you include all the SMART elements? If not, go back and add them.

Here are other tips for accomplishing your goals:

- o Start small. Identify the small steps you can make on your way to setting and accomplishing bigger goals.
- o Make your routine interesting by changing it up occasionally.
- o Do not forget to listen to your body and make healthy choices.
- o Celebrate your accomplishments, even the small ones. Reward yourself along the way!
- o Share your goals with others. Have a support system in place for when you need a pep talk.

More Challenges

Another way to create success is accountability. Share your goals with a friend, family member, or project helper who you know will support you as you strive toward your goals. Who will you ask to keep you accountable? Share your successes too!

Did You Know

According to the latest statistics from the Pew Research Center, about one in five Americans were using a smart watch or fitness tracker at the beginning of 2020.

Project Activity 12: Tracking Your Health Goals

Setting SMART goals is a major step on your journey toward physical health. Long-term success depends on tracking progress toward those goals on a regular basis and reflecting on progress made. Regular tracking and reflection not only pave the way for achieving physical health goals, but they also build trust and confidence in your ability to make lasting change. Tracking goal progress also gives you the chance to learn and create future goals. Let's get started!

Learning Outcomes:

- **Project Skill:** Measure goal progress.
- **Life Skill:** Visualize healthy outcomes over time.
- **Educational Standard:** NHES 6.12.3 Implement strategies and monitor progress in achieving a personal health goal.
- **Success Indicator:** Develops a way to measure goal tracking and tracks completion.

What to Do

Estimated time: 45 minutes

Look back at the goals you set in the previous activity and remind yourself of three important questions: what do you want to do, when do you want to do it by, and how will you know when you did it? When you have answered these questions for each one of your goals, it is time to decide how you are going to log your progress.

There are many options available. Find a timeline or calendar online, use a spiral journal, build a spreadsheet, or explore any other method that works for your goal situation. Then, try to make your logging process simple, fun, and easy to visualize each day. For example, maybe you have one major goal of taking a walk every day before school for two months. Make a big 2-month calendar with fun pictures or words of affirmation. Add a big smiley face on every calendar day you accomplish your goal. At the end of your 2 months, look at your calendar to see how you did. Then, set a new goal!

How did you decide to track your goals?

Did you reach your goal?

What helped you achieve your goal?

What got in the way?

What could you do differently?

How can you maintain this behavior?

Background

Tracking your physical health and fitness goals will keep you moving toward accomplishing those goals. The activities in this section are meant to help you learn how to measure and track your goal progress so that you can set yourself up for daily success. Living a life filled with physical health and fitness is about being aware of your environment, learning what activities and exercise are best for body, setting and tracking goals, being patient with yourself, and most important, making it fun!

When it comes to building habits and accomplishing goals, remember progress is most important. We live in a world filled with environmental factors, many of which we cannot control. Time constraints, access to healthy snacks, weather, and lack of exercise equipment may be just a few of the hurdles that you may face as you look to build new habits. It is okay if you do not reach your goal. When the going gets tough, what can you do? You are already on the right track by setting SMART goals. Here are some suggestions that have worked for others:

- **Enlist the support of others.** Having social support can make a difference when trying to reach your health goals. Get a workout buddy and you can motivate each other. And you'll be enhancing your social wellness in the process.
- **Work on one goal at a time.** It takes time to establish a habit. Trying to make too many changes at once may undermine your chances of achieving your goals.
- **Have a backup plan.** For example, if it rains, what can you substitute for an outdoor activity you had planned.
- **Don't let setbacks derail you.** Recognize that there are days that you will mess up. Don't use that as an excuse to give up. Every day is a new chance to get back on track.

More Challenges

If you didn't reach your goals by the timeline, why not? Can you adjust goals? Do you need to do something different? If you did reach your goal, set a new one!

Did You Know

A study published in the *European Journal of Social Psychology* concluded that it could take anywhere from 18 to 254 days – 66 days on average – to build a solid habit. Be encouraged by this. Every single person is different - think progress over perfection.

Pay attention to creating goals that are good for you and be patient as you strive toward change.

PROJECT AREA 4 Talking It Over

Share:

What is one goal that you set that you are most excited for?

Reflect:

Why is it important to look at your health resources and barriers first before creating goals?

Generalize:

Why is tracking your goals important in life?

Apply:

How might you need to adjust or change your goals if you aren't reaching them?

Glossary

Adrenaline: a hormone in the body that is released during stress to help the body respond

Aerobic: relating to or denoting exercise that improves or is intended to improve the efficiency of the body's cardiovascular system in absorbing and transporting oxygen

Baseline: an initial set of observations or data used for comparison or a control

Beats Per Minute (BPM): the number of heart beats per minute

Blood Pressure: the amount of pressure in a person's arteries when a heart beats and when it rests (the short time between beats); it is reported as a measurement with two numbers, systolic pressure over diastolic pressure

Body Mass Index (BMI): a person's weight in kilograms divided by the square of height in meters

Body Measurements: statistics, such as weight, height, waist circumference, and other similar information, that are collected by a health professional

Body Temperature: the temperature of the human body; average body temperature is 98.6°F, although there is significant variation

Bone-Strengthening: physical activities that are primarily designed to increase the strength of specific sites in bones that make up the skeletal system for growth and strength

Calorie: the energy needed to raise the temperature of 1 kilogram of water through 1°C, equal to one thousand small calories and often used to measure the energy value of foods

Chronic disease: a chronic disease is one lasting 3 months or more. Chronic diseases generally cannot be prevented by vaccines or cured by medication, nor do they just disappear.

Coping skills: ways to tolerate, minimize, or otherwise deal with stressful situations

Diagnosis: the identification of the nature of an illness or other problem by examination of the symptoms

Diastolic Blood Pressure: the measurement of the pressure in your arteries when your heart rests between beats

Disease: denotes a condition characterized by functional impairment, structural change, and the presence of specific signs and symptoms

Exercise: activity requiring physical effort, carried out with the purpose of sustaining, or improving some aspect of health and fitness; is a subcategory of physical activity

Family health history: a record of the health information about a person's immediate and extended family.

Fat: a natural oily or greasy substance occurring in animal bodies, especially when deposited as a layer under the skin or around certain organs

Fight, flight, or freeze: the body's involuntary responses to a perceived threat, which involve physiological changes that prepare the individual to act

Gene: a basic unit of heredity that stores and passes information from parent to offspring and determines some characteristic in the offspring

Health: According to the World Health Organization, a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity

Health barriers: are factors that prevent an individual, population, and/or community from acquiring access to health services and/or achieving best health

Health behaviors: actions individuals take that affect their health

Health equity: when every person can "attain his or her full health potential" and no one is "disadvantaged from achieving this potential because of social position or other socially determined circumstances"

Health history: an assessment of all factors affecting a patient's health status, including information about social, cultural, familial, and economic aspects of a person's life as well as any other component of lifestyle that affect health and well-being. It serves as the basis of an individualized plan for addressing wellness

Heart rate: the speed at which a heart beats, usually measured as beats per minute (BPM); heart rate is an important vital sign of health

Heredity: passing on characteristics (traits) through genes from one generation to another (from parent to child)

Holistic: Concerned with the whole or complete system rather than the analysis or treatment of individual parts

Illness: a state of being unhealthy in one's body or mind

Medical Screening Tests: examinations or procedures that can be applied rapidly to better understand a potential diagnosis and what further testing may be needed

Moderate-to-vigorous: Moderate activity requires some effort and raises your heart rate to a degree you notice it, but your breathing stays steady. Vigorous activity demands a large amount of energy and raises your heart rate considerably.

MyPlate: a nutritional food guide, developed by the U.S. Department of Agriculture (USDA), to help Americans become more aware of what they eat and to assist them in making better food choices

Normative Values: Normative values, or normative data, are comprised of observations that describe what is usual or expected in a defined reference population, and at a specific point or period.

Percentile: each of the 100 equal groups into which a population can be divided according to the distribution of values of a particular variable

Physical Activity: any bodily movement produced by skeletal muscles that requires energy expenditure

Physical Examination: in health and fitness, the process of evaluating objective findings through observation and other means for diagnostic and therapeutic purposes

Physical Fitness: a set of attributes (endurance, strength, body composition, flexibility, agility, balance, coordination, power, speed, and reaction time) that people have or achieve that relate to their ability to perform physical activities

Physical Health: one aspect of an individual's total health, the state of your physical body and how well it is operating

Plogging: Plogging is a Swedish exercise trend that combines jogging with picking up litter. It is an English-Swedish combination of "jogging" and "plocka upp," which means "pick up" in Swedish.

Primary Care Physician: a specialist in family medicine, general internal medicine or general pediatrics who provides definitive care to the patient as the point of first contact and takes responsibility for providing the patient's comprehensive care

Pulse: the palpable beat resulting from the contractions of the heart

Rapid Eye Movement (REM) Sleep: the portion of sleep when there are rapid eye movements; we typically have 3 to 5 periods of REM sleep per night, and they occur at intervals of 1-2 hours

Respiratory Rate: the number of breaths taken in a minute

Risk Factor: something that increases the possibility for or the susceptibility to illness or disease

Runs in a family: a particular characteristic, health condition, or disease might be described as “running in a family” if more than one person in the family has the characteristic or condition

Sign: objective evidence of a diseases (e.g., rash, cough, high blood pressure)

Sleep Deprivation: when an individual does not get enough sleep.

Sleep Hygiene: behaviors done to help promote good sleep, including ensuring a good sleep environment, appropriate afternoon and evening activities, coping behaviors, and a regular sleep routine

SMART Goals: an acronym standing for specific, measurable, attainable, relevant, and time-bound that helps guide you in creating clear and realistic goals

Sphygmomanometer: an instrument for measuring blood pressure, typically consisting of an inflatable rubber cuff that is applied to the upper arm and connected to a column of mercury next to a graduated scale, enabling the determination of systolic and diastolic blood pressure by increasing and gradually releasing the pressure in the cuff

Specialist: a person who concentrates primarily on a particular subject or activity; a person highly skilled in a specific and restricted field

Stadiometer: a device for measuring height that typically consists of a vertical ruler with a sliding horizontal rod or paddle which is adjusted to rest on the top of the head

Stethoscope: a medical instrument for listening to the action of someone's heart or breathing, typically having a small disk-shaped resonator that is placed against the chest, and two tubes connected to earpieces

Strength-building: or resistance training involves the performance of physical exercises that are designed to improve strength and endurance

Stress: a person's physical or emotional response to the demands or pressures of daily life

Stressor: something that causes a state of strain or tension

Stretching: a form of physical exercise in which a specific muscle or tendon (or muscle group) is deliberately flexed or stretched in order to improve the muscle's felt elasticity and achieve comfortable muscle tone

Symptom: can be recognized only by the person experiencing it (e.g., stomachache, fatigue)

Systolic Blood Pressure: the measurement of the pressure in your arteries when your heart beats

Thermometer: an instrument for measuring and indicating temperature

Vital Signs: clinical measurements, specifically pulse rate, temperature, respiration rate, and blood pressure, that indicate the state of an individual's essential body functions

Waist-to-height ratio: measure of the distribution of body fat based on a person's waist circumference divided by their height

Wellness: the active pursuit of activities, choices, and lifestyles that lead to a state of holistic health

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Summary of Learning Outcomes

Activity	Project Skill	Life Skill	Educational Standard	Success Indicator
PROJECT AREA: What is Physical Health & Fitness?				
1. Influencing Your Physical Health	Understand influences on physical health and fitness.	Self-awareness.	NHES 1.12.3: Analyze how environment and personal health are interrelated.	Provides examples of different kinds of physical health influences.
2. Health Self-Check	Understand what may be asked in an annual check-up and take stock of own health.	Being responsible	NHES 3.12.4: Determine when professional health services may be required.	Evaluates personal physical health and prepares to communicate with a health professional.
3. Family Health History	Gathers information about family members' health.	Communication; keeping records	NHES 1.12.4 Analyze how genetics and family history can impact personal health.	Records family health history.
PROJECT AREA: Taking Your Measurements & Vital Signs				
4. Taking Your Body Measurements	Measuring height, weight, and BMI.	Comparing to standards	NHES 3.12.1: Evaluate the validity of health information, products, and services.	Measures, records, and compares own measurements to percentiles and BMI.
5. Taking Your Vital Signs	Record vital signs.	Keeping records & working with numbers.	NHES 6.12.1: Assess personal health practices and overall health status.	Measures and records own vital signs and compares to normative values.
PROJECT AREA: Tracking Your Behaviors				
6. Tracking Your Physical Activity	Record physical activity.	Making healthy lifestyle choices.	NHES 7.12.1 Analyze the role of individual responsibility for enhancing health.	Records physical activity and learns new ways to be active.
7. Tracking Your Dietary Intake	Compare foods eaten to the MyPlate standard.	Evaluating personal decisions.	NHES 7.12.2: Demonstrate a variety of healthy practices and behaviors that will maintain or improve the health of self or others.	Tracks meals consumed for 4 days with photos and indicates whether each meal met the recommended standard for proportion of fruits and vegetables and for healthy beverage consumption.
8. Tracking Your Sleep	Recording a sleep pattern within a week.	Keeping records & working with numbers	NHES 5.12.7 Evaluate the effectiveness of health-related decisions.	Tracks and records hours of sleep each night for a week.

9. Tracking Your Stress	Identifying the body's reaction to stress	Coping with stress	NHES 1.12.2: Describe the interrelationships of emotional, intellectual, physical, and social health.	Identifies effects of stress on the body and identifies constructive ways to manage this stress.
PROJECT AREA: Where to Go from Here				
10. Barriers to Your Goals	Identify health barriers.	Self-awareness of health access	NHES 5.12.1 Examine barriers that can hinder healthy decision making.	Identifies health resources and barriers.
11. Setting Your Health Goals	Setting fitness goals	Achieving goals	NHES 6.12.2: Develop a plan to attain a personal health goal that addresses strengths, needs, and risks.	Sets 3 SMART goals.
12. Tracking Your Health Goals	Measure goal progress.	Visualize healthy outcomes over time.	NHES 6.12.3 Implement strategies and monitor progress in achieving a personal health goal.	Develops a way to measure goal tracking and tracks completion.