

*Project HOME:
Homes for Wildlife in the Schoolyard*

Correlations to the
New Hampshire
Curriculum Frameworks

Science, Mathematics, Social Studies, Reading, Oral and Written Communication

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Introduction

Because *Homes for Wildlife* outlines a process (and not a particular curriculum) for conducting a schoolyard enhancement project, it is not feasible to correlate the guide to specific NH curriculum frameworks. However, particular activities and processes that it describes are obvious matches to certain frameworks. This document seeks to identify those NH curriculum frameworks that would obviously be addressed by undergoing the process of schoolyard enhancement as outlined in this guide.

The part of this document that lists the correlations is organized according to the chapters in *Homes for Wildlife* which correspond to steps of the schoolyard enhancement process described in the book. NH curriculum frameworks that are most likely addressed by conducting that process with students are then identified. In a few chapters, particular “activity cards” are provided at the end. When this is the case, the activities described on these cards have been correlated as well. In addition, chapters of *Homes for Wildlife* are cross-referenced with relevant Project WILD activities. The correlations for these activities are attached at the end of this document.

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How to Use These Correlations

This resource is intended to advise educators who are undertaking a schoolyard habitat enhancement project as described in *Homes for Wildlife* with students. The primary audience is classroom teachers, curriculum specialists, and curriculum committees.

This handbook is organized according to the main steps in the process of conducting a thorough schoolyard habitat enhancement project. These steps correspond to the chapters in *Homes for Wildlife* which include:

1. Getting started
2. Learning about wildlife and habitat
3. Mapping the school
4. Conducting the site inventory
5. Developing the enhancement plan
6. Choosing the enhancement projects
7. Maintaining and sustaining the outdoor classroom

A section of this handbook is devoted to each chapter of *Homes for Wildlife*. There through a narrative, we discuss the major types of frameworks' concepts and skills that could be addressed by conducting that portion of the enhancement process with students as described in the guide. If you are planning to conduct this portion of the enhancement process with students, we encourage you to consult this resource for the main frameworks that would be addressed.

Because the steps described are so easily modified and extended into related curriculum areas, they could easily meet many more standards than are indicated. Therefore, educators who make modifications or additions to the basic process outlined here may find they meet additional standards not listed.

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Methodology for Correlating Homes for Wildlife to the New Hampshire Curriculum Frameworks

Homes for Wildlife was correlated to five content areas of the New Hampshire Curriculum Frameworks, chapter by chapter. First, each chapter was read and notes were made about the general types of content, skills, and activities that would be addressed in the step of the habitat enhancement process as described in that particular chapter.

Then, for each of the five Curriculum Framework content areas, the associated domains/strands/grade-level or grade-span expectations were reviewed, one by one, to see if the types of content, skills, and activities described in the chapter met the intent of those standards. Narratives were then written describing how the various activities described in the chapters could potentially address different content standards.

Because *Homes for Wildlife* describes a process for habitat enhancement appropriate for students of many ages and not a particular curriculum or set of activities, matches were not made to individual proficiencies or to individual grade levels.

In the case of Chapters 1, 3, and 4, which end with several Activity Cards recommended by the author, correlations were made between each individual activity and the standards. These correlations are listed at the end of the narratives for each of these chapters.

Any attempt to correlate universal curriculum standards and a single program involves subjectivity. In addition, as any teacher knows, educational activities obviously lend themselves to modification and extension. The process and activities described in *Homes for Wildlife* could be taken in many directions to address a myriad of standards, but Project HOME has chosen to correlate based on a strict interpretation of the process and activities as they have been described.

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How the NH Curriculum Frameworks are Listed

During the curriculum framework revisions approved in June 2006, each item was given a unique code to identify it. This resource uses the same coding system to identify particular curriculum frameworks. The coding consists of a series of letters and numbers, punctuated by colons. The following explains how this coding works for each content area's Curriculum Framework.

NH Framework for Science Literacy (K-12)

1. **Content Area:** The first code, which consists of the letter "S" identifies this as part of the science framework.
2. **Domain:** The letter code after the first colon identifies the particular domain within science that is being addressed. Science consists of a total of four domains including Earth Space Science (ESS), Life Science (LS), Physical Science (PS), and Science Process Skills (SPS).
3. **Strand & Stem:** A third numeric code (after the second colon) exists to identify the enduring knowledge statement for students. These strands and stems are not specific to grade in this document.

K-12 Mathematics NH Curriculum Framework

1. **Content Area:** The first code, which consists of the letter "M" identifies this as part of the mathematics framework.
2. **Strand:** The letter code after the first colon identifies the particular strand within math that is being addressed. Math consists of a total of six strands including Number & Operations (N&O), geometry and Measurement (G&M), Functions and Algebra (F&A), Data, Statistics, and Probability (DSP), Problem Solving, Reasoning, and Proof (PRP), and Communication, Connections, and Responsibility (CCR).

For mathematics, correlations were not made any deeper than the level of strand because, at this point, the frameworks become grade specific. Because *Homes for Wildlife*, describes a process appropriate for students of many grades and not a particular curriculum or set of activities, it is difficult to correlate it to this level of the frameworks.

K-12 Social Studies NH Curriculum Framework

1. **Content Area:** The first code, which consists of the letters "SS" identifies this as part of the social studies framework.

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2. **Strand:** The letter code after the first colon identifies the particular strand within social studies that is being addressed. Social studies consists of a total of five strands including Civics and Government (CV), Economics (EC), Geography (GE), US and NH History (HI), and World History (WH).
3. **Standard:** A third numeric code (after the second colon) exists to identify the standard of what students should know and be able to do. These standards are not specific to grade in this document.

K-12 Written and Oral Communication NH Curriculum Framework

1. **Content Area:** The first code, which consists of the letter “W” identifies this as part of the English language arts framework having to do with written and oral communication.
2. **Content Cluster:** The letter code after the first colon identifies the particular content cluster within written and oral communication that is being addressed. Written and oral communication consists of a total of seven content clusters including Structures of Language (SL), Reading Connection (RC), Expressive Writing (EW), Informational Writing (IW), Conventions (C), Habits of Writing (HW), and Oral Communications (OC).
3. **GLE/GSE Number:** A third numeric code (after the second colon) exists to identify the specific GLE/GSE.

For English language arts, correlations were not made to specific grade levels. Because *Homes for Wildlife*, describes a process appropriate for students of many grades and not a particular curriculum or set of activities, it is difficult to correlate it to this level of the frameworks.

K-12 Reading NH Curriculum Framework

1. **Content Area:** The first code, which consists of the letter “R” identifies this as part of the English language arts framework having to do with reading.
2. **Content Cluster:** The letter code after the first colon identifies the particular content cluster within reading that is being addressed. Reading consists of a total of eight content clusters including Early Reading Strategies (ERS), Reading Fluency and Accuracy (F&A), Word Identification Skills and Strategies (WID), Vocabulary (V), Literary Texts (LT), Informational Texts (IT), Reading Strategies (RS), and Breadth of Reading (B).

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3. **GLE/GSE Number:** A third numeric code (after the second colon) exists to identify the specific GLE/GSE.

For English language arts, correlations were not made to specific grade levels. Because *Homes for Wildlife*, describes a process appropriate for students of many grades and not a particular curriculum or set of activities, it is difficult to correlate it to this level of the frameworks.

The following table summarizes the codes used to identify the NH Curriculum Frameworks within this document.

Table 1: Summary of NH Curriculum Framework codes.

NH Curriculum Framework (Code)	Domain (S) Strand (SS or M) Content Cluster (ELA)	Code
K-12 Science Literacy (S)	Earth Space Science	ESS
	Life Science	LS
	Physical Science	PS
	Science Process Skills	SPS
K-12 Mathematics (M)	Number and Operations	N&O
	Geometry and Measurement	G&M
	Functions and Algebra	F&A
	Data, Statistics, and Probability	DSP
	Problem Solving, Reasoning, and Proof	PRP
	Communication, Connections, and Representations	CCR
K-12 Social Studies (SS)	Civics and Governments	CV
	Economics	EC
	Geography	GE
	US / NH History	HI
	World History	WH
K-12 Written & Oral Communication (W)	Structures of Language	SL
	Reading Connection	RC
	Expressive Writing	EW
	Informational Writing	IW
	Conventions	C
	Habits of Writing	HW

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	Oral Communications	OC
K-12 Reading (R)	Early Reading Strategies	ERS
	Reading Fluency and Accuracy	F&A
	Word Identification Skills & Strategies	WID
	Vocabulary	V
	Literary Texts	LT
	Informational Texts	IT
	Reading Strategies	RS
	Breadth of Reading	B

For instance, a curriculum framework identified as SS:GE:2 would be from the K-12 Social Studies Curriculum Framework (SS), within the strand of Geography (GE) and specifically addressing the second standard (2).

Correlations by Chapter

Chapter 1: Getting Started

Activity Cards

1. *25 Words*
No correlation
2. *An On-the-Spot Story*
 - W:HW:2 – Writing extensively
 - W:EW:1&2 – Narrative writing
3. *Colors*
 - S:LS:1.1 – Classification
 - S:SPS:1.1 – Making observations and asking questions

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Correlations by Chapter

Chapter 2: Learning About Wildlife and Habitat

A thorough study of wildlife and their habitat components (food, water, cover, and space) will address several science curriculum frameworks in the Life Science domain including S:LS:1 (All living organisms have identifiable structures and characteristics that allow for survival (organisms, populations, and species)) and S:LS:2 (Energy flows and matter recycles through an ecosystem). Further study of wildlife concepts such as diversity, carrying capacity, limiting factors, and succession as suggested will also address S:LS:3 (Groups of organisms show evidence of change over time).

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Correlations by Chapter

Chapter 3: Mapping the School

As the *Homes for Wildlife* author states, “Map-making is the perfect integrated curriculum project. It is impossible to do it well without straying into all major curriculum realms.” Correlation of the mapping process with the NH curriculum frameworks certainly shows this to be true as matches can be made with Mathematics, Social Studies, and Science frameworks.

Working with existing maps of the area and/or having students construct their own maps will both address SS:GE:1 (The World in Spatial Terms) as well as several frameworks having to do with measurement and scale including M:G&M (Geometry and Measurement) and S:SPS:2.3 (Models and Scale).

The mapping process also involves students researching existing maps that include the site. Through analysis of resources such as cover type maps and soil type maps, S:ESS:1.2 (Composition and Features of the Earth) can also be addressed.

If your plans involve comparison of different types of maps or use of Geographic Information Systems (GIS) for analysis of on-site features, students will recognize the importance of technology to the process and will become aware of how mapping technology has advanced, thus addressing S:ESS:4.1 (Design Technology).

Activity Cards

In addition to the curriculum framework correlations described above, several of the suggested activities could address S:SPS:4.3 (Critical Thinking and Systems Thinking), M:DSP (Data, Statistics, and Probability) and/or M:PRP (Problem Solving, Reasoning, and Proof).

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Correlations by Chapter

Chapter 4: Conducting the Site Inventory

Knowing what is already on your site is crucial knowledge to have when determining how to enhance it. Surveying of the site is another interdisciplinary aspect of this project as you and your students will need to be familiar with not only the physical and biological characteristics of the site, but also its socio-cultural characteristics. This will not only lead to a scientific study of the site, but also a historical and geographical one as well.

By observing their surroundings and making records of what features and organisms exist on the site, students perform one of the most vital steps of the scientific process, S:SPS:1.1 (Making observations and asking questions). Other inventories may involve monitoring environmental conditions (weather, sunlight patterns, etc.) which can also address S:SPS:1.3 (Conducting scientific investigations) and S:SPS:2.4 (Patterns of change). Data that is collected will need to be compiled, displayed, and interpreted which will address S:SPS:1.4 (Representing and understanding results of investigations) and this will most likely involve the making and/or use of additional maps addressing SS:GE:1 (The world in spatial terms).

Because students will be inventorying both biotic and abiotic factors on the site, their findings will most likely deepen their understanding of a myriad of Life Science (particularly S:LS:1 and S:LS:2) and Earth Science (particularly S:ESS:1) standards.

Conducting the site inventory will most likely also require students to conduct research, which addresses S:SPS:4.1 (Information and media literacy). This research will vary by site and might include using field guides to identify organisms, investigating town or county records to learn about human-built features such as roads and utilities, and reading historical documents about how the site was used and was changed in the past, just to name a few.

Through the process of site inventory, students will also come to appreciate that what is currently on the site is a result of the physical, biological, and socio-cultural features that are present now and in the past. This understanding addresses a great number of the Social Studies' Geography standards including SS:GE:2 (Places and regions), SS:GE:3 (Physical systems), SS:GE:4 (Human systems), and SS:GE:5 (Environment and society).

Finally, any site inventory will also require students to practice a variety of math skills/ Students will need to do a great deal of counting, tallying, and estimating of numbers addressing M:N&O (Numbers and operations) as well as measuring distances and performing calculations as described in M:G&M (Geometry and measurement).

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Activity Cards

1. *Size of Schoolyard Site*
 - S:SPS:1.1 – Making observations and asking questions
 - M:N&O – Numbers and operations
 - M:G&M – Geometry and Measurement

2. *High/Low Temperature*
 - S:SPS:1.1 – Making observations and asking questions
 - S:SPS:1.3 – Conducting scientific investigations
 - S:SPS:2.4 – Patterns of change
 - SS:GE:2 – Places and regions

3. *Surface Rocks*
 - S:SPS:1.1 – Making observations and asking questions
 - S:ESS:1.2 – Composition and features of Earth
 - S:ESS:1.6 – Rock cycle
 - SS:GE:3 – Physical systems

4. *Wet and Dry Spots*
 - S:SPS:1.1 – Making observations and asking questions
 - S:ESS:4.3 – Social issues, environmental change
 - SS:GE:1 – The world in spatial terms
 - SS:GE:5 – Environment and society

5. *Covered Areas of Schoolyard Sites*
 - S:SPS:1.1 – Making observations and asking questions
 - M:N&O – Numbers and operations
 - M:G&M – Geometry and measurement
 - SS:GE:1 – The world in spatial terms

6. *Animal Signs*
 - S:SPS:1.1 – Making observations and asking questions
 - S:LS:1.1 – Classification

7. *Earthworm Analysis*
 - S:SPS:1.1 – Making observations and asking questions
 - M:N&O – Numbers and operations
 - M:G&M – Geometry and measurement
 - M:DSP – Data, statistics, and probability

8. *Agents of Decomposition*
 - S:SPS:1.1 – Making observations and asking questions

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- S:LS:2.3 – Recycling of materials
- SS:GE:1 – The world in spatial terms

9. *Most Common Plants*

- S:SPS:1.1 – Making observations and asking questions
- S:SPS:4.1 – Information and media literacy
- S:LS:1.1 – Classification

10. *Animal Foods*

- S:SPS:1.1 – Making observations and asking questions
- S:SPS:4.1 – Information and media literacy
- S:LS:2.2 – Flow of energy
- SS:GE:1 – The world in spatial terms

11. *Survival Adaptations*

- S:SPS:1.1 – Making observations and asking questions
- S:LS:1.1 – Classification
- S:LS:1.2 – Living things and organization
- S:LS:3.3 – Natural selection

12. *Protective Devices*

- S:SPS:1.1 – Making observations and asking questions
- SS:GE:1 – The world in spatial terms
- SS:GE:5 – Environment and society

13. *Service Utilities*

- S:SPS:1.1 – Making observations and asking questions
- SS:GE:1 – The world in spatial terms
- SS:GE:5 – Environment and society

14. *Dates with History*

- S:SPS:1.1 – Making observations and asking questions
- SS:GE:1 – The world in spatial terms
- SS:GE:5 – Environment and society

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Correlations by Chapter

Chapter 5: Developing the Enhancement Plan

Developing the actual enhancement plan will require a lot of decision making on the part of you and your students. Working through a decision-making process with a large group of people (perhaps all the students in your class or multiple classes!) will most likely involve more Language Arts skills than any other step in this process.

Because many enhancement projects are about attracting new species of wildlife to your site, additional research will probably be necessary to determine what wildlife are native to the area and could be enticed to your location. This will most likely incorporate R:B:3 (Reading for research across content areas) and R:IT:1 and R:IT:2 (Information texts). This information will need to be analyzed so that matches can be made between the wildlife that could be attracted and the food, water, and cover needs that these organisms require, thus addressing S:LS:1.2 (Living things and organization), S:LS:2.1 (Environment), and S:LS:2.2 (Flow of energy).

Deciding on an enhancement project will require students to share ideas about their hopes for the site and have group discussions and/or debates about the merits of the different proposals. Through these discussions, students will practice speaking, listening, and presentations skills addressing W:OC:1 (Interactive listening) and W:OC:2 (Making presentations).

Students will need to consider not only their wants in these discussions, but also what is reasonable to expect given the time, resources, and money that are available. Students will need to investigate and consider the costs of the goods and services associated with their possible project. They will most likely need to brainstorm possible funding sources or ideas for barter of goods and services. Thus, the project will also likely address various Economics standards possibly including SS:EC:2 (Basic economic concepts) and SS:EC:4 (Financial institutions and government).

Finally, once decisions have been made concerning the type, scope, and timeline of the project, students will need to write out the details of the plan addressing W:IW:1, W:IW:2, and W:IW:3 (Information writing). Additional presentations may need to be made or letters written to solicit the help of other classes and/or organizations.

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Correlations by Chapter

Chapter 6: Choosing the Enhancement Projects

Chapter 6 is unlike the previous chapters in that it does not describe part of the process for habitat enhancement of schoolgrounds. Instead, Chapter 6 provides ideas and explanations for various projects to enhance food, water, and cover for various organisms. Therefore, there are no frameworks correlations for this chapter.

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Correlations by Chapter

Chapter 7: Maintaining and Sustaining the Outdoor Classroom

Chapter 7 does not have any frameworks correlations. It suggests ideas for ways to maintain your project including determining a maintenance schedule, establishing an outdoor classroom, and suggesting outdoor study ideas.