

APPENDIX 4

USING THE HECAT TO DEVELOP A SCOPE AND SEQUENCE FOR HEALTH EDUCATION

A scope and sequence provides a picture of a school district's entire curriculum in a subject area. It is intended to serve as a general guide for curriculum directors, administrators, teachers, parents, and school board members. A health education scope and sequence outlines the breadth and arrangement of key health topics and concepts across grade levels (scope), and the logical progression of essential health knowledge, skills and behaviors to be addressed at each grade level (sequence) from pre-kindergarten to the 12th grade. A health education scope and sequence should identify *what* the student should know and do at the end of each grade or grade group, aligned with the national, state, or local health education standards, benchmarks and performance indicators, and *when* it should be taught.

A scope and sequence is most often represented in a table or matrix. The format of the table may vary, but the essential elements common to a scope and sequence include the health topic, grade groups (e.g., Pre-K–2; 3–5, 6–8, 9–12) or individual grade levels (e.g., K, 1, 2, 3), key health education topics, and specific knowledge and skill expectations relevant to the health topic and grade group or grade level.

A scope and sequence can be simple or complex, typically arranged on multiple pages so that more specificity can be provided for topic and grade group or grade. Although national or local health education standards may not be specifically stated in a curriculum scope and sequence, the knowledge and skill expectations or performance indicators identified for each topic and grade level should be based on those standards. To coincide with the maturity level and cognitive abilities of the learner, the progression of health education knowledge and skill expectations will increase in complexity as the sequence advances up grade levels.

Figure 1 (pg. A4-4) shows an example of one page of a scope and sequence chart for a single topic curriculum, physical activity. This example

addresses the *National Health Education Standards* for one topic, one grade group (grades 3–5), and knowledge and skill expectations appropriate for this topic and grade group. The knowledge and skill expectations are taken from the HECAT, Chapter 6, *Physical Activity Curriculum (PA) Module*. For a single topic curriculum, a complete scope and sequence would consist of multiple pages, encompassing all health education standards, grade group(s), and pertinent knowledge and skill expectations.

A scope and sequence for a comprehensive health education curriculum will have multiple topics, and will distribute the opportunities for students to learn, practice and master skills in the developmentally appropriate grade groups or grade levels (i.e., pre-K through grade 12) where learning the topic is most suitable.

A comprehensive health education scope and sequence is unique from a single topic health education curriculum. A comprehensive curriculum ensures that all knowledge and skill expectations are covered across the breadth or range of topics in succeeding higher levels of complexity over time (grade groups or grade levels). In contrast, a single topic health education curriculum typically attempts to address all standards and the knowledge and skill expectations within the designated grade group(s) or grade level(s).

Figure 2 (pg. A4-5) provides an example of a scope and sequence for a comprehensive health education curriculum, using dots to represent the topic and grade group where each of the *National Health Education Standards* (knowledge and skills) could be addressed.

The cumulative number of times that the standards are addressed at each grade group is identified in the “Total” column. In this example, within any single topic and grade group, not all of the standards may be addressed. The

comprehensive approach provides for cumulative learning and skills practice across the breadth of topics and grade groups to achieve full coverage.

A “ready-made” scope and sequence provided by commercial developers to match their curricula and ancillary instructional materials rarely addresses the unique needs of individual schools and school districts. A school district should develop its own health education scope and sequence.

The development of a health education scope and sequence is usually completed through a group process, facilitated by an experienced and knowledgeable leader. The leader establishes a regular meeting schedule and timeline for completion, and actively involves individuals with knowledge, expertise, and experience in health education, curriculum development, and the health needs of youth.

The scope and sequence development process will include these general steps:

1. Determine the necessary health education standards or benchmarks, and additional knowledge and skill expectations required at the local level.
2. Clarify health priorities by using local, state, and national health data on youth health-related behaviors¹ including health problems and risk-taking behaviors among school-aged youth.
3. Select key health topics, based on data that should be addressed in grades pre–K through grade 12.
4. Identify and prioritize expected healthy behavior outcomes for students for each topic which will meet the needs of the community and school district.
5. Determine the essential knowledge and skill expectations for each health topic that directly relate to the healthy behavior outcomes. The knowledge and skill expectations should
 6. Decide specifically *when* each of the essential health education knowledge and skill expectations should be taught *across* the curriculum for all grades.
 7. Determine the overall amount of instructional time. Allow sufficient time for each knowledge and skill expectation to be introduced, reinforced, and mastered, and for students to successfully develop the breadth and depth of knowledge of all health education concepts, and be able to perform all health behavior skills.
 8. Review and validate the scope and sequence.
 - Ensure that all skills build progressively on one another, and that students will have sufficient time and opportunity to successfully develop skills relevant to all essential concepts across topics and grade levels.
 - Examine and verify that the specified outcomes, concepts and skills to be learned, for each topic and grade, are appropriate and meet the needs and maturity level of the students, as well as the needs of the community and school district.

A clearly organized scope and sequence is critical for developing or selecting appropriate health education curricula.

A scope and sequence should:

- Correspond with national, state, or local health education standards, benchmarks and indicators.
- Correspond with the state health education framework.
- Reflect locally-identified health priorities.
- Show an awareness of students’ developmental needs.

¹ A school district might have state or local data. Information about national State, territory, and local Youth Risk Behavior Surveillance data is available at www.cdc.gov/HealthyYouth/yrbs.

- Address the concepts and skills students need before problems emerge.
- Exhibit effective coordination within a standard and across grades pre-K-12.
- Show balance, so that one grade is not over-loaded.
- Show reinforcement of skills and concepts, without excessive repetition.

Using the HECAT to Inform a Scope and Sequence for Health Education

The HECAT provides valuable information to assist groups in the scope and sequence planning process. The HECAT articulates the *National Health Education Standards*, identifies the expected outcomes (Healthy Behavioral Outcomes) of a topic-specific curriculum, and identifies the essential knowledge expectations and skill expectations that are directly related to each topic by standard and grade group. This information can be used directly or modified to expedite the development of a health education scope and sequence.

Once a school district has developed its scope and sequence, it can be used to inform revisions to the HECAT analysis tool and to identify appropriate health education curricula. Developing and using a locally-developed scope and sequence chart and the HECAT will ensure the selection of the most appropriate health education curricula.

Additional references on scope and sequence:

1. English F. *Deciding What to Teach and Test: Developing, Aligning, and Auditing the Curriculum* (Millennium ed.). Thousand Oaks, CA: Sage Publications; 2000.
2. Fodor JT, Dalis GT, Giarratano Russell SC. *Health Instruction in Schools: Planning, Implementing and Evaluating*. Bangor, ME: Booklocker, Inc.; 2010.
3. Hale J. *A Guide to Curriculum Mapping: Planning, Implementing, and Sustaining the Process*. Thousand Oaks, CA: Corwin Press; 2007.
4. Jacobs HH. *Mapping the Big Picture: Integrating Curriculum and Assessment K-12*. Alexandria, VA: Association for Supervision and Curriculum Development; 1997.
5. Telljohann S, Symons C, Pateman B. *Health Education: Elementary and Middle School Applications* (6th ed.). New York, NY: McGraw Hill; 2008.
6. West-Christy J. *Teaching Today. Roadmap to Success: A Curriculum Mapping Primer*. New York, NY: Glencoe/McGraw-Hill; 2003.
7. Wiggins G, McTighe J. *Understanding by Design* (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development; 2005.
8. Wiggins G, McTighe J. *Understanding by Design: Guide to Creating High-Quality Units*. Alexandria, VA: Association for Supervision and Curriculum Development; 2011.
9. Wiles J. *Curriculum Essentials: A Resource for Educators* (2nd ed.). Pearson/Allyn & Bacon; 2005.

Figure 1: Example Page from a Physical Activity Scope and Sequence Chart (Grades 3–5)¹

Standards	Grades 3–5
	Knowledge/Skill Expectations
1. Students will comprehend concepts related to health promotion and disease prevention.	<input type="checkbox"/> Describe the recommended amount of physical activity for children. <input type="checkbox"/> Identify ways to increase daily physical activity. <input type="checkbox"/> Identify different types of physical activities. <input type="checkbox"/> Describe the importance of choosing a variety of ways to be physically active. <input type="checkbox"/> Explain positive outcomes for being physically active. <input type="checkbox"/> Identify short-term and long-term benefits of moderate and vigorous physical activity, such as improving cardiovascular health, strength, endurance, and flexibility and reducing the risks for chronic diseases. <input type="checkbox"/> Identify warm up activities to help prevent injury during physical activity. <input type="checkbox"/> Describe the benefits of drinking water before, during, and after physical activity. <input type="checkbox"/> Identify safety precautions for participating in various physical activities in different kinds of weather and climates. <input type="checkbox"/> Explain how physical activity can contribute to maintaining a healthy body weight. <input type="checkbox"/> Identify equipment needed for protection in sports and recreational activities, such as mouthpieces, pads and helmets.
2. Students will analyze the influence of family, peers, culture, media, technology and other factors on health behaviors.	<input type="checkbox"/> Identify relevant influences of culture on physical activity practices and behaviors. <input type="checkbox"/> Identify relevant influences of peers on physical activity practices and behaviors. <input type="checkbox"/> Identify relevant influences of community on physical activity practices and behaviors. <input type="checkbox"/> Describe how relevant influences of family and culture affect personal physical activity practices and behaviors. <input type="checkbox"/> Describe how relevant influences of school and community affect personal physical activity practices and behaviors. <input type="checkbox"/> Describe how relevant influences of media and technology affect personal physical activity practices and behaviors. <input type="checkbox"/> Describe how relevant influences of peers affect personal physical activity practices and behaviors.
3. Students will demonstrate the ability to access valid information and products and services to enhance health.	<input type="checkbox"/> Identify trusted adults at home who can help promote physical activity. <input type="checkbox"/> Identify trusted adults and professionals in school who can help promote physical activity. <input type="checkbox"/> Identify trusted adults and professionals in the community who can help promote physical activity. <input type="checkbox"/> Explain how to locate school health helpers who can help promote physical activity. <input type="checkbox"/> Explain how to locate school or community health helpers to enhance physical activity.
4. Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.	<input type="checkbox"/> Demonstrate effective verbal and nonverbal communication skills to avoid engaging in unsafe physical activities. <input type="checkbox"/> Explain how to be empathetic and compassionate toward others who are trying to maintain or increase physical activity. <input type="checkbox"/> Demonstrate effective peer resistance skills to avoid or reduce physical inactivity. <input type="checkbox"/> Demonstrate how to effectively ask for help to improve personal physical activity.
5. Students will demonstrate the ability to use decision-making skills to enhance health.	<input type="checkbox"/> Identify situations which need a decision related to physical activity. <input type="checkbox"/> Decide when help is needed and when it is not needed to make a decision related to physical activity. <input type="checkbox"/> Explain how family, culture, peers, or media influence a decision related to physical activity. <input type="checkbox"/> Identify options and their potential outcomes when making a decision related to physical activity. <input type="checkbox"/> Choose a safe and healthy option when making a decision related to physically activity. <input type="checkbox"/> Describe the final outcome of a decision related to physical activity.
6. Students will demonstrate the ability to use goal-setting skills to enhance health.	<input type="checkbox"/> Set a realistic personal goal to be physically active. <input type="checkbox"/> Track progress toward achieving a personal goal to be physically active. <input type="checkbox"/> Identify resources that can help to achieve a personal goal to be physically active.
7. Students will demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.	<input type="checkbox"/> Describe physical activity practices and behaviors that reduce or prevent health risks. <input type="checkbox"/> Demonstrate healthy physical activity practices and behaviors. <input type="checkbox"/> Make a commitment to be physically active.
8. Students will demonstrate the ability to advocate for personal, family, and community health.	<input type="checkbox"/> Give factual information to improve the physical activity of others. <input type="checkbox"/> State personal beliefs to improve the physical activity of others. <input type="checkbox"/> Demonstrate how to persuade others to make healthy physically activity choices.

¹ This single page example uses the HECAT knowledge and skill expectations, grades 3–5, Physical Activity (PA) Module.

Figure 2: Example Scope and Sequence for a Comprehensive Health Education Curriculum National Health Education Standards* Addressed by Topic and Grade Groups

Standards*	Topics												Number of Standards Across Topics and Grade Groups																
	Alcohol & Other Drugs			Healthy Eating			Mental & Emotional Health			Personal Health & Wellness			Physical Activity			Safety & Injury Prevention			Sexual Health			Tobacco			Violence Prevention				
	K-2	3-5	6-8	9-12	K-2	3-5	6-8	9-12	K-2	3-5	6-8	9-12	K-2	3-5	6-8	9-12	K-2	3-5	6-8	9-12	K-2	3-5	6-8	9-12	K-2	3-5	6-8	9-12	
1.
2.
3.
4.
5.
6.
7.
8.

Source: The Joint Committee on National Health Education Standards. *National Health Education Standards: Achieving Excellence (2nd Edition)*. Atlanta: American Cancer Society, 2007.

Standards*. Students will:

- 1: Comprehend concepts related to health promotion and disease prevention to enhance health.
- 2: Analyze the influence of family, peers, culture, media, technology and other factors on health behaviors.
- 3: Demonstrate the ability to access valid information and products and services to enhance health.
- 4: Demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.
- 5: Demonstrate the ability to use decision-making skills to enhance health.
- 6: Demonstrate the ability to use goal-setting skills to enhance health.
- 7: Demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.
- 8: Demonstrate the ability to advocate for personal, family and community health.

