

# **Comprehensive Health Interdisciplinary Framework**

### **Rationale for Interdisciplinary Framework**

The COVID-19 pandemic and the challenges it brought have made it impossible to ignore that, now more than ever, public health is a part of our day-to-day lives. This pandemic has at the same time increased attention to the ways that student health and mental health are so paramount to learning. Indeed, learning cannot happen if health and wellness are compromised. The capacity to maintain and positively act on one's health and health contexts is, furthermore, an important skill for all students to be successful in their lives after graduation (see <u>Portrait of a Graduate</u>). However, topics such as health and mental health are sometimes seen as isolated from the rest of academic learning in K-12 schools.

This document/tool explores the ways that health can be integrated into K-12 curriculum/instruction through an interdisciplinary approach. Integrating health instruction across the curriculum supports a school-wide culture of wellness and health promotion where student health is relevant and nurtured in ALL spaces in the school. An interdisciplinary approach, furthermore, enhances the meaning and real-world relevancy for both the health education topic/skill and the integrated subject area (e.g., math or social studies). There are several models that can be applied in the development of an integrated health curriculum (cross-disciplinary, <u>transdisciplinary</u>, etc.), that lead to varying levels of interconnection between different subject area skills/content. This tool, however, provides a basic introduction to interdisciplinary thinking and is, therefore, not intentionally guided by any one of these approaches. It is centered on two very simple questions:

- 1. How can students transfer/apply subject skills to the study of health topics?
- 2. How is instruction nurturing the health and health skills of students in the classroom?

Below you will find an overview of Vermont's health statute and standards, basic examples of ways health education can be integrated into subject areas, and teacher resources specific to interdisciplinary health education. This document, and what is outlined below, is centered on interdisciplinary health curriculum/instruction, and will not describe models of cross-discipline assessment.

### Framework: Comprehensive Health Education in Vermont Schools

Vermont statute (<u>16.VSA. 131, 16 V.S.A. § 906</u>, <u>16 V.S.A § 133., 16 V.S.A. § 909</u>) outlines topics to be included within a Comprehensive Health Education program (see Appendix A for detailed list). The State Board of Education also adopted the <u>National Health Education Standards</u> (NHES) to direct health education instruction in the state. A summary of these health standards and statutes is found in Chart 1 below. The <u>National Sex Education Standards</u> (NSES) are also integrated into this chart as NSES



are recommended best practice standards and cover several of the content areas that Vermont statute requires. Many topics that can be covered under comprehensive health education naturally overlap categories, just as many will have relevance across more than one educational content area.

Health Content Topics*	National Health Education Standards (Skills/Competencies)
Physical Health: Human Growth and Development, Disease Prevention,	Standard 1: Students will comprehend concepts related to health promotion and
Physical Activity, Nutrition, Drugs, Tobacco ( <u>16 V.S.A. § 131, 16 V.S.A. §</u>	disease prevention to enhance health.
906, <u>16 V.S.A § 133,</u> <u>16 V.S.A. § 909</u> ), Anatomy and Physiology ( <u>NSES</u> )	Standard 2. Students will analyze the influence of family name outway made
Montal/Social Emotional Health: Mantal Health Internary	<b>Standard 2:</b> Students will analyze the influence of family, peers, culture, media,
<b>Mental/Social-Emotional Health</b> : Mental Health, Interpersonal Relationships, Substance Misuse ( <u>16 V.S.A. § 131, 16 V.S.A. § 906, 16</u>	technology, and other factors on health behaviors.
<u>V.S.A. § 909</u> )	<b>Standard 3:</b> Students will demonstrate the ability to access valid information and products and services to enhance health.
<b>Safety</b> : Injury and Violence Prevention, Safety Skills (e.g., CPR, first aid),	products and services to enhance health.
Sexual Violence/Abuse ( <u>16 V.S.A. § 131)</u> , Interpersonal Violence ( <u>NSES</u> )	<b>Standard 4:</b> Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.
<b>Community Health</b> : Consumer Health, Community/Public Health, Disease, Health Resources ( <u>16 V.S.A. § 131, 16 V.S.A. § 906, 16 V.S.A. § 909</u> )	<b>Standard 5:</b> Students will demonstrate the ability to use decision-making skills to enhance health.
<b>Interpersonal Health:</b> Healthy Relationships, Parenting Methods/Styles, ( <u>16</u> <u>V.S.A. § 131)</u> , Consent and Healthy Relationships, Gender Identity and Expression, Interpersonal Violence, Sexual Orientation and Identity ( <u>NSES</u> )	<b>Standard 6:</b> Students will demonstrate the ability to use goal-setting skills to enhance health.
<b>Sexual Health:</b> Healthy Relationships, Contraception, Sexually Transmitted Disease, Sexual Violence/Abuse, Reproductive Health ( <u>16 V.S.A. § 131, 16</u>	<b>Standard 7:</b> Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.
V.S.A § 133), Sexual Health, Sexual Orientation and Identity, Puberty and Adolescent Sexual Development ( <u>NSES</u> )	<b>Standard 8:</b> Students will demonstrate the ability to advocate for personal, family, and community health.

#### Chart 1: Health Content and Skills as Defined by State Statute and National Health Standards

\*The NSES Standards cover a few topics not explicitly included within Vermont state statute, those additional topics are incorporated into Health Content Topics where appropriate.



### How can students transfer/apply subject skills to the study of health topics?

In each subject area (as defined by <u>Education Quality Standards</u>) there are several skills (as determined by state or national standards) that students are expected to be able to DO (such as reading complex texts, conducting inquiry projects, or recognizing patterns in complex systems). In an interdisciplinary approach, these skills can be applied to health/physical education content/topics within each subject area. For instance, in an English course students can analyze characters in narrative texts in terms of their mental health using evidence in the text to justify their thinking (ELA Common Core Reading Literature - Key Ideas and Details). Chart 2 below provides basic examples of the ways health education topics can be integrated into the teaching of other subject area skills/practices.

#### Chart 2: Subject Skills and Health Topics Crosswalk

Education Quality Standards Content Area	Comprehensive Health Integration Across Subject Examples	
English Language Arts:	Reading:	
Common Core English Language Arts Anchor	• Students read and analyze literary texts that highlight characters who experience a range of physical/mental health challenges and strengths and compare how themes and topics are addressed within and across texts.	
<u>Standards</u>	Writing:	
	<ul> <li>Students write opinion pieces or arguments to support claims related to a health/physical education topic, using valid reasoning and relevant and sufficient evidence.</li> </ul>	
	Speaking and Listening:	
	<ul> <li>Students present information, findings, and supporting evidence related to topics that promote personal health (e.g., advocacy) and healthy relationships.</li> </ul>	
	<ul> <li>Language:</li> <li>Students apply knowledge of language to examine and understand the social and historical construction of health terms (e.g., health, "fat," etc.).</li> </ul>	



Education Quality Standards Content Area	Comprehensive Health Integration Across Subject Examples
Mathematics: Common Core Standards for Mathematical Practice	<ul> <li>Make sense of problems and persevere in solving them:</li> <li>Students synthesize information and develop equations and solutions to solve real-world health scenarios/problems (e.g., health word problems, etc.).</li> </ul>
	<ul> <li>Reason abstractly and quantitatively:</li> <li>Students analyze and apply formulas or algorithms that are used to measure or assess health (e.g., BMI, r factor).</li> </ul>
	<ul> <li>Construct viable arguments and critique the reasoning of others:</li> <li>Students use statistical concepts, ranging from simple, (surveying classmates and working with basic percentages) to complex (advanced statistics such as correlates, significance, etc.) to draw conclusions about health issues/topics (e.g., universal healthcare).</li> </ul>
Mathematics: Common Core Standards for Mathematical Practice (cont.)	<ul> <li>Model with mathematics:</li> <li>Students model equations and solutions to health-related situations/scenarios (e.g., modeling trends and predicting growth in youth vaping in the state).</li> <li>Students model equations and solutions to physical motion (see <u>Free Throw Adjustments</u> performance task).</li> </ul>
	<ul> <li>Use appropriate tools strategically:</li> <li>Students construct data tables/charts using health data (e.g., Youth Risk Behavior Survey data, Center for Disease Control, etc.).</li> </ul>
	<ul> <li>Attend to precision:</li> <li>Students examine and accurately apply health units (e.g., calories, temperature, etc.) to solve and explain equations/problems as appropriate.</li> </ul>
	<ul> <li>Look for and make use of structure:</li> <li>Students examine how disease incidence/prevalence rates are measured and how population size can impact these rates.</li> </ul>
	<ul> <li>Look for and express regularity in repeated reasoning:</li> <li>Students examine the association between certain common correlated health factors (e.g., smoking/heart disease, income/health, etc.) and discuss outliers.</li> </ul>



Education Quality Standards Content Area	Comprehensive Health Integration Across Subject Examples
Science:	Asking questions and defining problems:
Next Generation Science	Students ask questions to clarify the relationship between genetics, the environment, and physical health.
Standards Practice	<ul> <li>Developing and using models:</li> <li>Students develop models to understand the different systems in the human body.</li> </ul>
	<ul> <li>Planning and carrying out investigations:</li> <li>Students investigate the physical and biological processes that allow an individual to perform a simple physical motion (e.g., jump, kick a ball, etc.).</li> </ul>
	<ul> <li>Analyzing and interpreting data:</li> <li>Students critically analyze health research and develop strategies to interpret health data from different sources (e.g., politically embedded health "science").</li> </ul>
Science: Next Generation Science Standards Practice (cont.)	<ul> <li>Using mathematics and computational thinking:</li> <li>Students compare the statistical impact of health interventions (e.g., prevention efforts, healthy food campaigns, etc.) on health behaviors (e.g., exercise, eating healthy, etc.).</li> </ul>
	<ul> <li>Constructing explanations and designing solutions:</li> <li>Students explain the ways that disease and health are related to environment (e.g., why sickle cell disease is common in genetic lines that originated in territories close to the equator). (See <u>Wildlife and Lyme Disease</u> performance task.)</li> </ul>
	<ul> <li>Engaging in argument from evidence:</li> <li>Students engage in a local health campaign/initiative (e.g., increased physical activity time in the school schedule) and use evidence to support why this campaign/initiative is important.</li> </ul>
	<ul> <li>Obtaining, evaluating, and communicating information:</li> <li>Students evaluate and research the impacts of certain health behaviors on the body (e.g., smoking, drinking, etc.).</li> </ul>



Education Quality Standards Content Area	Comprehensive Health Integration Across Subject Examples Inquiry: (Dimension 1):	
Social Studies/World		
Language: <u>The College, Career and Civic</u>	<ul> <li>Students ask questions regarding how certain health behaviors are portrayed in the media (e.g., smoking, etc.).</li> <li>Students develop inquiries related to healthcare such as, "Why is the Affordable Care Act so controversial?".</li> </ul>	
Life Framework for Social Studies State Standards	Content: (Dimension 2):	
	Students examine how health and the responsibilities of healthcare have been viewed across time and between cultures.	
	• Students use benefits and costs to evaluate the effectiveness of government policies focused on personal health.	
	<ul> <li>Evaluating Sources and Using Evidence (Dimension 3):</li> <li>Students examine the spatial distribution of health resources (e.g., food deserts, mental health supports, etc.) using maps and mapping tools.</li> </ul>	
	Communicating Conclusions and Taking action (Dimension 4):	
	Students use evidence to critique or propose new local, state, or federal health related policies (see <u>Change We Can</u> <u>See</u> performance task).	
Arts:	Creating:	
National Core Arts Standards	Students create art (visual or performance) that depicts personal, community, or interpersonal health.	
	Performing/Presenting/Producing:	
	• Students examine the physical structures that are used in certain forms of performance art (e.g., ballet).	
	<ul> <li>Responding:</li> <li>Students create art that synthesizes or portrays their physical and/or mental health.</li> </ul>	
	Connecting:	
	<ul> <li>Students view and discuss artworks related to a health topic (e.g., safety).</li> </ul>	



Education Quality Standards Content Area	Comprehensive Health Integration Across Subject Examples	
Physical Education: <u>National</u> Physical Education Standards	<ul> <li>The physically literate individual demonstrates competency in a variety of motor skills and movement patterns.</li> <li>Students examine and practice motor skills and movement patterns that are related to positive health.</li> </ul>	
(SHAPE)	The physically literate individual applies knowledge of concepts, principles, strategies, and tactics related to movement and performance.	
	<ul> <li>Students learn and practice certain safety skills (e.g., hands only CPR) and the precision of movement needed to ensure that these safety skills are effectively applied.</li> </ul>	
	The physically literate individual demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness.	
	<ul> <li>Students examine the relationship between nutrition and physical activity/fitness.</li> </ul>	
	<ul> <li>The physically literate individual exhibits responsible personal and social behavior that respects self and others.</li> <li>Students examine the relationship between emotional and physical safety.</li> </ul>	
	<ul> <li>The physically literate individual exhibits responsible personal and social behavior that respects self and others.</li> <li>Students examine the relationship between emotional and physical safety.</li> </ul>	
	The physically literate individual recognizes the value of physical activity for health, enjoyment, challenge, self- expression and/or social interaction.	
	Students understand the health effects of certain physical activity and fitness programs.	

The level of integration between health and other subject content/skills within curriculum can, however, vary greatly. For instance, a math teacher may choose to integrate basic information on nutrition within a word problem assigned to students. While a school or team of teachers, may choose to focus on the many dimensions of youth substance use in science (the impacts of substance use on the body), social studies (the ways substance use is tied to economic, political, and spatial exclusion), math (measuring and tracking prevalence rates of youth substance use in the state), and English (expository writing that pulls together content/skills taught in science, social studies, and math). It should be clearly stated that high levels of integration between health and other subject curriculum takes additional time, energy, and coordination (see Integrated Units: Planning Guide for more information on discipline integration).

The demands on student thinking within interdisciplinary approaches can vary widely as well. The following "Community Health- Evaluating Sources and Using Evidence" graphic highlights how connections between a single health topic and a single subject standard can become more complex, and how the demands on student thinking can be expanded with more authentic interdisciplinary tasks. This example describes performance tasks



that students will do to show what they learned in both health and social studies. This continuum is provided to further highlight what an interdisciplinary approach may look like in the classroom (see also <u>Interdisciplinary Performance Assessment Template</u>).

#### Community Health - Evaluating Sources and Using Evidence

- 1. Students will read a text on a public health topic and write constructed responses to questions on a worksheet (citing evidence in text).
- 2. Students will critique a local or school health policy in written form citing evidence from multiple sources.
- 3. Student will research a school health issue, interview students, conduct research, and develop a presentation on the state of the health issue and posit ways that this issue may be addressed.
- 4. Students will design and deliver a presentation to community stakeholders in which they will identify a public health issue which exists in their town (as indicated by data they have analyzed), describe the nature of the issue, explain what initiatives already exist to address it, and then present their own idea for a public health initiative which could address this problem. (See <u>Health in Our Town</u>).

#### How is instruction nurturing the health and health skills of students in the classroom?

The health of students directly impacts the learning that they do in the classroom. It is, therefore, necessary that educators support students in developing health strategies or skills (see <u>Adult Learner Factors</u> for information on how SEL can be integrated into educator PD as well). For instance, within a science course students can practice and learn about relationship skills in ways that support both collaborative group work and their personal health (National Health Education Standard 4, see Chart 2). Related to this, within each subject area students can be given opportunities to reflect on the ways their current health shapes their learning of course content, and to develop strategies for enhancing their health and, thereby, their capacity to learn in the classroom. For instance, students may be asked after a course assessment to consider the strategies they used to manage stress or prepare mentally/physically for the assessment and consider ways they may better prepare for future assessments (National Health Education Standard 7). The chart below offers general ways in which subject educators can incorporate comprehensive health education concepts and skills (as defined by National Health Education Standards) into their teaching practices (also see <u>CASEL SEL Framework</u> and <u>Health Standards/CASEL Crosswalk</u>).



### **Chart 3: National Health Education Standards Content Area Integration Ideas**

National Health Education Standards	EQS Content Areas: Literacy, Math, Science, Global Citizenship, Arts Expression, Physical Education
<b>Standard 1:</b> Students will comprehend concepts related to health promotion and disease prevention to enhance health.	<ul> <li>Use accurate and inclusive health language when describing the physical/mental health of human subjects (e.g., historical, local, or fictional characters) at focus of study.</li> <li>Use strategies for students to reflect on the ways physical/mental health impact learning, and implemen classroom strategies that support student health and, thereby, their learning (e.g., brain breaks, <u>change your thoughts</u>, etc.).</li> </ul>
<b>Standard 2:</b> Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.	<ul> <li>Look for ways that the content area learning objectives can be taught or understood in the community context (e.g., local interviews, shadowing, etc.).</li> <li>Actively teach about the social, political, and economic conditions that shape students' lives and learning.</li> </ul>
<b>Standard 3:</b> Students will demonstrate the ability to access valid information and products and services to enhance health.	<ul> <li>Use valid and reliable data and discuss rationale for data selection.</li> <li>Integrate data literacy and proper use of technology into classroom practices.</li> <li>Know how and where to get support for students in crisis (see <u>Mental Health First Aid</u>).</li> </ul>
<b>Standard 4:</b> Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.	<ul> <li>Practice consent communication skills when participating in class projects or discussions (turn taking, asking, and confirming consent to be on a team/group, respectful disagreement).</li> <li>Teach conflict resolution techniques to students.</li> </ul>
<b>Standard 5:</b> Students will demonstrate the ability to use decision-making skills to enhance health.	<ul> <li>Incorporate explicit teaching about decision making as it relates to student work in the classroom (e.g., selecting resources, making work plans, planning next steps, etc.).</li> <li>Support students in directing their own learning (See <u>Self-Direction Toolkit</u>).</li> </ul>
<b>Standard 6:</b> Students will demonstrate the ability to use goal-setting skills to enhance health.	<ul> <li>Teach and encourage a <u>growth mindset</u>.</li> <li>Reflect with students on the connection between optimal learning and stress/self-identified mental health, etc.</li> <li>Teach and focus on the development of student <u>resilience</u> and <u>perseverance</u> skills/mindsets.</li> </ul>
<b>Standard 7:</b> Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.	<ul> <li>Consider ways to teach the content through participation in movement games/activities.</li> <li>Support student safety and encourage students to practice safe behaviors in classroom. (See also <u>Safety in the Science Classroom</u>).</li> <li>Incorporate <u>mindfulness exercises</u> into classroom routines.</li> <li>Provide <u>social and emotional competency instruction</u>.</li> </ul>
<b>Standard 8:</b> Students will demonstrate the ability to advocate for personal, family, and community health.	<ul> <li>Model advocacy and teach advocacy skills.</li> <li>Embed teaching and learning in the real world of students.</li> </ul>

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Health skills/content can also be integrated into a single lesson or unit. For example, a teacher can use an inquiry approach to teaching proportionality and ask students to do research in groups and present their findings on the compelling question, "Should BMI be used to make a decision about a person's health?" (National Health Education Standard 1, see also <u>Safeguards in BMI Measurement in Schools</u>). The teacher can provide direct instruction to students on the interpersonal skills that they will need to use to be successful in this collaborative effort before grouping (National Health Standard 4). The teacher, prior to students presenting to the class, could discusses strategies for managing stress that may arise for students when presenting to others (e.g., deep breathing) (National Health Education Standard 7). This example highlights the ways that both health skills and content can be integrated in unique ways within subject areas and serve to support the learning of students in core content/skills. The effectiveness of any health education curriculum is strengthened when students are given opportunities to practice health skills in other academic areas (see <u>CDC Characteristics of an Effective Health Curriculum</u>). While an interdisciplinary comprehensive health education approach will better serve the needs of all students, this does not mean that interdisciplinary strategies alone can replace a comprehensive health education program (as outlined in Vermont state statute).



## **Resource Guide**

This guide offers a "suite" of resources to support all educators in identifying linkages and developing curricular materials to support interdisciplinary instruction. Within each of those sections, lesson ideas and examples with performance indicators are provided at both the elementary and secondary levels for each health education content area. In many cases, a learning opportunity will also cover at least one other required content area. Additionally, library/content selection titles are provided in this tool whenever possible.

This is also a "living document" whereby educators are encouraged to share lesson plans that they've created with the Agency of Education. This list is not exhaustive, and we look forward to populating this document further with resources from the field.

## **English Language Arts**

#### Elementary

<u>Developing Empathy through Retold Fairy Tales</u>, <u>PBS LearningMedia</u> - In this lesson, students watch a video that explores how a Native American saying, "walk a mile in someone else's moccasins," relates to the practice of empathy. As a class and in small groups, students examine a well-known fairy tale, *Cinderella*, to try to "walk a mile" in the shoes of each character. (CC.ELA.R.L.3.3; NHS 1.5.3; Mental/Social-Emotional Health)

### Middle/High School

- <u>The Genius of Marian</u> In this lesson, students delve into the role of family members acting as caregivers for those who are ill, elderly, disabled or otherwise not able to care for themselves regularly and efficiently. Students examine what family caregivers do, their unique qualities, and how they cope with the challenges caregiving presents. Students determine the type of support system caregiving family members need in order to take care of others and themselves. (CC.ELA.SL.9-10.3.I, CC.ELA.W.9-10.4; NHS 2.12.1; Physical Health and Community Health)
- Quality Health Information This module introduces tools to help students understand medical terminology and provides strategies for identifying reliable health-related online information. The goal is to help students build capacity to obtain and understand basic health information, and to distinguish health-related facts from opinions. (CC.ELA.L.9-10.6; NHS 3.12.1; Community Health)



## **Social Studies**

#### Elementary

- <u>Dig In!</u> In this lesson, students explore the food system and participate in activities that help them understand the route fruits and vegetables take from farms to their plates. Students will discuss what it means for a fruit or vegetable to be locally grown, and the benefits of local foods. They will "dig deeper" into the delicious options among dark-green leafy vegetables by working to identify, taste, and compare items such as kale, spinach, and leaf lettuce, and discover ways to include them at snacks and meals. (D2.Eco.3.3-5; NHS 7.5.1; Nutrition and Community Health)
- <u>The Global Garden</u> In this lesson, students will explore culinary traditions and how fruits and vegetables are grown and cooked around the world and throughout the United States. They will learn about global gardening and how other languages have contributed to our culinary vocabulary. (D2.Eco.3.3-5; NHS 2.5.2, 7.5.1; Nutrition and Community Health)

#### Middle/High School

- <u>Promoting Health and Wellness in Your Community</u> Health and wellness in communities is achieved by helping people make healthy choices where they live, learn, work, and play at every stage of life. In this module, students learn the skills to become active community health advocates. Students are encouraged to recognize their leadership qualities and are introduced to the principles of health advocacy and health policy, focusing on developing effective, persuasive communications. These skills will empower students to advocate for themselves and for their communities, helping to reduce health disparities. (D2.Civ.2.9-12, D2.Civ.5.9-12, D4.7.9-12; NHS 8.12.2: Community Health)
- <u>Not Going Quietly</u> This lesson centers around the film *Not Going Quietly*. The film uses the story of an adult who receives a devastating health diagnosis to illustrate the far-reaching impact of health policy on everyday families in the U.S. and shows how one family advocated to make changes. Students are challenged to identify a health care issue that they are passionate about and to identify specific actions they could take to change health policy. (D2.Civ.2.9-12, D2.Civ.5.9-12; NHS 2.12.10: Community Health)
- <u>Food Deserts: Causes, Consequences and Solutions</u> This lesson explores the concept of food deserts and the relationship between food deserts, poverty, and obesity. Students are encouraged to examine their personal access to a healthy diet; compare prices of common staple items among different retail options; and analyze the causes and consequences of food deserts locally and nationally. Finally, students are asked to come up with solutions to help the food desert that is closest to their school. (D2.Geo.8.9-12, D4.6.9-12; NHS 2.12.4, 2.12.10; Nutrition and Community Health)
- <u>The Hunger Gap</u> Students will consider how to define and measure hunger and food insecurity, examine community food availability maps, and explore interventions designed to improve food security. (D2.Geo.8.9-12; NHS 2.12.10; Nutrition and Community Health)
- <u>Dig In!</u> In this lesson, students explore the food system and participate in activities that help them understand the route fruits and vegetables take from farms to their plates. Students will discuss what it means for a fruit or vegetable to be locally grown, and the benefits of local foods. They will "dig deeper" into the delicious options among dark-green leafy vegetables by working to identify, taste, and compare items such as



kale, spinach, and leaf lettuce, and discover ways to include them at snacks and meals. (D2.Eco.3.3-5; NHS 7.5.1; Nutrition and Community Health)

• The Global Garden - In this lesson, students will explore culinary traditions and how fruits and vegetables are grown and cooked around the world and throughout the United States. They will learn about global gardening and how other languages have contributed to our culinary vocabulary. (D2.Eco.3.3-5; NHS 2.5.2, 7.5.1; Nutrition and Community Health)

## Math

### Elementary

 <u>FoodMASTER</u> - This curriculum was developed by FoodMASTER with funding from the National Institutes of Health: Science Education Partnership Award (SEPA) to present third through fifth grade students with ten basic food topics to help develop skills in mathematics and science. There are ten lessons in this curriculum that teach a number of Common Core Math Standards related to statistics, measurement, making decisions, and modeling. (NHS 1.5.1; 7.5.2; Nutrition)

### Middle/High School

Getting to the "Y" - This is not a lesson but is a valuable model/resource that integrates data analysis, health, and civic engagement. Getting to 'Y' is an opportunity for students to bring meaning to their own Youth Risk Behavior Survey data. Through youth leadership, partnerships with adults, participatory action research, and peer and community engagement, participants not only experience personal growth and build their capacity for future civic engagement, but also effect sustainable change in youth behavior, community, and school culture. (CC.S.MD.7; NHS 5.12.4, 8.12.3; Community Health)

## Science

### Elementary

- <u>Growth and Development</u> In this lesson, students come to understand that all living things have a life cycle that includes being born, developing into an adult, reproducing, and eventually dying. The goal of this introductory lesson is to engage students in the study of the developmental stages of animals. (NGSS 1-LS1-1; NSES AP.2.CC.1; Physical Health, Sexual Health)
- Keeping Food Healthy Have you ever purchased strawberries or blackberries at the grocery store and tasted one before you got home to wash it? You may want to rethink your decision. This experiment activity asks students to consider the effects of bacteria on the fruits we eat. (NGSS 3-LS4-3; NHS 1.5.4, 7.5.1; Physical Health)
- <u>Brain Processing of Senses</u> Students explore how the senses and the brain work together to help us, and all animals, survive and thrive in their environments. This lesson could be adapted to more closely discuss how safety/health impact mental processing. (NGSS 4-LS1-2; NHS 1.5.3; Mental/Social Emotional Health)



#### Middle School/High School

• <u>Stressed Out?</u> - Stress is a part of every teen's life, even more so during intense challenges such as a pandemic and life transitions. But uncontrolled stress can cause serious health problems and increase the risk that students may use drugs to attempt to deal with stressors, including mental health issues and trauma. Use these materials to help your students understand how stress affects their body and learn healthy ways to cope with pressure. (NGSS MS-LS1-8; NHS 1.8.1, 1.8.2; Mental/Social Emotional Health)

Library Resource: Under Pressure: the Science of Stress by Tanya Lloyd Kyi

- <u>Mental Health and Disasters</u> Students learn about how the body reacts to stress and evaluate the long-term effects of stress on people whose lives have been impacted by disasters and national tragedies. (NGSS HS-LS1-3; NHS 1.12.2, 1.12.3; Mental/Social Emotional Health)
- <u>Science and Society</u> Students conduct a liquid exchange activity that models a spread of an infectious disease. An activity summary discussion helps students extend and apply their understanding of how an infectious disease may spread. (NGSS HS-LS2-1.; NHS 1.12.5; Physical Health)
- <u>Disease Detectives</u> This lesson uses a real-life case to demonstrate how epidemiologists and other public health workers respond when there is a suspected outbreak—or sudden increase in the number of cases of a disease. (NGSS HS-LS2-1, HS-LS2-8; NHS 1.12.3, 2.12.10; Physical Health)

## The Arts

### Elementary

- Feeling Words Writing your feelings can help regulate and create a sense of understanding. In this lesson, students will write their feelings to create an artwork. Students will be also taught about the use of negative space in pieces of art. (VA: Cr3.1.1a; NHS 4.2.1; Mental/Social Emotional Health)
- Expressing Emotions Through Art Students will look at works of art that show the emotion of caring. Once they understand how to show this feeling with the use of elements and principles of art, they will create their own artwork of themselves showing this emotion. (VA: Re 8.1.2a; NHS 4.2.1; Mental/Social Emotional Health)
- <u>Romare Bearden Self Portraits</u> Let your students' creative juices flow with this lesson that teaches them about collage and symbolism. Students will create their own collage self-portrait and learn about Romare Bearden. (VA: Cr 2.3.5a; NHS; Mental/Social Emotional Health)

### Middle School/High School

- Looking at Food Advertising This lesson introduces students to the ways in which advertising can affect their food choices. Working from television and magazine ads, students discuss the techniques used by advertisers to engage kids with products. Specifically, they assess the importance of "spokescharacters" and jingles as effective ways to build relationships with kids. As a class exercise, they create jingles and spokes characters themselves for the foods they enjoy. (MA: Re7.1.8; NHS 2.8.5; Physical Health)
- Addressing Trauma Using Affective and Cognitive Skills Significant trauma, including witnessing or experiencing violence, is a fact of life for many students. Left unaddressed, that trauma can be an obstacle to learning. Teachers, who are typically asked to focus on cognitive rather

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than affective learning, sometimes feel ill-equipped to help students process their experiences. This lesson provides a curriculum-connected place to start. (VA: Re.7.1.la; NHS 7.12.2; Mental/Social Emotional Health)

## **Physical Education**

### Elementary

- <u>Exercise and Your Brain</u> Young people will understand that the benefits of exercise go beyond their physical well-being. Exercise helps reduce stress, lift moods, and improves your ability to think. (PE S3.E1.5, S5.E1.5; NHS 1.5.1, 7.5.1; Physical Health and Mental/Social Emotional Health)
- Implementing the Safety and Physical Activity Plan In this lesson students begin the process of identifying inherent risks in the physical activities that they have selected for their physical activity practicum. In addition, students demonstrate the capability to access appropriate information to make informed decisions about managing risk and safety related to participation in physical activity. They also begin to implement their physical activity practicipation. (PE S3.E1.5 S4.E6.5; NHS 1.5.4, 7.5.3; Safety)

### Middle School/High School

- <u>Hunger and Malnutrition</u> Students will learn about the importance of eating a variety of foods in order to get all the nutrients needed to be healthy, explore diets around the world using Peter Menzel's Hungry Planet Family Food Portraits, and discuss the scope of the problems of hunger and malnutrition using the World Food Programme HungerMap Live. (PE S3.M18.8; NHS 2.8.10; Nutrition)
- <u>Sports for Social Change</u> Sports are used across the globe as a social and educational tool to promote leadership, foster role models, and support teamwork. A community youth sports program in South Africa offers positive life skills and a healthy environment for youth dialogue. (PE S2.H1.L2; NHS, 2.12.4; Physical Health)



## **Appendix A**

## **Vermont Statute Language and Health Content Areas**

<u>16 V.S.A. § 131. Definition</u>: Comprehensive health education means a systematic and extensive elementary and secondary educational program designed to provide a variety of learning experiences based upon knowledge of the human organism as it functions within its environment. The term includes the study of:

1) Body structure and function, including the physical, psychosocial, and psychological basis of human development, sexuality, and reproduction. **Topic Nested (in order of relevance):** Physical Health

2) Community health to include environmental health, pollution, public health, and world health.

### Topic Nested (in order of relevance): Community Health

3) Safety, including:

(A) first aid, disaster prevention, and accident prevention; and

(B) information regarding and practice of compression-only cardiopulmonary resuscitation and the use of automated external defibrillators.

#### Topic Nested (in order of relevance): Safety

4) Disease, such as HIV infection, other sexually transmitted diseases, as well as other communicable diseases, and the prevention of disease. **Topic Nested (in order of relevance):** Physical Health

5) Family health and mental health, including instruction that promotes the development of responsible personal behavior involving decision making about sexual activity, including abstinence; skills that strengthen existing family ties involving communication, cooperation, and interaction between parents and students; and instruction to aid in the establishment of strong family life in the future, thereby contributing to the enrichment of the community; and that promotes an understanding of depression and the signs of suicide risk in a family member or fellow student that includes how to respond appropriately and seek help and provides an awareness of the available school and community resources such as the local suicide crisis hotline.

Topics Nested (in order of relevance): Family Health, Mental and Social Emotional Health, Family Health, Community Health

6) Personal health habits including dental health. Topic Nested (in order of relevance): Physical Health

7) Consumer health including health careers, health costs and utilizing health services.

Topics Nested (in order of relevance): Community Health, Family Health



8) Human growth and development, including understanding the physical, emotional, and social elements of individual development and interpersonal relationships, including instruction in parenting methods and styles. This shall include information regarding the possible outcomes of premature sexual activity, contraceptives, adolescent pregnancy, childbirth, adoption, and abortion.

**Topics Nested (in order of relevance):** Physical Health, Mental and Social-Emotional Health, Family Health, Sexual Health, Community Health

9) Drugs, including education about alcohol, caffeine, nicotine, and prescribed drugs.

Topic Nested (in order of relevance): Mental and Social-Emotional Health

10) Nutrition - **Topics Nested (in order of relevance):** Physical Health, Community Health, Family Health

11) How to recognize and prevent sexual abuse and sexual violence, including developmentally appropriate instruction about promoting healthy and respectful relationships, developing, and maintaining effective communication with trusted adults, recognizing sexually offending behaviors, and gaining awareness of available school and community resources.

Topics Nested (in order of relevance): Sexual Health, Safety, Family Health

<u>16 V.S.A § 133. Supervisor, Comprehensive Health Education</u>: Vermont school districts may include a module with the secondary school health class curricula relating to cervical cancers and the human papillomavirus. The Agency shall work with relevant medical authorities to update the current model modules to reflect up-to-date information and practices for health education in this area.

Topics Nested (in order of relevance): Sexual Health, Physical Health

16 V.S.A. § 906: Course of Study

b. In public schools, approved and recognized independent schools, and in home study programs, learning experiences shall be provided for student in the minimum course of study.

c. For purposes of this title, the minimum course of study means learning experience adapted to the student's age and ability in the fields of:

4. physical education and comprehensive health education including the effects of tobacco, alcoholic drinks, and drugs on the human system and on society

Topics Nested (in order of relevance): Mental and Social-Emotional Health, Physical Health

<u>16 V.S.A. § 909</u>: Tobacco use, alcohol, and drug abuse prevention education curriculum

a. The Secretary, in conjunction with the Alcohol and Drug Abuse Council, and where appropriate, with the Division of Health Promotion, shall develop a sequential alcohol and drug abuse prevention curriculum for elementary and secondary schools. The curriculum shall include teaching about the effects and legal consequences of possession and use of tobacco products.

Topics Nested (in order of relevance): Physical Health, Mental and Social-Emotional Health, Community Health

