Vermont's Framework of Standards and Learning Opportunities

Updated 2013

2000

Updated 2013
Preface

Vermont's Framework of Standards was originally published in the Fall of 2000. While some updates have been made during the interim, this edition represents the first major revision of this guiding document since 2000. In 2010, the State Board of Education adopted the Common Core State Standards for English Language Arts and Mathematics (CCSS). In 2013, the State Board of Education adopted the Next Generation Science Standards (NGSS). Both the CCSS and the NGSS were developed at a national level with significant input and guidance from many states, including Vermont.

In this edition of the Framework, these new standards will replace the previous standards for English Language Arts (Section 2), Mathematics (Section 3), and Science (Section 4). The older standards have been deleted. The new standards appear as new sections of the Framework and in the format in which they were originally published. Wherever these new sections are referenced they can be accessed directly by using the internal document links (Ctrl/click). For more information about the development process, refer to the introductions to the new sections.

Also included with this edition is an updated Resources section. The Resources are intended to provide assistance in the effective use of the entirety of the Framework, but in particular, the new sections.
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The purpose of Vermont's Framework of Standards and Learning Opportunities is to improve student learning. The standards will be used in three ways:

1. To provide a structure from which standards-based district, school, and classroom curriculum can be developed, organized, implemented, and assessed.
2. To provide the basis for the development of a state, local, and classroom comprehensive assessment system.
3. To make explicit what may be included in statewide assessments of student learning.

### Definition of Standards and Evidence

Standards identify the essential knowledge and skills that should be taught and learned in school. Essential knowledge is what students should know. It includes the most important and enduring ideas, issues, dilemmas, principles, and concepts from the disciplines. Essential skills are what students should be able to do. Skills are ways of thinking, working, communicating, and investigating. Standards also identify behaviors and attitudes related to success in and outside of school. These include (but are not limited to) providing evidence to back up assertions and developing productive, satisfying relationships with others. Frequently, standards are accompanied by evidence. The evidence is an indicator by which it can be determined whether or not the student has met the standards.

### Definition of Learning Opportunities

Learning opportunities are recommended practices to support all students in attaining the standards in this framework. They address access, instruction, assessment, and connections, as well as best practices particular to the fields of knowledge. They represent areas that can be influenced by the teacher, and they are supported by current research and best practices. Examples of recommended practices follow each learning opportunity.

### Organization of the Framework

The framework is organized in four main parts:

1. Vital Results Standards, which are the responsibility of teachers in all fields of knowledge;
2. Field of Knowledge Standards, which are specific to each field of knowledge and must be applied to attain the vital results;
3. Learning Opportunities and examples of recommended practices; and
4. Appendices, including questions and answers about how the framework was developed, and about issues relating to its use; and a bibliography.

As the work to build both state and national standards continues, these standards provide practical, useful reference points for the development of local curriculum and assessment. They are intended as points of reference, not as limitations. Many students will accomplish much more than these standards envision; yet the standards set the targets for what all students should be challenged, encouraged, and expected to achieve.
2 Reasoning and Problem Solving Standards

Questioning / Problem Solving

Types of Questions

2.1 Students ask a variety of questions. This is evident when students:

- Ask questions about how things get done and how they work;
- Ask questions to determine why events occur;
- Ask questions that compare and contrast, to determine similarities and differences;
- Ask questions that help make connections within and across fields of knowledge and/or between concepts; and
- Ask reflective questions that connect new ideas to personal experience.

<table>
<thead>
<tr>
<th>PreK – 4</th>
<th>5 – 8</th>
<th>9 – 12</th>
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<tbody>
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</table>

Evidence PreK – 4 applies, plus —

- Ask critical evaluation questions that judge the quality of evidence from within a problem, text, work of art, etc.

- Ask critical evaluation questions that judge the quality of evidence from experts, evidence from other disciplines, etc.
### Overview of Vermont’s Framework

#### The Vital Results

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<tr>
<th>The Fields of Knowledge</th>
<th>Communication</th>
<th>Reasoning and Problem Solving</th>
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<th>Civic and Social Responsibility</th>
<th>Arts, Language, and Literature</th>
<th>History and Social Sciences</th>
<th>Science, Mathematics, and Technology</th>
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<td></td>
<td>See Section 2</td>
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<td>See Section 3 for Math</td>
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<td>See Section 4 for Science</td>
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</tbody>
</table>

#### Communication

- See Section 2

#### Reasoning and Problem Solving

- **Questioning/Problem Solving**
  - Types of questions

- **Problem Solving**
  - Problem solving process
  - Types of problems
  - Improving effectiveness
  - Mathematics dimensions

- **Approach**
  - Application
  - Information
  - Taking risks
  - Persuading

- **Abstract & Creative Thinking**
  - Fluency
  - Elaboration
  - Flexibility
  - Product/service
  - Planning/organization

#### Personal Development

- **Worth and Competence**
  - Goal-setting
  - Learning strategies
  - Respect

- **Healthy choices**
  - Development
  - Healthy choices
  - Physically active lifestyle choices

- **Making Decisions**
  - Informed decisions
  - Personal economics
  - Sustainability

- **Relationships**
  - Teamwork
  - Interactions
  - Conflict resolution
  - Roles and responsibilities

- **Workplace**
  - Dependability and productivity
  - Career choices
  - Transition planning

#### Civic and Social Responsibility

- **Service**
  - Service
  - Democratic processes

- **Human Diversity**
  - Cultural expressions
  - Effects of prejudice

- **Change**
  - Continuity and change
  - Understanding place

#### Arts, Language, and Literature

- **Non-Native Language**
  - Speaking and listening
  - Reading
  - Writing

- **Artistic Process**
  - Intent
  - Critique
  - Artistic problem solving
  - Exemplary works
  - Analysis
  - Perspective

- **Elements, Forms, and Techniques in the arts**
  - Artistic proficiency
  - Visual arts
  - Music
  - Theater
  - Dance

#### History and Social Sciences

- **Investigation and Critical Evaluation**
  - Causes and effects in human societies
  - Uses of evidence and data
  - Analyzing knowledge

- **History**
  - Historical connections
  - Traditional and social histories
  - Being a historian

- **Geography**
  - Geographical knowledge
  - Movements and Settlements

- **Citizenship**
  - Meaning of citizenship
  - Types of government
  - Institutional access
  - Human rights

- **Diversity and Unity**
  - Concepts of culture
  - Forces of unity and disunity

- **Economics**
  - Knowledge of economic systems
  - Impact of economic systems
  - Governments and resources

- **Conflicts and Conflict Resolution**
  - Nature of conflict

- **Identity and Interdependence**
  - Identity and interdependence
The Vital Results

Vital results cut across all fields of knowledge. In the classroom, vital result standards are combined with field of knowledge standards. The following pages present standards for each of these vital results:

1. Communication
   See Section 2

2. Reasoning and Problem Solving
   - Asks meaningful questions.
     See standards for Questioning/Problem Solving, 2.1
   - Chooses and uses effective means of solving problems.
     See standards for Problem Solving, 2.2—2.5
   - Approaches problem solving with an open mind, healthy skepticism, and persistence.
     See standards for Approach, 2.6—2.9
   - Thinks abstractly and creatively.
     See standards for Abstract and Creative Thinking, 2.10—2.14

3. Personal Development
   - Develops a sense of unique worth and personal competence.
     See standards for Worth and Competence, 3.1—3.3
   - Makes healthy choices.
     See standards for Healthy Choices, 3.4—3.6
   - Makes informed decisions.
     See standards for Making Decisions, 3.7—3.9
   - Develops productive and satisfying relationships with others.
     See standards for Relationships, 3.10—3.13
   - Demonstrates the skills necessary to participate in the workplace.
     See standards for Workplace, 3.14—3.16

4. Civic / Social Responsibility
   - Learns by serving others, and participates in democratic processes.
     See standards for Service, 4.1—4.2
   - Respects and values human diversity as part of our multi-cultural society and world.
     See standards for Human Diversity, 4.3—4.4
   - Understands continuity and changes
     See standards for Change, 4.5-4.6
1 Communication Standards

The deleted Communication standards have been replaced by the Common Core State Standards for English Language Arts. Please refer to Section 2 of this Framework document.

2 Reasoning and Problem Solving Standards

<table>
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<td>d. Ask questions that help make connections within and across fields of knowledge and/or between concepts; and</td>
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<tr>
<td>e. Ask reflective questions that connect new ideas to personal experience.</td>
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<tr>
<td><strong>Evidence</strong> PreK – 4 applies, plus —</td>
</tr>
<tr>
<td>f. Ask critical evaluation questions that judge the quality of evidence from within a problem, text, work of art, etc.</td>
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<tr>
<td><strong>Problem Solving</strong></td>
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<tr>
<td><strong>Problem Solving Process</strong></td>
</tr>
<tr>
<td>2.2 Students use reasoning strategies, knowledge, and common sense to solve complex problems related to all fields of knowledge. This is evident when students:</td>
</tr>
<tr>
<td>a. Use information from reliable sources, including knowledge, observation, and trying things out;</td>
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<tr>
<td>b. Use a variety of approaches to solve problems;</td>
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<tr>
<td>c. Justify and verify answers and solutions;</td>
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<tr>
<td>d. Identify patterns and connections (underlying concepts);</td>
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<tr>
<td>e. Transfer strategies from one situation to others;</td>
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<tr>
<td>f. Implement an approach that addresses the problem being posed; and</td>
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<tr>
<td>g. Use manipulative, sketches, webs, etc. to model problems.</td>
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<tr>
<td><strong>Evidence</strong> f. and g. applies, plus —</td>
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<tr>
<td>aa. Seek information from reliable sources, including knowledge, observation, and trying things out;</td>
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<tr>
<td>bb. Evaluate approaches for effectiveness and make adjustments;</td>
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<td>cc. Consider, test, and justify more than one solution;</td>
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<tr>
<td>dd. Find meaning in patterns and connections (underlying concepts); and</td>
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<tr>
<td>ee. Select and apply appropriate methods, tools and strategies.</td>
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<tr>
<td><strong>Types of Problems</strong></td>
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<tr>
<td>2.3 Students solve problems of increasing complexity. This is evident when students:</td>
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<tr>
<td>a. Solve problems that are brief, clear, and concise; and</td>
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<tr>
<td>b. Solve problems in which the information needed for a solution can be organized within a simple system.</td>
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<tr>
<td><strong>Evidence</strong> a. Solve problems that require processing several pieces of information; and</td>
</tr>
<tr>
<td>bb. Solve problems that are related to diverse topics, including the less familiar.</td>
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<tr>
<td><strong>Improving Effectiveness</strong> (applies to grades 5 – 12 only)</td>
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<tr>
<td>2.4 Students devise and test ways of improving the effectiveness of a system. This is evident when students:</td>
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<tr>
<td>a. Evaluate the effectiveness of a system;</td>
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<td>b. Identify possible improvements;</td>
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<tr>
<td>c. Test-run the improvements and evaluate their effects;</td>
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<tr>
<td>d. Make changes and monitor their effects over time;</td>
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<tr>
<td>e. Identify further possible improvements; and</td>
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<tr>
<td>f. Test-run and evaluate results.</td>
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<tr>
<td><strong>Evidence</strong> 5 – 8 applies.</td>
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</table>
Mathematics Dimensions

2.5 Students produce solutions to mathematical problems requiring decisions about approach and presentation, so that final drafts are appropriate in terms of these dimensions:

- **PreK - 8**
  - **Approach and Reasoning:** The reasoning, strategies, and skills used to solve the problem;
  - **Connections:** Demonstration of observations, applications, extensions, and generalizations;
  - **Solution:** All of the work that was done to solve the problem, including the answer;
  - **Mathematical Language:** The use of mathematical language in communicating the solution;
  - **Mathematical Representation:** The use of mathematical representation to communicate the solution; and
  - **Documentation:** Presentation of the solution.

- **5 – 8**
  - **Execution:** The answer and the mathematical work that supports it;
  - **Observations and Extensions:** Demonstration of observation, connections, application, extensions, and generalizations;
  - **Mathematical Communication:** The use of mathematical vocabulary and representation to communicate the solution; and
  - **Presentation:** Effective communication of how the problem was solved, and of the reasoning used.

- **9 – 12**
  - **Approach and Reasoning:** The strategies and skills used to solve the problem, and the reasoning that supports the approach;
  - **Execution:** The answer and the mathematical work that supports it;
  - **Observations and Extensions:** Demonstration of observation, connections, application, extensions, and generalizations;
  - **Mathematical Communication:** The use of mathematical vocabulary and representation to communicate the solution; and
  - **Presentation:** Effective communication of how the problem was solved, and of the reasoning used.

2.6 Students apply prior knowledge, curiosity, imagination, and creativity to solve problems.

2.7 Students respond to new information by reflecting on experience and reconsidering their opinions and sources of information.

2.8 Students demonstrate a willingness to take risks in order to learn.

2.9 Students persevere in the face of challenges and obstacles.

Abstract and Creative Thinking

2.10 Students generate several ideas using a variety of approaches.

2.11 Students represent their ideas and/or the ideas of others in detailed form.

2.12 Students modify or change their original ideas and/or the ideas of others to generate innovative solutions.

Product/Service

2.13 Students design a product, project, or service to meet an identified need. This is evident when students:

- a. Identify a need that could be met by a product, project, or service;
- b. Justify the need and design the product, project, or service, researching relevant precedents and regulations; and
- c. Evaluate the results.

2.14 Students plan and organize an activity. This is evident when students:

- a. Develop a proposal for an activity, and obtain approval for it to take place;
- b. Plan and organize all aspects of the event (with adult supervision PreK-4 & 5-8); and
- c. Oversee all aspects of the event through to completion (with adult supervision PreK-4).
3 Personal Development Standards

<table>
<thead>
<tr>
<th><strong>Worth and Competence</strong></th>
<th><strong>Goal-Setting</strong></th>
<th><strong>Learning Strategies</strong></th>
<th><strong>Respect</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.1</strong> Students assess their own learning by developing rigorous criteria for themselves, and use these to set goals and produce consistently high-quality work.</td>
<td><strong>3.2</strong> Students assess how they learn best, and use additional learning strategies to supplement those already used.</td>
<td><strong>3.3</strong> Students demonstrate respect for themselves and others.</td>
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**Healthy Choices**

**Development**

3.4 Students identify the indicators of intellectual, physical, social, and emotional health for their age and/or stage of development.

**Healthy Choices**

3.5 Students make informed, healthy choices that positively affect the health, safety, and well-being of themselves and others. This is evident when students:

a. Explain how childhood injuries and illnesses can be prevented and treated;
b. Describe relationships between personal health behaviors, alcohol, tobacco, and other drug use, and individual well-being; set a personal health goal, and track progress toward its achievement;
c. Demonstrate the ability to locate resources from home, school, and community that provide valid health information;
d. Recognize personal stress;
e. Demonstrate refusal skills to enhance health;
f. Wear seat belts when riding in vehicles, and a helmet when riding a bicycle; and

g. Can identify and classify foods according to the Food Guide Pyramid.

**Physically Active Lifestyle Choices**

3.6 Students demonstrate competency in many and proficiency in a few of the skills and concepts needed for a lifetime of physical activity. This is evident when students:

a. Demonstrate proficiency in a variety of locomotor, non-locomotor, body control, and manipulative skills;
b. Demonstrate knowledge of movement concepts and principles (body awareness, space, and movement qualities) and their simple application to motor skills and activities;
c. Demonstrate knowledge of the 4 health-related fitness components (cardiorespiratory endurance, flexibility, muscular strength and endurance, and body composition) and identify a variety of activities to develop each component;
d. Demonstrate an awareness of personal responsibility for achieving and setting goals for a physically active lifestyle; and

e. Exercise regularly - at least 30 minutes five or more times each week.

Evidence e. applies, plus —

aa. Demonstrate competency in beginning dance skills, gymnastics skills, sport skills, and related activities;
bb. Demonstrate the ability to apply movement concepts and principles to a variety of dance, gymnastics, sport activities;
cc. Demonstrate the ability to assess one's own fitness level and plan a program to enhance or maintain one's fitness; and
dd. Begin to assume personal responsibility by setting goals for a physically active lifestyle.

Evidence e. applies, plus —

aaa. Demonstrate competency in many and proficiency in a few selected skills and related activities, (e.g. dance, gymnastics, and sports);
bbb. Apply movement concepts and principles in increasingly complex activities;
ccc. Assess, refine, and maintain a comprehensive personal fitness plan; and

ddd. Assume personal responsibility for setting goals for a physically active lifestyle.
Making Decisions

Informed Decisions

3.7 Students make informed decisions. This is evident when students:

- a. Seek information and base decisions on evidence from reliable sources, including prior experience, trying things out, peers, adults, and print and non-print resources; and
- b. Evaluate the consequences of decisions.

Personal Development Standards

Personal Economics

3.8 Students demonstrate an understanding of personal economic decisions, and account for their decisions. This is evident when students:

- a. Identify factors that influence their wants and needs; and
- b. Use money to conduct accurate financial transactions.

Sustainability

3.9 Students make decisions that demonstrate understanding of natural and human communities, the ecological, economic, political, or social systems within them, and awareness of how their personal and collective actions affect the sustainability of these interrelated systems. This is evident when students:

- a. Identify items that they consume on a daily basis and analyze the resources used in producing, transporting, using, and disposing of these items, including the origins of the resources;
- b. Distinguish between personal wants and needs and identify how marketing and advertising inform their consumption patterns;
- c. Identify and practice ways to repair, re-use, recycle (e.g., use both sides of paper), and design and implement a plan to monitor personal resource consumption;
- d. Explore local natural and human communities (e.g., vernal pools, farms, mines, cities), identify the systems within them, and what is required for these communities to be sustained.

Relationships

Teamwork

3.10 Students perform effectively on teams that set and achieve goals, conduct investigations, solve problems, and create solutions (e.g., by using consensus-building and cooperation to work toward group decisions).

Interactions

3.11 Students interact respectfully with others, including those with whom they have differences.

Conflict Resolution

3.12 Students use systematic and collaborative problem-solving processes, including mediation, to negotiate and resolve conflicts.

Roles and Responsibilities

3.13 Students analyze their roles and responsibilities in their family, their school, and their community.
<table>
<thead>
<tr>
<th>PreK – 4</th>
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<th>9 – 12</th>
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<tbody>
<tr>
<td><strong>Workplace</strong></td>
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<tr>
<td><strong>Dependability and Productivity</strong></td>
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<tr>
<td><strong>3.14</strong> Students demonstrate dependability, productivity, and initiative. This is evident when students:</td>
<td><strong>Evidence PreK – 4 applies, plus:</strong></td>
<td><strong>Evidence a., b., and c. applies, plus:</strong></td>
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<tr>
<td>a. Attend school on a regular basis;</td>
<td>d. Select the tools that are appropriate for academic and/or vocational tasks (with adult guidance).</td>
<td>dd. Independently select the tools that are appropriate for academic and/or vocational tasks.</td>
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<td>b. Complete assignments on schedule; and</td>
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<tr>
<td>c. Participate in classroom and group discussions.</td>
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<tr>
<td><strong>Evidence PreK – 4 applies, plus —</strong></td>
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<tr>
<td><strong>Career Choices</strong></td>
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<td><strong>3.15</strong> Students know about various careers. This is evident when students:</td>
<td><strong>Evidence 5 – 8 applies, plus —</strong></td>
<td><strong>Evidence 5 – 8 applies, plus —</strong></td>
</tr>
<tr>
<td>a. Describe the types of work done by their parents or other members of the community.</td>
<td>b. Describe the historical and current impact of role stereotyping in the workplace.</td>
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</tr>
<tr>
<td>aa. Collect information about careers, and experience careers directly or indirectly through classroom work and community experiences such as job shadowing, working with a mentor, or performing community service.</td>
<td>aaa. Collect information about specific careers, and experience these occupations directly or indirectly through classroom work, community work, and/or workplace experiences — such as job shadowing, working with a mentor, performing community service, apprenticeships, youth entrepreneurship, courses in technical centers, or community placements; and</td>
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<td>b.</td>
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<tr>
<td><strong>Transition Planning (applies to grades 5 – 12 only)</strong></td>
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<tr>
<td><strong>3.16</strong> Students develop a plan for current and continued education and training to meet personal and career goals. This is evident when students:</td>
<td><strong>Evidence 5 – 8 applies, plus —</strong></td>
<td><strong>Evidence 5 – 8 applies, plus —</strong></td>
</tr>
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<td>a. Make and carry out a plan for current and continued education and training to address individual and/or career goals.</td>
<td>b. Demonstrate how their education and training has provided them with the knowledge and skills to enter their chosen occupation or pursue further education and/or training.</td>
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## Civic / Social Responsibility Standards

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<tr>
<th>Service</th>
<th>Civic / Social Responsibility Standards  4</th>
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<tbody>
<tr>
<td><strong>4.1</strong></td>
<td>Students take an active role in their community. This is evident when students:</td>
</tr>
<tr>
<td>a. Plan, implement, and reflect on activities that respond to community needs; and</td>
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<tr>
<td>b. Use academic skills and knowledge in real-life community situations.</td>
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<tr>
<td><strong>Democratic Processes</strong></td>
<td></td>
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<tr>
<td><strong>4.2</strong></td>
<td>Students participate in democratic processes. This is evident when students:</td>
</tr>
<tr>
<td>a. Students work cooperatively and respectfully with people of various groups to set community goals and solve common problems.</td>
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<tr>
<td></td>
<td>Evidence PreK – 4 applies.</td>
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</tbody>
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## Human Diversity

### Cultural Expression

**4.3** Students demonstrate understanding of the cultural expressions that are characteristic of particular groups.

### Effects of Prejudice

**4.4** Students demonstrate understanding of the concept of prejudice, and of its effects on various groups.

## Change

### Continuity and Change

**4.5** Students understand continuity and change. This is evident when students:

| a. Demonstrate understanding that change results from new knowledge and events; and |
| b. Demonstrate understanding of the patterns of change (steady, cyclic, irregular) and constancy. |

| aa. Demonstrate an understanding that perceptions of change are based on personal experiences, historical and social conditions, and the implications of the change for the future. |

**4.6** Understanding Place

Students demonstrate understanding of the relationship between their local environment and community heritage and how each shapes their lives. This is evident when students:

| a. Demonstrate knowledge and history of local environment (e.g., soils, forests, watershed) and how their community relies on its environment to meet its needs (e.g., nutritional, recreational, economic, emotional well-being); |
| b. Describe the role of agriculture, forestry, and industry on the development of their local community over time; |
| c. Demonstrate knowledge of past and present community heritage (e.g., traditions, livelihoods, customs, stories, changing demographics, land use) and recognize ways in which this heritage influences their lives. |

| aa. Apply knowledge of local environment through active participation in local environmental projects (e.g., work with local planning board to analyze existing agricultural land use from a variety of perspectives); |

**4.1** Vital Results

<table>
<thead>
<tr>
<th>Civic / Social Responsibility</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PreK – 4</strong></td>
<td>5 – 8</td>
</tr>
</tbody>
</table>

- Evidence PreK – 4 applies.  
- Evidence PreK – 4 applies.  
- Evidence b. applies, plus —  
- Evidence b. applies, plus —  
- Evidence b. applies, plus —  
- Evidence aa. and cc. applies, plus —  
- Evidence aa. and cc. applies, plus —  
- Evidence bb. applies, plus —  
- Evidence bb. applies, plus —  

**4.1** Civic/Social Responsibility

Evaluate and predict how current trends (e.g., environmental, economic, social, political, technological) will affect the future of their local community and environment.
The Fields of Knowledge

Fields of knowledge support the vital results. Field of knowledge standards are specific to each field, and must be applied to attain the vital results. The following pages present standards for each of these categories:

5. **Arts, Language, and Literature**
The new standards can be found in Section 2.

- Non-Native Language
  See standards 5.19 — 5.21
- Artistic Process
  See standards 5.22 — 5.27
- Elements, Forms, and Techniques in the Arts
  See standards 5.28 — 5.37

6. **History and Social Sciences**

- Critical Evaluation
  See standards 6.1 — 6.3
- History
  See standards 6.4 — 6.6
- Geography
  See standards 6.7 — 6.8
- Citizenship
  See standards 6.9 — 6.12
- Diversity and Unity
  See standards 6.13 — 6.14
- Economics
  See standards 6.15 — 6.17
- Conflicts and Conflict Resolution
  See standard 6.18
- Identity and Interdependence
  See standard 6.19

Note: The phrase various groups in the history and social sciences standards includes racial, ethnic, and gender groups, and various socioeconomic classes

7. **Science, Mathematics, and Technology**
The new Math standards can be found in Section 3.
The new Science standards can be found in Section 4.

- Design and Technology
  See standards 7.16 — 7.19
## Arts, Language and Literature Standards 5

**The deleted Language and Literature standards have been replaced by the Common Core State Standards for English Language Arts. Please refer to Section 2 of this Framework document.**

### Non-Native Language

#### Speaking and Listening

5.19 Students speak and listen in a non-native language. This is evident when students:

- **a.** Express personal ideas, feelings, and experience, using simple sentences.  
  
  **Evidence PreK – 4 applies.**

#### Reading

5.20 Students read a non-native language. This is evident when students:

- **a.** Read a variety of materials for meaning and information.

- **aa.** Applies knowledge obtained from reading materials in a variety of situations.

#### Writing

5.21 Students write a non-native language. This is evident when students:

- **a.** Write simple messages that are clear to the reader.  
  
  **Evidence PreK – 4 applies.**

- **aa.** Write pieces in organized, meaningful ways, using correct vocabulary, structure, and usage.
### Artistic Process

**Intent**

5.22 Students convey artistic intent from creator to viewer or listener.

**Critique**

5.23 Students critique their own and others’ works in progress, both individually and in groups, to improve upon intent.

**Artistic Problem Solving**

5.24 Students solve visual, spatial, kinesthetic, aural, and other problems in the arts.

**Exemplary Works**

5.25 Students demonstrate knowledge of exemplary works in the arts from a variety of cultures and historical periods.

**Analysis (applies to grades 5 – 8 only)**

5.26 Students develop and present basic analysis of works in the arts from structural, historical, economic, and cultural perspectives.

**Perspective (applies to grades 9 – 12 only)**

5.27 Students combine perspectives to develop and present basic analysis of works in the arts, and they convey the ability to evaluate work in the various arts disciplines.

### Elements, Forms, and Techniques in the Arts

**Artistic Proficiency**

5.28 Students use art forms to communicate, showing the ability to define and solve artistic problems with insight, reason, and technical proficiency. This is evident when students:

- a. Use dance, music, theater, and visual arts to communicate.
- aa. Communicate at a basic level in dance, music, theater, and visual arts.
- aaa. Communicate proficiently in at least one art form

**Visual Arts**

5.29 Students use the elements and principles of two- and three-dimensional design in the visual arts, including line, color, shape, and texture, in creating, viewing, and critiquing.

5.30 Students use a variety of visual arts media (e.g., clay, tempera, watercolor, paper mache, animation, computer-aided design, video) to show an understanding of the different properties each possesses.

**Music**

5.31 Students use the elements of vocal and instrumental music, including rhythm, pitch, timbre, and articulation.

5.32 Students translate an idea into music notation or sound.

**Theater**

5.33 Students use aspects of voice — including volume, diction, pause, tempo, and inflection — to enhance a role.

5.34 Students show awareness of audience and character through aspects of movement, including blocking, gesture, use of body, and motivation.

5.35 Students connect directorial and design choices to a script or role-play.

**Dance**

5.36 Students use dance vocabulary and locomotor movements (such as jump, leap, slide, skip) and axial movements (such as bend, twist, stretch) to show underlying movement skills such as alignment, balance, weight, shift, and elevation.

5.37 Students combine movement (in patterns using elements of space, time, and energy) with structural form (beginning, middle, end) to create a piece.
<table>
<thead>
<tr>
<th>Investigation and Critical Evaluation</th>
<th>Causes and Effects in Human Societies</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1 Students examine complex webs of causes and effects in relation to events in order to generalize about the workings of human societies, and they apply their findings to problems. This is evident when students:</td>
<td></td>
</tr>
<tr>
<td>a. Identify multiple causes and effects of events under study; and</td>
<td>Evidence PreK – 4 applies, plus —</td>
</tr>
<tr>
<td>b. Examine how people in specific circumstances behave in order to predict human behavior in similar situations.</td>
<td>c. Examine specific events, make general observations about human behavior, and apply these observations in proposing solutions to a similar social problem.</td>
</tr>
<tr>
<td>Uses of Evidence and Data</td>
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<tr>
<td>6.2 Students understand the varied uses of evidence and data, and use both to make interpretations when students:</td>
<td></td>
</tr>
<tr>
<td>a. Compare and contrast differing sets of data.</td>
<td>Evidence PreK – 4 applies, plus —</td>
</tr>
<tr>
<td>b. Use statistical methodology to describe and interpret a broad range of societal issues (e.g., infant mortality, literacy rates, indicators of quality of life, the effects of government policies on various groups);</td>
<td>c. Distinguish among fact, bias, stereotyping, generalizing, and categorizing in gathering and presenting evidence and data;</td>
</tr>
<tr>
<td>c. Distinguish among fact, bias, stereotyping, generalizing, and categorizing in gathering and presenting evidence and data;</td>
<td>d. Find evidence to support claims; and</td>
</tr>
<tr>
<td>d. Find evidence to support claims; and</td>
<td>e. Judge credibility of sources.</td>
</tr>
<tr>
<td>Uses of Evidence and Data</td>
<td></td>
</tr>
<tr>
<td>6.3 Students analyze knowledge as a collection of selected facts and interpretations based on a particular historical or social setting. This is evident when students:</td>
<td></td>
</tr>
<tr>
<td>a. Differentiate among fact, opinion, and interpretation; and</td>
<td>Evidence PreK – 4 applies, plus —</td>
</tr>
<tr>
<td>b. Distinguish relevant from irrelevant information.</td>
<td>c. Recognize and evaluate the human tendencies to categorize, romanticize, or vilify individuals and groups through selected facts and interpretations; and</td>
</tr>
<tr>
<td>c. Recognize and evaluate the human tendencies to categorize, romanticize, or vilify individuals and groups through selected facts and interpretations; and</td>
<td>d. Analyze interpretations of events from the perspective of various groups, and evaluate the credibility of differing accounts.</td>
</tr>
<tr>
<td>d. Analyze interpretations of events from the perspective of various groups, and evaluate the credibility of differing accounts.</td>
<td></td>
</tr>
<tr>
<td>History</td>
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</tr>
<tr>
<td>Historical Connections</td>
<td></td>
</tr>
<tr>
<td>6.4 Students identify major historical eras and analyze periods of transition in various times in their local community, in Vermont, in the United States, and in various locations worldwide to understand the past, the present, and the relationship between the two. This is evident when students:</td>
<td></td>
</tr>
<tr>
<td>a. Demonstrate understanding of concepts of past, present and future (e.g., create time lines, create chronologies based on narratives, compare and contrast family life, or school, and community life in different periods);</td>
<td>Evidence PreK – 4 b. and c. applies, plus —</td>
</tr>
<tr>
<td>b. Examine local history by reading historical narratives and documents, investigating artifacts, architecture, and other resources that illustrate key periods in local history (e.g., investigate local town’s history and establish its connection/place with Vermont and other cultures);</td>
<td>aa. Demonstrate the ways that time has been organized throughout history (e.g., linear, cyclical) and various dating system (e.g., A.D., B.C.); and</td>
</tr>
<tr>
<td>c. Investigate the impact of new knowledge and inventions (e.g., the knowledge of fire, the printing press, the cotton gin, train, automobile, textile, machine, electricity, steam); and</td>
<td>dd. Sequence historical eras; identify the characteristics of transitions between eras, being sure to make connections to the present; and research, examine, and analyze historical data from each era:</td>
</tr>
<tr>
<td>d. Identify and sequence patterns of change and compare historical data from Vermont, the U.S. and the world by examining: VERMONT family and community life now and in the past; -the people, events, problems and ideas that created Vermont</td>
<td>VERMONT The Pre-Contact to 1608 Era -discover how Abenaki oral tradition reflects and influences their society</td>
</tr>
<tr>
<td>ddd. Sequence historical eras; identify the characteristics of transitions between eras, being sure to make connections to past and present; and research, analyze and synthesize historical data from each era: VERMONT The Growth and Emergence of Modern Vermont Era (1860-1930) -discover the impact Vermonters made on the Civil War and the war’s impact on life in Vermont</td>
<td>dddd. Sequence historical eras; identify the characteristics of transitions between eras, being sure to make connections to past and present; and research, analyze and synthesize historical data from each era:</td>
</tr>
</tbody>
</table>
### History and Social Sciences Standards 6

<table>
<thead>
<tr>
<th>PreK – 4</th>
<th>5 – 8</th>
<th>9 – 12</th>
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</thead>
<tbody>
<tr>
<td><strong>UNITED STATES</strong>&lt;br&gt;-how democratic values came to be and how people (e.g., Washington, Lincoln, King) events (e.g., 4th of July, Memorial Day, Labor Day) and symbols (e.g., flags, eagles) have exemplified them&lt;br&gt;-regional folklore and cultural contributions that helped form our national heritage&lt;br&gt;<strong>WORLD</strong>&lt;br&gt;-family and community life now and in the past&lt;br&gt;- major discoveries in science and technology, their social and economic effects, and the scientists and inventors responsible for them.</td>
<td><strong>The Colonization Era (1609-1774)</strong>&lt;br&gt;-interpret the impact of resettlement on Abenaki, European colonizers, and the environment&lt;br&gt;-Revolutionary/New State Era (1775-1791)&lt;br&gt;-identify how various groups and individuals participated in the Revolution.&lt;br&gt;-evaluate Vermont’s definition of citizenship and governmental principles in Vermont’s Constitution&lt;br&gt;-The Agricultural, Industrial, Social Transition Era (1791-1860)&lt;br&gt;-discover how changes in farming and other industries affected social patterns in Vermont&lt;br&gt;<strong>UNITED STATES</strong>&lt;br&gt;Native Cultures to 1600&lt;br&gt;-examine two or more native cultures and identify cultural similarities and differences among them (e.g., economic systems, governmental structures) at 1500-1774&lt;br&gt;-trace the evolution of political, religious, economic and social institutions in the American colonies.&lt;br&gt;-The Revolutionary/New State Era (1775-1791)&lt;br&gt;-investigate the political, social and economic causes of the American Revolution&lt;br&gt;-analyze the ideas and institutions in the Declaration of Independence, the Constitution, and the Bill of Rights&lt;br&gt;-Expansion (1791-1900)&lt;br&gt;-investigate and analyze the conditions that led to territorial expansion, effects on various groups, and concepts of nationalism and sectionalism&lt;br&gt;<strong>WORLD</strong>&lt;br&gt;Nomadic/Pastoral Era – 1000 BCE&lt;br&gt;-early human development&lt;br&gt;-river valleys and the rise of civilization (e.g., Mesopotamia, Egypt, Indus River, Valley, Yellow River) at 500 CE&lt;br&gt;-analyze governments and religions (e.g., Greece and China)&lt;br&gt;-analyze economic systems and trade (e.g., in Africa) at 1500&lt;br&gt;-describe Feudal systems and the Renaissance (e.g., in Italy and Japan)&lt;br&gt;-examine the rise of trading centers and cultures in conflict (e.g., Aztec and African empires),</td>
<td><strong>Patterns of Global Change (1815-1918)</strong>&lt;br&gt;-analyze the causes and consequences of WW I and the US role in the world&lt;br&gt;-analyze causes and effects of WWII and the US role in the world&lt;br&gt;-analyze causes and effects of the Great Depression and identify policies designed to fix it.&lt;br&gt;-cause and effects of World War II&lt;br&gt;-Post War United States (1945-present)&lt;br&gt;-analyze the domestic issues facing the US in post-WWII and as well as foreign policies issues.&lt;br&gt;<strong>UNITED STATES</strong>&lt;br&gt;Civil War/Reconstruction (1860-1877)&lt;br&gt;-investigate the social, political, and economic causes and effects of the Civil War&lt;br&gt;-The Emergence of Modern America (1877-1930)&lt;br&gt;-analyze the impact of major forces that shaped America in the late Nineteenth and early Twentieth Century (e.g., industrialization, urbanization, immigration, imperialism, nationalism, unionism, and the struggle for equal rights)&lt;br&gt;-analyze causes and effects of WW I and the US role in the world&lt;br&gt;-Great Depression and WW II (1929-1945)&lt;br&gt;-analyze causes and effects of the Great Depression and identify policies designed to fix it.&lt;br&gt;-causes and effects of World War II&lt;br&gt;-Post War United States (1945-present)&lt;br&gt;-analyze the domestic issues facing the US in post-WWII and as well as foreign policies issues.&lt;br&gt;<strong>WORLD</strong>&lt;br&gt;Age of Exploration (1450-1515)&lt;br&gt;-Columbian encounters&lt;br&gt;-global voyages&lt;br&gt;-Age of Revolution (1689-1820)&lt;br&gt;-analyze the nature of political, economic, industrial, and social revolutions (e.g., Glorious Revolution, American Revolution, French Revolution, Russian Revolution, Industrial Revolution)&lt;br&gt;-Patterns of Global Change (1815-1918)&lt;br&gt;-investigate colonization/Imperialism/conflict (e.g., Africa, Asia, South America, Australia)&lt;br&gt;-Modern World 1914-present&lt;br&gt;-analyze the causes and consequences of WW I and the collapse of European world order&lt;br&gt;-describe the rise of totalitarian governments (e.g., fascism, nazi and communist) and their effects (e.g., the Cold War)&lt;br&gt;-analyze the transition from colonialism to independence (e.g., India, Asia, Africa)&lt;br&gt;-examine the promises and paradoxes of the 20th century (e.g., dealing with continuing technological, environmental and human rights issues)</td>
</tr>
</tbody>
</table>

### Traditional and Social Histories

**6.5 Students investigate both the traditional and the social histories of the people, places, and cultures under study.**

- **a.** Describe and interpret events through the perspectives of people (both famous and common) living in the time and place under study.
- **b.** Demonstrate understanding of the relationships among powerful people, important events, and the lives of common people.

### Being a Historian

**6.6 Students use historical methodology to make interpretations concerning history, change, and continuity.**

- **a.** Classify objects from "long ago" and today; and
- **b.** Explain what this classification shows us about change over time.

- **Evidence PreK – 4 applies, plus —**
- **c.** Collect and use primary resources (e.g., letters, diaries, artifacts, artwork, documents) in building original historical interpretations; and
- **d.** Use oral history methods and data to understand the ways in which people assign meaning to their own historical experiences.

- **Evidence PreK – 8 applies, plus —**
- **c.** Identify and analyze the influence of various groups (e.g., racial, ethnic, religious, and various socioeconomic classes) on major issues and events under study.

- **Evidence PreK – 8 applies, plus —**
- **e.** Use statistical methods and data collection to make interpretations, comparisons, and conclusions about scientific, governmental, social, and other changes in society;
- **f.** Identify and analyze recurring themes in the midst of change (e.g., ethnic and national identity); and
- **g.** Explain why we study human actions in the past.
### Geography

**Geographical Knowledge**

6.7 Students use geographical knowledge and images of various places to understand the present, communicate historical interpretations, develop solutions for the problems, and plan for the future. This is evident when students:

| a. | Identify location and patterns of local areas (e.g., create and use maps of classroom, schoolyard, neighborhoods, and town, to identify the location of physical features; use clay to create land forms or landmarks [mountains, islands, isthmus, peninsulas]); |
| b. | Develop a mental map and make a representational map for school to home; home to relatives or friend’s house; of community, town or city; of the major global physical divisions, such as continents and oceans; and of tropical, mid-latitude, and polar regions; |
| c. | Make and use a grid (coordinate) system to give locations. Locate on a map and globe the cardinal directions, poles, equator, tropics, Arctic and Antarctic circles; |
| d. | Use scale to calculate and estimate distance on a map; and |
| e. | Make and use legend/keys on a variety of thematic maps. |

### Movements and Settlements

6.8 Students analyze the factors and implications associated with the historical and contemporary movements and settlements of people and groups in various times in their local community, in Vermont, in the United States, and in various locations worldwide. This is evident when students:

| a. | Recognize the causes, effects, processes and patterns of human movements, both chosen and forced (e.g., family heritage and origins, family migrations); |
| b. | Recognize voluntary and involuntary migration factors (e.g., drought, famine, economic opportunity, conflicts, slavery); and |
| c. | Link the movement of material and non-material culture traits to specific cultural regions. (e.g., pottery, tools, songs, stories) |

### Citizenship

**Meaning of Citizenship**

6.9 Students examine and debate the meaning of citizenship and act as citizens in a democratic society. This is evident when students:

| a. | Debate and define the rights, principles, and responsibilities of citizenship in a school, community and country; |
| b. | Analyze and debate the problems of majority rule and the protection of minority rights as written in the U.S. Constitution. |

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6.3
<table>
<thead>
<tr>
<th>Types of Government</th>
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</table>
| 6.10 Students compare and evaluate the philosophical underpinnings and the workings of different types of government, including constitutional, in various times in their local community, in Vermont, in the United States, and in various locations worldwide. This is evident when students:

| a. | Identify and classify different types of leadership (e.g., family, peer group, classroom, government) and the evolution of rules and laws, and |
| b. | Identify the rights and responsibilities and the concepts of equality and freedom embodied in such documents as the Declaration of Independence, Constitution, and the Bill of Rights. |

<table>
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<tr>
<th>Institutional Access</th>
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</table>
| 6.11 Students analyze the access that various groups and individuals have had to justice, reward, and power, as those are evident in the institutions in various times in their local community, in Vermont, in the United States, and in various locations worldwide. This is evident when students:

| a. | Examine community (e.g., classroom, school, town, nation) for fair treatment of all people. |
| b. | Identify, compare, contrast, and evaluate the political and economic power of various groups. |

<table>
<thead>
<tr>
<th>Human Rights</th>
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</thead>
</table>
| 6.12 Students identify and evaluate the concept of human rights in various times in their local community, in Vermont, in the United States, and in various locations worldwide. This is evident when students:

| a. | Identify and compare how various communities (e.g., classroom, school) have defined human rights. |
| b. | Evaluate the impact of social choices (e.g., efforts to end hunger, finance health care, defend homeland) on human rights; and |
| b. | Explain the importance to the individual and to society of personal rights (e.g., freedom of thought and conscience, freedom of movement and residence). |

<table>
<thead>
<tr>
<th>Diversity and Unity</th>
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</table>
| 6.13 Students understand the concept of culture, including the cultures of indigenous peoples, in various times in their local community, in the United States, and in various locations worldwide. This is evident when students:

| a. | Identify the cultural/ethnic groups in your local community, and describe by using characteristics of culture (e.g., food, housing, customs, beliefs); and |
| b. | Describe how cultural traditions are passed down in families and communities, and how traditions change over time. (e.g., holiday festivals worldwide, oral histories, writing and other media). |

<table>
<thead>
<tr>
<th>Forces of Unity and Disunity</th>
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</table>
| 6.14 Students understand the tensions between the forces of unity and those of disunity in various times in their local community, in the United States, and in various locations worldwide. This is evident when students:

| a. | Identify the differences between homogeneity and diversity, and explain how each can cause community tensions and disunity, or can contribute to harmony and unity; and |
| b. | Identify and evaluate the benefits and stresses of diversity on a society (e.g., classroom, town, nation) |

| Evidence PreK – 4 applies, plus — |
| Identify and analyze key ways in which culture is transmitted, (e.g., oral tradition, media, migration, and conquest), and the key forces of cultural change (e.g., technological, economic, political, military). |

| Evidence PreK – 8 applies, plus — |
| c. | Analyze the shared values and beliefs of various subcultures that hold them together. |

| Evidence PreK – 8 applies, plus — |
| d. | Analyze perceptions of race, gender, ethnic group, and socioeconomic class as forces of unity and disunity; and |
| e. | Compare and contrast societies where diversity has led to either unity or disunity, and suggest lessons that can be learned about societal cohesiveness (e.g., melting pot vs. salad bowl). |
6 History and Social Sciences Standards

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<tr>
<th>PreK – 4</th>
<th>5 – 8</th>
<th>9 – 12</th>
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</thead>
</table>

**Economics**

### Knowledge of Economic Systems

**6.15** Students use the basic principles of economics to interpret local, state, national, and international economic activity. This is evident when:

- **a.** Identify opportunity costs (choices made when purchasing an item) and explain reasons behind choice;
- **b.** Identify examples of natural resources, human resources, and capital goods;
- **c.** Identify situations where they were consumers and other situations where they were producers or sellers; and
- **d.** Examine trade networks among early peoples and the medium of trade (e.g., bartering).

**Impact of Economic Systems**

**6.16** Students evaluate the impact of economic systems on the needs and wants of all people and on the environment in various times in their local community, in Vermont, in the United States, and in various locations worldwide. This is evident when:

- **a.** Compare the differences in lifestyles (e.g., size, rural-ness, economic factors) between their community and other communities in Vermont and around the world; and
- **b.** Explain the household as an economic system.

**Governments and Resources**

**6.17** Students understand how governments affect the flow of resources, goods, and services. This is evident when:

- **a.** Identify aspects of their lives affected by the government.
- **b.** Identify the role of government in economic policy and how it affects individuals and groups (e.g., taxes, tariffs, and public budgets).

Evidence PreK – 4 applies, plus —

**Evidence PreK – 4 applies, plus —**

- **g.** Use formal economic terms (e.g., Gross Domestic Product, Consumer Price Index, inflation, deflation, balance of payments, supply and demand, consumer expectations, pricing, etc.) as they analyze and interpret local, state, national, and international economic activity;
- **h.** Identify how technology is changing production and employment patterns and redefining how goods and services are produced and distributed (e.g., on-demand production or assembly of goods, Internet based commerce); and
- **i.** Understand the relationship between interest rates and borrowing money through such activities as monitoring the changes in the interest rates (e.g. for mortgages, personal loans, car loans), and demonstrate how savings, investment, and interest rates interact to shape the well-being of an economy.

Evidence 5 – 8 applies, plus —

- **bb.** Explain the interrelated roles of households, businesses, and government in the economy;
- **g.** Demonstrate understanding of the patterns and networks of economic interdependence that exist locally, nationally, and globally (e.g., currencies, stock markets, commodities); and
- **h.** Analyze and compare how economic systems, (i.e., mixed, command, market) have fostered or discouraged individual liberties and the common good (e.g., the environment, national defense, consumer rights, poverty, basic human needs).
Conflicts and Conflict Resolution

Nature of Conflict

6.18 Students analyze the nature of conflicts, how they have been or might be resolved, and how some have shaped the divisions in various times of their local community, Vermont, the United States, and the world. This is evident when students:

a. Identify conflicts and their resolutions in historical stories, myths, legends, and fables.

aa. Explain a conflict (e.g., Labor Issues, Revolutionary War) by recognizing the interests, values, perspectives, and points of view of those directly and indirectly involved in the conflict.

b. Formulate a position on a conflict and evaluate the consequences on the individual and society.

c. Explain conditions, actions, and motivations that contribute to conflict and conflict resolution within and among individuals, groups, communities, and nations; and

d. Show understanding of how conflicts (e.g., revolutions, colonization, genocide) cause changes in social patterns.

Evidence c. and d. applies, plus —

aaa. Analyze and evaluate conditions, actions, and motivations that contribute to contemporary global conflicts, showing how national interests come into conflict with one another;

bb. Use knowledge of social and conflict theories to identify and propose a solution for a persistent social conflict; and

e. Identify and evaluate the role of technology, multinational organizations, and non-government organizations in contributing to and/or resolving global conflicts (e.g., Greenpeace, Amnesty International, United Nations, League of Nations, European Union).

Identity and Interdependence

Identity and Interdependence

6.19 Students understand the variety of influences and impacts of the construction, preservation, and change of identity, within families, other social structures, and nations. This is evident when students:

a. Identify their position in time, space, and various groups, and analyze how these positions help to build identity.

b. Classify influences on identity (e.g., family, peer, and kinship groups, occupations, ethnicity, social class, religion, and nationality), and analyze how these motivate behavior; and

c. Examine symbols, literature, histories, folk traditions, and myth for sources of national identities.

d. Demonstrate understanding of how various groups build and preserve identity (e.g., ceremonies, education).

e. Demonstrate how societal changes (e.g., new jobs, changing gender roles, economic depressions, wars) can alter identities over time; and

f. Identify the distinctive characteristics of a nation’s identity.

Evidence PreK – 4 applies, plus —

g. Analyze and evaluate how competing national identities and beliefs may lead to national and international conflicts (e.g., Middle East, Bosnia, Ireland); and

h. Analyze and evaluate how factors (e.g., political, economic) require international cooperation and lead to national and international interdependence (e.g., European Common Market, Postal Service).
7 Science, Mathematics, and Technology Standards

PreK – 4  |  5 – 8  |  9 – 12

Design and Technology

Natural Resources (Updated 10/22/07)

7.16 Students understand how natural resources are extracted, distributed, processed, and disposed of. This is evident when students:

a. Identify natural and agricultural resources and where they come from (e.g., wildlife, fish, plant, rock, water, soil, minerals, sunlight and air), and distinguish between natural resources and things made by humans (e.g., sand vs. cement, milk vs. ice cream, wheat vs. bread, sap vs. syrup, wildlife vs. domesticated animals).

b. Identify the benefits of agriculture and natural resources (e.g., public health, public welfare, recreation, safe food).

c. Identify actions individuals and families can take to help manage natural resources and agriculture (e.g., walking on established trails, fishing and hunting in season, picking up litter, recycling, purchasing locally grown agricultural products).

aa. Identify and investigate the natural resource and agricultural areas in Vermont and the products and markets for each (e.g., interaction of major natural communities, fish and wildlife, water and earth resources; locate farming regions and products).

bb. Describe the effects of the interrelationship among multiple natural resources and agricultural practices (e.g., forestry management, wildlife population management, nutrient and pesticide use).

cc. Describe how management and development practices affect resource conservation and agricultural systems (e.g., deciding when and how to harvest trees, fish, and wildlife; where to plant and how to grow crops; where to preserve wild areas; where to locate businesses and homes; and how farm practices can reduce their impacts on streams).

aaa. Identify, investigate, and analyze the major natural communities and resources that exist within Vermont and the New England region, and evaluate the attributes, distribution, and current issues related to each (e.g., regional processes that influence our natural resources, such as the introduction of zebra mussels into Vermont waters; watershed issues; acid rain).

bbb. Evaluate how science and technology are used to maximize benefits and understand natural resource and agricultural systems (e.g., genetic diversity of species promotes disease resistance in natural populations, bioengineering of seeds provides improved crop production).

ccc. Evaluate how science, technology and socio/economic principles are used by individuals, private groups and governments to make informed decisions about natural resources and agricultural management (e.g., purchasing a fuel efficient car, managing farm and urban nutrients/crops; establishing town zoning, pollution emission standards, hunting and fishing regulations or adding/removing a species like the peregrine falcon – from Vermont’s endangered and threatened species list).

7.19 Students use technological/engineering processes to design solutions to problems. This is evident when students:

a. Recognize that there are several steps in planning solutions to technological problems; and

b. Recognize that several steps are usually involved in making things.

aa. Create a design solution:

- Build on specifications, with an understanding of the constraints (e.g., cost, weight, environment), and tolerances that affect performance;
- Include mathematical and/or mechanical models of their design;
- Include steps and sequences for efficiently building a prototype that conforms to the specifications;
- Test the prototype;
- Use the results to modify the design; and

bb. Understand that the sequence in which these steps occur is critical to the efficiency and effectiveness of a solution.

aaa. Create a design solution:

- Build on specifications, with an understanding of the constraints (e.g., cost, weight, environment), and tolerances that affect performance;
- Include mathematical and/or mechanical models of their design;
- Include steps and sequences for efficiently building a prototype or product that conforms to the specifications;
- Test the prototype;
- Use the results to modify the design; and

bbb. Evaluate and adjust a design process, responding to the unique characteristics of a specific problem.
Learning Opportunities

Learning Opportunities

Learning opportunities are recommended practices to support all students in attaining the standards in this framework. They address access, instruction, assessment, and connections, as well as best practices particular to the fields of knowledge. They are specific, they represent areas that can be influenced by the teacher, and they are supported by current research and best practices.

A. Access

- Content
- Instructors
- Resources
- Time
- Safe and Healthy Environment

B. Instruction

- Acquiring Knowledge and Skills
- Variety of Instructor Roles
- Multiple Student Roles
- Application and Reflection
- Adaptive Learning Environments

C. Assessment and Reporting

- Assessment and Reporting
- Multiple Assessment Strategies
- Criteria
- Using Assessments to Inform Instruction and Guide Student Learning
- Student Involvement in Assessment
- Effectively Communicating Assessment Information

D. Connections

- Interdisciplinary Connections
- Relevance
- Family and Community Collaboration

E. Best Practices

- Arts, Language, and Literature
- History and Social Sciences
- Science, Mathematics, and Technology
Learning Opportunities

To achieve the high standards presented in Vermont's Framework, every student needs:

A. Access

A.1 Content

- Access to the knowledge and skills described in the standards Vermont's Framework. For example:
  a. Local curriculum based on the standards of Vermont's Framework.
  b. Concepts and skills based on Common Core standards that are woven throughout the grades, providing an opportunity to develop increasing levels of sophistication and understanding over time (e.g., understanding of atomic theory built on early explorations into the physical properties of objects).
  c. Units of study that are current, coordinated within the school (e.g., across classrooms and grade levels), and coordinated beyond the school (e.g., within the supervisory union).
  d. Opportunities to learn the concepts and skills identified in Vermont's Framework (e.g., physical science included at the primary level; use of a variety of arts media at the secondary level).
  e. Opportunities to read and write every day.

A.2 Instructors

A.2.1 Access to instructors who are knowledgeable about the disciplines they teach, about the developmental characteristics of the students they teach, and about best practices in learning and teaching. For example:

- Instructors planning developmentally appropriate curriculum and instruction.
- Instructors presenting their knowledge through multiple perspectives and connected disciplines (e.g., studying the Civil War from historical, economic, and literary perspectives).
- Instructors continually updating units of study to include new and revised information, current standards, and appropriate instructional strategies.

A.2.2 Access to instructors who share their knowledge, who work with others to plan and assess curriculum, and who themselves are continually learning. For example:

- Instructors participating in a variety of means of professional development to increase their knowledge of content and of learning and teaching (e.g., coaching, study groups, collaborative curriculum development, independent study).
- Instructors working with others (e.g., colleagues, parents, other community members, and students) to plan and assess curriculum.

A.3 Resources

- Equitable and prompt access to accurate materials and current resources (in addition to textbooks) that are appropriate for learning goals. For example:
  a. Frequent opportunities to engage the community as a resource and a learning laboratory (e.g., learning from artists, businesses, health-care providers, town records, town meeting, community theater, the local landfill).
  b. Access to a variety of information-technology tools (e.g., computers, telecommunications).
  c. Access to all services provided within the school (e.g., guidance services, special education, speech and language support, health services, enrichment).
  d. Access to resource materials that are free of bias, stereotyping, and/or misrepresentation.
  e. Access to facilities and equipment necessary to support the instructional process.

A.4 Time

- Instruction that uses time effectively and flexibly to achieve learning goals. For example:
  a. Schedules built around instructional needs (e.g., flexible blocks).
  b. Teacher input on external events or intrusions (e.g., timing of announcements, schedules, and special events) that have an impact on the day. Use of non-instructional time in creative and purposeful ways (e.g., taking lunch count in Spanish).
  c. Time built in for collaboration (e.g., student with teacher, teacher with teacher, teacher with family).
  d. Maximum time devoted to student “time on task,” with high levels of student engagement in constructive learning tasks.

A.5 Safe and Healthy Environment

- A physically and emotionally safe, educationally supportive environment in which to learn. For example:
  a. Equipment, work, and learning spaces maintained and organized so that tasks and projects may be carried out safely.
  b. Adults who are healthy and who model healthy behaviors (e.g., a smoke-free, drug-free environment).
  c. An environment in which each student has access to a caring adult.
  d. Policies and rules that are fair, known to all, and consistently applied.
Learning Opportunities

B. Instruction

Acquiring Knowledge and Skills

B.1 Learning experiences that engage students in active learning, build on prior knowledge and experiences, and develop conceptual and procedural understanding, along with student independence. For example:

a. Beginning learning experiences by setting a context and/or previewing possible applications.

b. Strategies that help students link new learning to previous knowledge and experiences (e.g., discussion of previous experiences, free writes, pretests, “think-pair-share,” three-minute pauses).

c. “Scaffolding” of learning so that students can gradually gain expertise (e.g., removing cues over time as students learn to converse in a second language).

d.Prompting of students to support their statements with evidence (e.g., while comparing, classifying, constructing support for positions).

e. Strategies that help students organize and interpret new learning (e.g., having students create graphs and charts, graphic representations, flow charts, distributed practice sessions).

f. Questions that extend and refine learning (e.g., open-ended questions, error-analysis questions).

g. Opportunities for students to bring up and explore their own misconceptions, and to replace these with accurate conceptions of knowledge.

Variety of Instructor Roles

B.2 Teachers who use a variety of teaching roles (e.g., direct instruction, facilitating, modeling, coaching, reflecting, guiding, observing), and adapt these as appropriate for different purposes of instruction and student needs. For example:

a. Teacher as explorer and co-learner.

b. Instructor’s role determined by the purpose of the learning and the needs of the students.

c. Ongoing teacher collaboration in designing, implementing, and evaluating units of study.

Multiple Student Roles

B.3 Opportunities to learn through a variety of roles (e.g., planner, questioner, artist, scientist, historian), alone and with others. For example:

a. Collaboration in both small and large groups.

b. Students teaching other students, formally and informally.

c. Pursuit of individual concerns, learning interests, and projects.

d. Co-design (e.g., with teachers, peers) of learning activities.

e. Opportunities for independent learning, work in pairs, and work in larger groups.

Application and Reflection

B.4 Projects and assignments that require students to integrate and apply their learning in meaningful contexts, and to reflect on what they have learned. For example:

a. Extended investigations through which students address essential questions.

b. Opportunities to transfer learning from one format or context to another.

c. Experience with designing products, services, and systems.

d. Student planning of activities, implementation of teaching-and-learning activities, and carrying out of projects that meet real needs.

e. Use of in-depth applications (e.g., critiques, author studies).

f. Opportunities for reflection through a variety of modes (e.g., writing, talking, dancing, painting).

Adaptive Learning Environments

B.5 Learning environments that are adapted so that all students achieve success. For example:

a. Use of what is known from learning theory (multiple intelligence, learning styles, language development) to select appropriate instructional strategies.

b. Instructors who assess students’ needs and use that information to form groups, and to modify and adapt instruction.

c. Collaboration among those involved with the child’s learning experience (e.g., family members, teachers, health care providers, bus drivers) in order to meet student needs.

d. An environment in which standards are the constant and time, strategies, and approaches are the variables, based on individual differences, strengths, and needs.
Learning Opportunities

C. Assessment and Reporting

Multiple Assessment Strategies

C.1 A balance and variety of assessment strategies, used to gain information and provide feedback about student learning (e.g., performance assessments, self-assessments, paper-and-pencil tests, checklists, etc.). For example:
   a. Appropriate tools and techniques used for assessing different skills and concepts (e.g., anecdotal notes during observation of a discussion; a standards-based rubric used during a culminating project; formal assessments).

Criteria

C.2 Expectations and performance criteria are clear and public. For example:
   a. Assessments clearly define student products and/or performances, and judge with observable criteria based on standards.
   b. Public display of student work samples (e.g., on walls, bookmarks, newsletters, discussion at open houses) that illustrate identified criteria.

Using Assessment to Inform Instruction and Guide Student Learning

C.3 Assessment results that are used to influence instructional decisions and to plan the next learning steps for students. For example:
   a. Classroom-based assessments that are embedded into instruction (e.g., assessment of prior knowledge about a topic, entries in learning logs).
   b. Ongoing adjustment of instruction and of the classroom environment based on assessment (e.g., adding learning-teaching activities, selecting different materials, restructuring learning groups).
   c. Appropriate use of tools such as performance checklists, scales, tests, and quizzes before, during, and after units of study.
   d. Collaboration in assessment: gathering information from students, parents, other teachers, and/or community members to help build a more complete picture of student growth and achievement.
   e. Students participate as appropriate in the development of performance descriptions.

Student Involvement in Assessment

C.4 Students use clear criteria and examples to evaluate their own work. For example:
   a. Peer conferencing and self-reflection activities that use identified criteria (e.g., students setting criteria for assessment, or using rubrics to assess cooperative group activities).
   b. Involvement by students in setting and monitoring progress toward learning goals.

Effectively Communicating Assessment Information

C.5 Classroom-based assessments that are combined with other measures to communicate information about student learning. For example:
   a. Assessments that are summarized in relation to standards.
   b. Clear communication and reporting about results to students, parents, and other professionals.
   c. Communication of assessment information for clearly defined purposes: comparing student achievement against standards, demonstrating student growth over time, and public accountability.
   d. Assessments that are fair, valid, and consistent (reliable).
   e. Report cards that reflect student progress over time toward the standards, as well as student achievement of the standards.
   f. Student involvement in parent conferences (e.g., reviewing the quality of work and setting goals).
   g. Regular evaluations of how effectively assessments are being communicated (e.g., interviews with students, a survey of parents’ responses to new reporting approaches).
## D. Connections

### Interdisciplinary Connections

**D.1** Learning experiences that illustrate strong connections within and across the fields of knowledge. For example:

a. Direct experience with “real-world” questions, problems, issues, and solutions that are complex and that cross discipline boundaries (e.g., students design and build a nature trail using math skills, mapping, and principles of design), as opposed to contrived or superficial themes.

b. Application of skills learned in one discipline to other disciplines (e.g., questioning, estimation, and technical writing used in both social and physical sciences).

c. Investigation of problems that lend themselves to the scope of interdisciplinary work (e.g., study of rural economic development from social, economic, and environmental perspectives).

d. Opportunities to make connections among skills, content, and concepts within a discipline (e.g., vocabulary study connected with the history of the English language).

### Relevance

**D.2** Learning experiences that have personal, community, and/or global relevance. For example:

a. Thematic studies that allow students to draw connections between their lives and the world beyond the classroom (e.g., the study of immigration patterns in a local town; using the “outdoor classroom” to learn the natural heritage of a local community).

b. Involvement by students in the development of study units, and in pursuing their own questions to extend or focus a unit.

c. Service-learning experiences that are linked to classroom learning (e.g., writing a resource book for younger students).

d. Inclusion of multiple perspectives (e.g., analysis of the spotted owl issue from the perspectives of the environmentalist and the logger).

### Family and Community Collaboration

**D.3** An educational climate that is collaborative, in which school staff, families, health and human services personnel, and community members work together to support all learners. For example:

a. Ongoing, two-way communication with parents and community members: sharing of information, solving problems, and developing and discussing standards and criteria.

b. Access to family and community resources, including other social agencies (e.g., counseling provided during the school day), to support high performance by all learners.

c. Use of a variety of learning environments that are available in the community (e.g., libraries, lumber yards, shops, historical societies, forests, watersheds, hydroelectric dams).

d. Service-learning experiences that help students discover how communities work and their own role in them.

e. Connections across generations (e.g., mentoring, foster-grand parenting, taking oral histories).

f. Flexible scheduling of parent-teacher conferences, and use of home visits (as appropriate) to meet the needs of families.

g. Recognition and support of diverse languages and cultures (e.g., interpreters at parent-teacher conferences and open houses).

h. Proactive planning to make the school welcoming to all families and community members.
Learning Opportunities

E. Best Practices in the Fields of Knowledge

Arts, Language, and Literature

E.1 In addition to those presented in sections A-D, best practices specific to the arts, language, and literature include:

a. Emphasis on multiple artistic forms and techniques.
b. Emphasis on multiple reading strategies and comprehension.
c. Mini-lessons and individual student conferences based on students’ diverse literacy needs. Writing
d. Used as a tool for learning across the curriculum (e.g., learning logs, free writes, letters).
e. Opportunities to pursue literacy through personal interests (e.g., by self-selecting topics, materials, grouping patterns, books).
f. Respect and support for languages and dialects used in students’ homes.
g. Teachers who set examples by reading, writing, and discussing their thoughts with others.

History and Social Sciences

E.2 In addition to those presented in sections A-D, best practices specific to history and the social sciences include:

a. Opportunities to participate in democratic processes in the school and community.
b. Partnerships and internship within the community.
c. Opportunities to collaborate with people of various cultures and social classes.
d. Access to national and international organizations with social science resources.
e. Opportunities to construct social, political, and economic systems.
f. Opportunities to report on research in various forms.

Science, Mathematics, and Technology

E.3 In addition to those presented in sections A-D, best practices specific to science, mathematics, and technology include:

a. Use of manipulative and scientific tools (e.g., calculators, microscopes, graphing calculators, computer simulations, tangrams) to engage students in active, in-depth learning (e.g., investigations, problem solving).
b. Frequent interactions with the natural world.
c. Inquiry, investigation, and experimentation as a regular part of the science program.
d. Frequent opportunities to use appropriate tools — including the senses — for observation and subsequent collection of data, including data that may not have been anticipated.
e. Frequent oral and written interactions between teachers and students, and among students, to develop and extend mathematical scientific thinking (e.g., discussions, presentations, learning logs, open-ended follow-up questions).
f. Flexible grouping for investigations, problem-solving tasks, research, and experimentation.
g. Teachers who display scientists’ habits of mind.
h. Open-ended tasks that allow students to explore and/or analyze scientific, mathematical, and technological questions.
i. Assessment approaches that are embedded in instruction, and that require appropriate manipulative and scientific and technological tools.
j. Basic skills (e.g., measuring, recording, and computing) that are integrated with analysis, synthesis, and evaluation.
k. The opportunity for students to present the results of their investigations to their peers for review.
Appendix A

Questions and Answers about Vermont’s Framework

What is the purpose of these standards?

Standards raise expectations for all learners. Vermont’s Framework affects virtually everyone involved in Vermont public education, from prekindergarten through grade 12.

For Students
The standards make expectations for their performance clear to all students, who now can understand what they need to learn and be able to do. The standards can lead to improved performance at all levels; they promote challenging, equitable, and rewarding learning experiences for all learners.

For Teachers
In the effort to bring about change for dramatically heightened results in learning, teachers are the most important people. The standards will guide teachers as they design curriculum, instruction, and assessment around what is important for students to learn. This alignment of curriculum, instruction, and assessment is intentional.

For Districts and Schools
School innovations and district-wide programs for learning exemplify the standards in action. For all districts and all schools, the standards provide a focus for developing new ways of organizing curriculum content, instructional delivery systems, and assessment plans.

For Parents, Community Leaders, and Business people
The standards communicate shared expectations for learning. They provide a common language for talking about learning and teaching, and they make it possible for parents, business people, and community leaders to become more effective partners in young people’s education. With standards in place, everyone can know what the goals of a good education are and how students are progressing toward those goals.

For the State
The standards provide a common reference for ensuring that all the components of Vermont’s educational system work together. They make explicit what may be included in statewide assessments of student learning. They make it clear — from district to district, and from school to school — what good learning is.

Who developed these standards?

In August 1993, the State Board of Education adopted Vermont’s Common Core of Learning. Distilled from the results of more than 40 community focus forums and worked on by more than 4,000 Vermonter’s, the Common Core set forth broad areas of knowledge and skills that all learners need to succeed in the 21st Century. It specified vital results in four categories: Communication, Reasoning and Problem Solving, Personal Development, and Social Responsibility. It connected these with three fields of knowledge — the Arts, Language, and Literature, History and Social Sciences, and Science, Mathematics, and Technology — that learners must work with, learn about, and be able to use in order to attain the vital results.

Vermont’s Framework of Standards and Learning Opportunities is the work of many people — teachers, school administrators, school board members, parents and community members, health and human services staff, business and higher education representatives, consultants, the staff of the Vermont Institute for Science, Mathematics, and Technology (VISMT), and the staff of the Teaching and Learning and School Improvement teams at the Vermont Department of Education. The standards and learning opportunities contained in this draft include the work of the following groups:

- The Vermont Arts, Language, and Literature Commission (formerly the Arts and Humanities Commission)
- The Vermont History and Social Sciences Commission
- The Vermont Science, Mathematics, and Technology Commission
- The Vermont Performance Standards Task Force
- The Vermont Learning Opportunities Committee (formerly the Effective Learning Experiences Committee)
- The Vermont Framework Steering Committee
- The New Standards Project
Appendix A

Questions and Answers about Vermont's Framework (continued)

How were the Standards Developed?

The process of developing standards has been one of research and collaboration; of drafting, feedback, and revision. The three commissions listed above developed the initial draft standards by focusing on the question, “What from each field of knowledge is important for students to know and be able to do in order to attain the vital results?” As they worked, the commissions used drafts of national standards for the disciplines within their fields of knowledge, along with standards documents from other states, and other reference sources from various academic and professional groups.

Next, the Framework Steering Committee unified the drafts from the three commissions into one draft framework of standards. Public meetings were held and the draft was mailed to hundreds of Vermonters for comment. It was then revised based on the feedback received: Standards were deleted, added, revised, and edited to be clearer and more concise.

The second draft was also mailed out to a large number of Vermonters, as well as to national reviewers. It was reviewed by hundreds of teachers in workshops, courses, and curriculum development sessions, and it was shared with community members and school board members in information sessions. A performance standards task force also met during 1994-1995, to determine how the standards could be more clearly articulated to show the degree or quality of performance that was to be expected of students. Meetings were also held with the Vermont State Board of Education and the VISMT Board for critique and feedback, and subsequent revision, of the standards.

Finally, meetings were convened with staff members of the New Standards Project. The mission of New Standards is to design an assessment system based on world-class standards of student performance. The system is being built around advanced forms of assessment, including portfolios and timed, on-demand performance examinations. The projects performance standards are based on continuous review of national and international standards, and they include standards and student work samples from the United States and other countries. The New Standards performance standards have been reviewed by educators and content experts in the United States and other countries. Because Vermont is a partner in the New Standards Project, we have been able to reflect the New Standards performance standards — for English language arts, science, mathematics, and applied learning — in our standards.

Where will additional evidence come from?

Evidence will continue to emerge as the framework is used by teachers and students, and additional evidence can be included in the next refinement of the framework. Student products and performances will provide benchmarks for standards at each level, PreK-4, 5-8, and 9-12.

How will the standards be used?

The standards will be used in three ways:

1. To provide a structure from which standards-based district, school, and classroom curriculum can be developed, organized, implemented, and assessed.

2. To provide the basis for the development of a comprehensive assessment system.

   A comprehensive assessment system incorporates state, local, and classroom responsibility for assessment of student performance and access to learning across all three fields of knowledge, in relation to the vital results.

3. To make explicit what may be included in statewide assessments of student learning.

   Statewide assessment will focus on students’ use of knowledge and skills from the three fields of knowledge to attain the vital results. Statewide assessment will focus on what students know and can do, not on how students should “be.” Standards presented under the following vital results are best left to local decision making with regard to assessment, and will not be part of statewide assessment:

   - Reasoning and Problem Solving Vital Result: Approaches problem solving with an open mind, healthy skepticism, and persistence.
   - Personal Development Vital Result: Develops a sense of unique worth and personal competence.
   - Personal Development Vital Result: Develops productive and satisfying relationships with others.
   - Civic/Social Responsibility Vital Result: Respects and values human diversity as part of our multi-cultural society and world.

Decisions about assessment in these four areas are best left to local communities and classroom teachers as they develop their own curriculum and assessment plans.
Appendix A

Questions and Answers about Vermont’s Framework (continued)

What is meant by “all students”?  
This framework is intended to provide a structure for curriculum-building and assessment of student learning, and to raise expectations for every student. A very small percentage of Vermont students may not meet the standards set forth in this framework because of the extreme severity of their disabilities. An example might be a high school student with a severe disability who functions at a pre-school academic level. Accommodations for such students should be specifically addressed in their Individualized Educational Programs, within the spirit and context of what these standards intend.

By all students, we mean specifically (adapted from the National Council of Teachers of Mathematics, 1989):
- Students who have been denied access in any way to educational opportunities, as well as those who have not;
- Students who are female, as well as those who are male;
- Students who are African-American, Hispanic, Asian, American Indian, or members of other minorities, as well as those who are part of the racial or ethnic majority;
- Students who are socio-economically disadvantaged, as well as those who are more advantaged; and
- Students who have not been successful in school, as well as those who have been successful.

To invite and enable many more students to reach high standards of performance, we need to make changes in our schools. These changes will be many and difficult. Making them effectively requires that communities set high standards and hold themselves accountable for first-rate educational results for all students — no exceptions, no excuses.

The 2013 Framework of Standards and Learning Opportunities represents the revisions made since the Spring 1996 edition. The revision process included gathering information from schools, forums, written suggestions, independent reviews and public hearings. The Vermont State Board of Education has approved revisions on five occasions:

October 1998..............Mathematics and Communications Standards  
May 1999...................History and Social Sciences Standards  
March 2000...............Personal Development and Civic/Social Responsibility Standards  
August 2010............Adoption of Common Core State Standards for English Language Arts and Mathematics  
June 2013.................Adoption of Next Generation Science Standards

The process of revising the Framework is the responsibility of the Agency of Education, and the State Board of Education.
Appendix B

How do the pieces fit?

5. **Learning, Teaching, and Assessment**
   Teachers implement the local curriculum and assess student performance in ways that are consistent with the Vermont’s Framework.

4. **Local Curriculum**
   In order to achieve the standards in Vermont’s Framework, the local school/district establishes a K – 12 curriculum and a process for student assessment. Local, state, and national influences include:
   - Local district- and school-level decisions by educators, students, parents, and community members.
   - Teacher-made learning materials and commercial materials.
   - Regional resources: cultural institutions, business partnerships, natural and built environments, etc.
   - Recommendations of professional organizations, national standards, and resources from other states.
   - A comprehensive assessment system.

3. **Vermont’s Framework**
   The Vermont Framework of Standards and Learning Opportunities includes:
   - **Standards and Evidence:**
     - Standards: What all students should know and be able to do.
     - Evidence: Statements of how the standards can be demonstrated.
   - **Learning Opportunities:**
     - The kinds of learning experiences that all students need.

2. **Common Core of Learning**
   The basis of the framework is Vermont’s Common Core of Learning — its vital results and fields of knowledge.
   - **The Vital Results are grouped under:**
     - Communication
     - Reasoning and Problem Solving
     - Personal Development
     - Social Responsibility
   - **The Fields of Knowledge are:**
     - Arts and Humanities
     - Social Sciences
     - Science, Mathematics, and Technology
     - Emerging Fields of Knowledge

1. **It is the goal of the Department of Education to guide and support the educational system, with the goal that every Vermont student becomes a competent, caring, creative, productive, and responsible citizen committed to continued learning through life ...**
   To achieve this goal, the Department focuses on enabling students to:
   - Enter school ready to learn;
   - Meet or exceed rigorous academic standards in a safe and civil school environment;
   - Acquire skills to make informed, positive choices about their health and safety;
   - Apply learning beyond high school.
## Definitions

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
<th>Example</th>
</tr>
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<tbody>
<tr>
<td><strong>Vital Results</strong></td>
<td>Broad expectations of what students should know and be able to do.</td>
<td>Writes effectively for a variety of purposes.</td>
</tr>
<tr>
<td><strong>Fields of Knowledge</strong></td>
<td>The content areas that are combined and applied to achieve the vital results.</td>
<td>Arts, Language, and Literature History and Social Sciences Science, Mathematics, and Technology</td>
</tr>
<tr>
<td><strong>Vital Result Standards</strong></td>
<td>Specific statements of what ALL students should know and be able to do. These establish the degree and quality of performance that students are expected to attain within grades preK-4, 5-8, and 9-12.</td>
<td>Writing Dimensions Students draft, revise, edit, and critique written products so that final drafts are appropriate in terms of the following dimensions: Purpose: Intent is established and maintained within a given piece of writing. Organization: The writing demonstrates order and coherence. Details: Details contribute to development of ideas and information, evoke images, or otherwise elaborate on or clarify the content of the writing. Voice or Tone: An appropriate voice or tone is established and maintained.</td>
</tr>
<tr>
<td><strong>Fields of Knowledge Standards</strong></td>
<td>Standards that specify concepts, content, and skills within the fields of knowledge.</td>
<td>Historical Connections: Students identify major historical eras and analyze periods of transition in various times in their local community, in Vermont, in the United States, and in various locations worldwide.</td>
</tr>
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### Standards for what the educational system should be able to do:

<table>
<thead>
<tr>
<th>Learning Opportunities</th>
<th>Recommended practice to support all students in attaining the standards.</th>
<th>Units of study that are current, coordinated within the school (e.g., across classrooms and grade levels), and coordinated beyond the school (e.g., within the supervisory union).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Essential Characteristics of Assessment</td>
<td>Attributes that must be present for assessment to be valid, reliable, and meaningful.</td>
<td>Students should have multiple opportunities to meet standards, and should be able to meet them in different ways. Assessment results must be accompanied by information about the reliability and validity of the assessment instrument.</td>
</tr>
<tr>
<td>Sources of Evidence</td>
<td>Instructional activity, student product/performance, and the criteria for quality that are aligned to demonstrate attainment of a standard.</td>
<td>Activity: An analysis of a historical event from the perspectives of various groups. Product/Performance: A written analysis Criteria: Accuracy, relevance.</td>
</tr>
<tr>
<td>Assessment Criteria</td>
<td>The standards-based dimension(s) used to assess one or more aspects of student work. Sources of evidence and other effective assessments align the assessment criteria with instructional goals and with the most important aspects of student work.</td>
<td>Standard: In written responses to literature, students show understanding of reading, connect what has been read to the broader world of ideas, concepts, and issues, and make judgments about the text. Criteria: Responses, connections, judgments.</td>
</tr>
<tr>
<td>Performance Descriptions</td>
<td>Brief descriptions of two or more positions along the continuum identified by the criteria.</td>
<td>See the descriptions of each level in The Vermont High School Mathematics Portfolio Scoring Guide and Benchmarks</td>
</tr>
<tr>
<td>Scoring Guide or Rubric</td>
<td>The procedure used to assign scores or qualitative labels to student work. Includes the complete range of performance on the assessment criteria defined above. The range may be reported as continuous or divided into levels or categories. Complete performance assessment rubrics include benchmarks (examples of student work) to illustrate each level or category defined.</td>
<td>The Vermont High School Mathematics Portfolio Scoring Guide and Benchmarks; for a copy of this scoring guide, contact: Assessment Program Vermont Department of Education 120 State Street Montpelier, VT 05620 (802) 828-3112 or 828-5410</td>
</tr>
</tbody>
</table>
**Performance Standards**  
The derived score or combination of scores required to document attainment of the standard, based on several examples of student work. A performance standard is usually set by an expert group on the basis of instructional goals, student performance data, knowledge of what students are capable of doing, and the intended use of the results.

Using the Vermont High School Mathematics Portfolio Scoring Guide, an expert group consisting of the Portfolio Design Group, other mathematics experts, and administrators will identify the score profile needed across best pieces in the mathematics portfolio to provide evidence that standard 2.4 has been demonstrated.
Appendix D

Resources Used to Inform the Development of the Framework


Additional Resources Used by the Arts and Humanities Commission

California. “Toward Assessment Project.”
Center for the Study of Reading at the University of Illinois, the International Reading Association, and the National Council of Teachers of English. Standards for the English Language Arts. Draft. 1994.

Additional Resources Used by the History and Social Sciences Commission

Appendix D

Resources Used to Inform the Development of the Framework (continued)


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Additional Resources Used by the Science, Mathematics, and Technology Commission


Technology Education Association of Maine, Bureau of Vocational Education; and Department of Technology, University of Southern Maine. The Curriculum Guide for Technology Education in Maine. 1990.


Appendix D

Resources Used to Inform the Development of the Framework (continued)

Additional Resources Used to Inform the Development of the Learning Opportunities

Adams, M.J. Beginning to Read: Thinking and Learning About Print. Summary prepared by the Center for the Study of Reading, The Reading Research and Education Center, University of Illinois at Urbana-Champaign. 1990.


International Reading Association and National Council of Teachers of English. Standards for the Assessment of Reading and Writing. Newark, Del.: 1994.


Vandegrift, Judith A. and Andrea L. Green. "Rethinking Parent Involvement." Educational Leadership, 52(8).
The Common Core State Standards (CCSS) for English Language Arts were adopted by the State Board of Education in 2010. In this edition of the Vermont Framework of Standards, the standards related to English Language Arts have been deleted and replaced by the new Common Core State Standards. Please use the link below to access the CCSS website where you can find the standards and additional resources to support your use of the standards.

http://www.corestandards.org/
The Common Core State Standards (CCSS) for Mathematics were adopted by the State Board of Education in 2010. In this edition of the Vermont Framework of Standards, the standards related to Mathematics have been deleted and replaced by the new Common Core State Standards. Please use the link below to access the CCSS website where you can find the standards and additional resources to support your use of the standards.

http://www.corestandards.org/
The Next Generation Science Standards (NGSS) were adopted by the State Board of Education in 2013. In this edition of the Vermont Framework of Standards, the standards related to Science have been deleted and replaced by the new Next Generation Science Standards. Please use the link below to access the NGSS website where you can find the standards and additional resources to support your use of the standards.

http://www.nextgenscience.org/next-generation-science-standards
Vermont Framework of Standards

Resources

Maine has produced guidance related to the Next Generation Science Standards (NGSS) and the Common Core State Standards that can be helpful in understanding the progression of expected proficiency at key milestones. Refer to the following link to the Maine Department of Education website.

http://www.maine.gov/doe/proficiency/standards/sample-graduation.html

Published jointly by NCTE and the International Reading Association (IRA), *The Standards for the English Language Arts* is designed to complement other national, state, and local standards and contributes to ongoing discussion about English language arts classroom activities and curricula.

http://www.ncte.org/standards/ncte-ira

Progressions Documents for the Common Core Math Standards were produced through a project at the University of Arizona. These standards progressions are narrative documents describing the progression of a topic across a number of grade levels, informed both by educational research and the structure of mathematics. They note key connections among the standards, point out cognitive difficulties and pedagogical solutions, and give more detail on particularly complicated areas of the mathematics.

http://ime.math.arizona.edu/progressions/