Appendix 5: 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 school board members, administrators, curriculum directors, teachers, students, and parents and caregivers. 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 span and *when* it should be taught.

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.
- 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 overloaded.
- Show reinforcement of skills and concepts, without excessive repetition.

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 spans (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 span 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 span 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.

The difference between a scope and sequence and a pacing guide

A health education scope and sequence is commonly confused with a health education pacing guide; however, each serves a unique purpose. A **pacing guide** is designed to keep teachers on track to deliver the intended health education curriculum, outlining a sequential order and timeframe in which material is taught. A **scope and sequence** guides the development, selection, or revision of curriculum by outlining target healthy behavior outcomes across grade levels.

Figure 1 (pg. APX-21) further demonstrates the differences and similarities between a pacing guide and scope and sequence.

Figure 2 (pg. APX-22) provides a sample template for a single topic curriculum, sexual health. This sample addresses the *National Health Education Standards* for one topic, one grade span (grades 6–8), and knowledge and skill expectations appropriate for this topic and grade span. The knowledge and skill expectations are taken from the HECAT, Chapter 6, *Sexual Health (SH) Module*. For a single topic curriculum, a complete scope and sequence would consist of multiple pages, encompassing all health education standards, grade span(s), and pertinent knowledge and skill expectations. This template is also accessible using HECAT Online when working on a scope and sequence project. The template may be adapted to include multiple grade spans and health topic areas.

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 spans 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 increasingly higher levels of complexity over time (grade spans 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 span(s) or grade level(s).

Figure 3 (pg. APX-23) provides a sample program coverage map of health education standards and topics. This map uses dots to illustrate which *National Health Education Standards* (knowledge and skills) are addressed in each grade span and health topic area. Information for this table would be derived from a scope and sequence.

The cumulative number of times that the standards are addressed at each grade span is identified in the "Total" column. In this example, within any single topic and grade span, 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 spans to achieve full coverage.

Developing a Scope and Sequence for Health Education

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 behaviors including health problems and risk-taking behaviors among school-aged youth.[2]
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 specify what students should know and be able to do relevant to each of the key health topics and aligned with standards or benchmarks.
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. For more details, see CDC's Developing a Scope and Sequence for Sexual Health Education step-by-step resource or brief overview. https://www.cdc.gov/healthyyouth/hecat/pdf/scope_and_sequence.pdf#:_:text=The%20development%20of%20a%20sexual%20health%20scope%20and,knowledgeable%20leader%2C%20such%20as%20the%20School%20Health%20Coordinator

[2] 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.

Using the HECAT Online 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 and skill expectations that are directly related to each topic by standard and grade span. This information can be used directly or modified to expedite the development of a health education scope and sequence.

In addition, HECAT Online can also be used to inform the development of a scope and sequence for a single health topic or grade span, or for comprehensive health education across multiple health topics and grades pre-K through 12. Additional information about how to use HECAT Online to develop a scope and sequence is located in the Online User Guide and can be completed through the web application. https://www.cdc.gov/healthyyouth/HECAT/

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:

Centers for Disease Control and Prevention. Developing a Scope and Sequence for Sexual Health Education. Atlanta, GA: CDC; 2016. Available at https://www.cdc.gov/healthyyouth/hecat/pdf/scope_and_sequence.pdf

Centers for Disease Control and Prevention. Sexual Health Education Scope and Sequence Processing Guide. Atlanta, GA: CDC; 2021. Available at https://www.cdc.gov/healthyyouth/health-education/docs/SHE_SS_Process_Guide_508.pdf

Centers for Disease Control and Prevention. Sexual Health Education Scope and Sequence Checklist. Atlanta, GA: CDC; 2021. Available at https://www.cdc.gov/healthyyouth/health-education/docs/SHE_SS_Checklist_508.pdf

Centers for Disease Control and Prevention. Health Education Pacing Guide and Unit Planner. Atlanta, GA: CDC; 2021. Available at https://www.cdc.gov/healthyyouth/health-education/docs/HED_Pacing_Guide_Unit-Planner_508.pdf

English F. Deciding What to Teach and Test: Developing, Aligning, and Auditing the Curriculum (Millennium ed.). Thousand Oaks, CA: Sage Publications; 2000.

Fodor JT, Dalis GT, Giarratano Russell SC. Health Instruction in Schools: Planning, Implementing and Evaluating. Bangor, ME: Booklocker, Inc.; 2010.

Hale J. A Guide to Curriculum Mapping: Planning, Implementing, and Sustaining the Process. Thousand Oaks, CA: Corwin Press; 2007.

Jacobs HH. Mapping the Big Picture: Integrating Curriculum and Assessment K–12. Alexandria, VA: Association for Supervision and Curriculum Development; 1997.

Telljohann S, Symons C, Pateman B. Health Education: Elementary and Middle School Applications (6th ed.). NY: McGraw Hill; 2008.

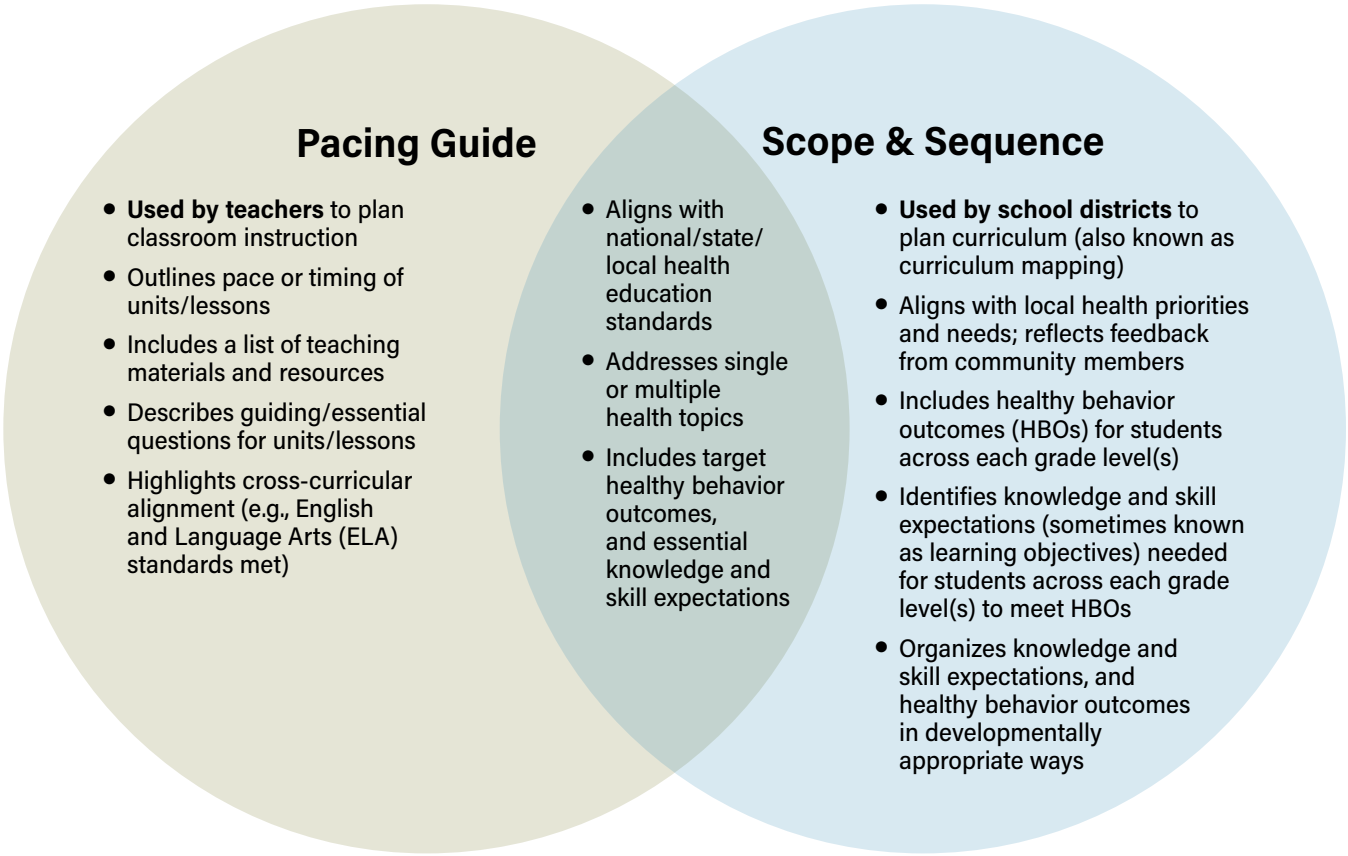
West-Christy J. Teaching Today. Roadmap to Success: A Curriculum Mapping Primer. New York, NY: Glencoe/McGraw-Hill; 2003.

Wiggins G, McTighe J. Understanding by Design (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development; 2005.

Wiggins G, McTighe J. Understanding by Design: Guide to Creating High-Quality Units. Alexandria, VA: Association for Supervision and Curriculum Development; 2011.

Wiles J. Curriculum Essentials: A Resource for Educators (2nd ed.). Pearson/Allyn & Bacon; 2005.

Figure 1: Differences and Similarities between a Scope and Sequence and a Pacing Guide [3–5]



[3] Centers for Disease Control and Prevention. Developing a Scope and Sequence for Sexual Health Education, Atlanta, GA: CDC; 2016. https://www.cdc.gov/healthyyouth/hecat/pdf/scope_and_sequence.pdf

[4] Centers for Disease Control and Prevention. Health Education Pacing Guide and Unit Planner, Atlanta, GA: CDC; 2021. https://www.cdc.gov/healthyyouth/health-education/docs/HED_Pacing_Guide_Unit-Planner_508.pdf

[5] Centers for Disease Control and Prevention. Sexual Health Education Scope and Sequence Processing Guide, Atlanta, GA: CDC; 2021. https://www.cdc.gov/healthyyouth/health-education/docs/SHE_SS_Process_Guide_508.pdf

[6] Centers for Disease Control and Prevention. Sexual Health Education Scope and Sequence Checklist, Atlanta, GA: CDC; 2021. https://www.cdc.gov/healthyyouth/health-education/docs/SHE_SS_Checklist_508.pdf

Figure 2: Example Sexual Health Education Scope and Sequence Template (Grades 6–8)[7]

Grade	Behavioral Outcomes	Student Learning Objectives	Student Learning Objectives	Standards/Requirements
	Healthy Behavior Outcomes (HBOs)	Knowledge Expectations (KE)	Skill Expectations (SE)	State/Local
6 *(sample)*	***HBO 2:*** *Establish and maintain healthy relationships* ***HBO 5:*** *Be sexually abstinent*	***SH1.8.10*** *Describe characteristics of healthy relationships. (HBO 2)* ***SH1.8.13*** *Explain the qualities of a healthy dating or sexual relationship. (HBO 2)* ***SH1.8.18*** *Describe how power differences (e.g., age, race/ethnicity, sex, gender, socio-economic status) impact relationships. (HBO 2, 3, 4, 5, 6, 7, 8 & 9)* ***SH1.8.33*** *Describe the benefits of being sexually abstinent. (HBO 5)* ***SH1.8.34*** *Describe why sexual abstinence is the safest, most effective risk avoidance method of protection from STIs, including HIV, and unintended pregnancy. (HBO 5, 6 & 7)*	***SH4.8.1*** *Demonstrate the effective use of verbal and nonverbal communication skills to promote healthy relationships and sexual and reproductive health.* ***SH4.8.3*** *Demonstrate effective peer resistance skills to avoid or reduce sexual risk behaviors.* ***SH5.8.1*** *Identify circumstances that help or hinder making a decision related to a safe or potentially risky sexual situation.* ***SH5.8.5*** *Distinguish between healthy and unhealthy alternatives to a sexual health-related decision.* ***SH5.8.6*** *Predict the potential outcomes of healthy and unhealthy alternatives to a sexual-health related decision.*	None
7				
8				
9				
10				
11				
12				

[7] Adapted from the Health Education Curriculum Analysis Tool (HECAT) Online scope and sequence results summary table.

Figure 3: Example Comprehensive Health Education Program Map

National Health Education Standards* Addressed by Topic and Grade Spans

Standards*	Topic: Alcohol & Other Drugs				Topic: Food & Nutrition				Topic: Mental & Emotional Health				Topic: Personal Health & Wellness				Topic: Physical Activity				Topic: Safety				Topic: Sexual Health				Topic: Tobacco				Topic: Violence Prevention				Number of Standards Across Topics and Grade Spans			
	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	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.	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	9	9	9	9
2.			•	•	•	•				•			•								•						•	•		•	•			•	•	•	3	3	4	3
3.			•		•	•		•			•	•	•	•		•	•					•						•	•	•	•			•		3	3	4	3
4.			•	•					•	•		•					•				•	•					•	•	•	•	•			•	•	•	4	4	4	4
5.			•		•	•					•	•	•				•				•						•	•	•	•				•	•	•	3	3	4	3
6.			•	•	•	•	•	•					•				•	•	•	•		•					•	•									3	3	4	4
7.							•						•	•	•	•	•	•		•	•	•	•	•		•	•	•	•	•							4	4	4	4
8.			•		•		•						•	•			•				•	•		•		•	•	•	•	•		•			•	•	4	4	4	4

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

*National Health Education 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.