Portfolio Guide
Program: Chemistry Education (Unified)
<table>
<thead>
<tr>
<th>Quality Indicator</th>
<th>Performance Indicator</th>
<th>Notes</th>
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<tbody>
<tr>
<td><strong>MoSTEP 1.2.1</strong></td>
<td>1.2.1.1 The preservice teacher knows the discipline applicable to the certification area(s) (as defined by Missouri State Subject Area Competencies) - rule number to be determined;</td>
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<tr>
<td>Conceptual Framework</td>
<td>1.2.1.2 The preservice teacher presents the subject matter in multiple ways;</td>
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<tr>
<td>1. Foundations</td>
<td>1.2.1.3 The preservice teacher uses students’ prior knowledge;</td>
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<tr>
<td>2. Subject Matter</td>
<td>1.2.1.4 The preservice teacher engages students in the methods of inquiry used in the subject(s);</td>
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<tr>
<td>6. Professional Skills</td>
<td>1.2.1.5 The preservice teacher creates interdisciplinary learning.</td>
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<tr>
<td><strong>MoStep 1.2.2</strong></td>
<td>1.2.2.1 The preservice teacher knows and identifies child/adolescent development;</td>
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<tr>
<td>Conceptual Framework</td>
<td>1.2.2.2 The preservice teacher strengthens prior knowledge with new ideas;</td>
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<tr>
<td>3. Learning and Development</td>
<td>1.2.2.3 The preservice teacher encourages student responsibility;</td>
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<tr>
<td>6. Professional Skills</td>
<td>1.2.2.4 The preservice teacher knows theories of learning.</td>
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<tr>
<td><strong>MoStep 1.2.3</strong></td>
<td>1.2.3.1 The preservice teacher knows and identifies child/adolescent behavior</td>
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<tr>
<td>Conceptual Framework</td>
<td>1.2.3.2 The preservice teacher designs and implements individualized instruction based on prior experience.</td>
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<tr>
<td>3. Learning and Development</td>
<td>1.2.3.3 The preservice teacher knows when and how to access specialized services to meet students’ needs</td>
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<tr>
<td>6. Professional Skills</td>
<td>1.2.3.4 The preservice teacher connects instruction to students’ prior experiences and family, culture, and</td>
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<tr>
<td><strong>MoStep 1.2.4</strong></td>
<td>1.2.4.1 The preservice teacher selects and creates learning experiences that are appropriate for curriculum goals, relevant to learners, and based upon principles of effective instruction (e.g., encourages exploration and problem-solving, building new skills from those previously acquired);</td>
<td></td>
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<tr>
<td>The preservice teacher recognizes the importance of long-range planning and curriculum development and develops, implements, and evaluates curriculum based upon student, district, and state performance standards. <strong>Conceptual Framework</strong> 2. Subject Matter 3. Learning and Development 4. Reflective Skills 6. Professional Skills 9. Diversity</td>
<td>1.2.4.2 The preservice teacher creates lessons and activities that recognize individual needs of diverse learners and variations in learning styles and performance;</td>
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<tr>
<td><strong>MoStep 1.2.5</strong></td>
<td>1.2.5.1 The preservice teacher selects alternative teaching strategies, materials, and technology to achieve multiple instructional purposes and to meet student needs;</td>
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<tr>
<td><strong>MoStep 1.2.6</strong></td>
<td>1.2.6.1 The preservice teacher knows motivation theories and behavior management strategies and techniques; 1.2.6.2 The preservice teacher manages time, space, transitions, and activities effectively;</td>
<td></td>
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<tr>
<td>The preservice teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation. <strong>Conceptual Framework</strong> 3. Learning and Development 4. Reflective Skills 6. Professional Skills</td>
<td>1.2.6.3 The preservice teacher engages students in decision making.</td>
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<tr>
<td><strong>MoStep 1.2.7</strong></td>
<td>1.2.7.1 The preservice teacher models effective verbal/non-verbal communication skills;</td>
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<tr>
<td>The preservice teacher models effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.</td>
<td>1.2.7.2 The preservice teacher demonstrates sensitivity to cultural, gender, intellectual, and physical ability differences in classroom communication and in responses to students' communications;</td>
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<tr>
<td><strong>Conceptual Framework</strong></td>
<td>1.2.7.3 The preservice teacher supports and expands learner expression in speaking, writing, listening, and other media;</td>
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<tr>
<td>5. Technology</td>
<td>1.2.7.4 The preservice teacher uses a variety of media communication tools.</td>
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<td>6. Professional Skills</td>
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<tr>
<td>9. Diversity</td>
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<tr>
<td><strong>MoStep 1.2.8</strong></td>
<td>1.2.8.1 The preservice teacher employs a variety of formal and informal assessment techniques (e.g., observation, portfolios of student work, teacher-made tests, performance tasks, projects, student self-assessments, authentic assessments, and standardized tests) to enhance and monitor her or his knowledge of learning, to evaluate student progress and performances, and to modify instructional approaches and learning strategies;</td>
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<tr>
<td>The preservice teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.</td>
<td>1.2.8.2 The preservice teacher uses assessment strategies to involve learners in self-assessment activities to help them become aware of their learning behaviors, strengths, needs and progress, and to encourage them to set personal goals for learning;</td>
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<tr>
<td><strong>Conceptual Framework</strong></td>
<td>1.2.8.3 The preservice teacher evaluates the effect of class activities on both the individual student and the class as a whole, collecting information through observation of classroom interactions, questioning, and analysis of student work;</td>
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<tr>
<td>4. Reflective Skills</td>
<td>1.2.8.4 The preservice teacher maintains useful records of student work and performances and can communicate student progress knowledgeably and responsibly, based on appropriate indicators, to students, parents, and other colleagues.</td>
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<tr>
<td><strong>MoStep 1.2.9</strong></td>
<td>1.2.9.1 The preservice teacher applies a variety of self-assessment and problem-solving strategies for reflecting on practice, their influences on students’ growth and learning, and the complex interactions between them;</td>
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<tr>
<td><strong>Conceptual Framework</strong></td>
<td>1. Foundation</td>
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<td></td>
<td>4. Reflective Skills</td>
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<td></td>
<td>8. Dispositions</td>
<td>1.2.9.2 The preservice teacher uses resources available for professional development.</td>
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<tr>
<td><strong>MoStep 1.2.10</strong></td>
<td>1.2.10.1 The preservice teacher participates in collegial activities designed to make the entire school a productive learning environment;</td>
<td>1.2.9.3 The preservice teacher practices professional ethical standards.</td>
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<tr>
<td><strong>Conceptual Framework</strong></td>
<td>6. Professional Skills</td>
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<td></td>
<td>10. Collaboration and Leadership</td>
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<td><strong>MoStep 1.2.10</strong></td>
<td>1.2.10.2 The preservice teacher talks with and listens to students, is sensitive and responsive to signs of distress, and seeks appropriate help as needed to solve students’ problems;</td>
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<td>1.2.10.3 The preservice teacher seeks opportunities to develop relationships with the parents and guardians of students, and seeks to develop cooperative partnerships in support of student learning and well-being;</td>
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<td>1.2.10.4 The preservice teacher identifies and uses the appropriate school personnel and community resources to help students reach their full potential.</td>
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</table>
| **MoStep 1.2.11**  
The preservice teacher understands the theory and application of technology in educational settings and has adequate technological skills to create meaningful learning opportunities for all students.  
**Conceptual Framework**  
2. Subject Matter  
3. Learning and Development  
5. Technology  
7. Assessment Skills | 1.2.11.1 The preservice teacher demonstrates an understanding of technology operations and concepts.  
1.2.11.2 The preservice teacher plans and designs effective learning environments and experiences supported by informational and instructional technology.  
1.2.11.3 The preservice teacher implements curriculum plans that include methods and strategies for applying informational and instructional technology to maximize student learning.  
1.2.11.4 The preservice applies technology to facilitate a variety of effective assessment and evaluation strategies.  
1.2.11.5 The preservice uses technology to enhance personal productivity and professional practice.  
1.2.11.6 The preservice teacher demonstrates an understanding of the social, ethical, legal, and human issues surrounding the use of technology in PK-12 schools and applies that understanding in practice. |       |
Subject-Specific Competencies for Beginning Teachers in Missouri: Chemistry - Unified Certification

Abbreviations used in this document for coding:

A. **1997 SSC: 2.1** = 1997 Subject Specific Competencies for the Beginning Teacher in Missouri Strand 2, Matter and Energy, competency 1, Properties of matter

B. **CR GenEd, III.D, SeChem** = Missouri Elementary General Education “Natural Science” and “Chemistry” Certification Requirements

C. **NSTA [2001]: Standard 2.a** = 2001 National Science Teachers Association standards (i.e., those found on the NCATE website: www.ncate.org)

D. **NSTA [1998]** = 1998 National Science Teachers Association standards conveying more detail than do the 2001 standards; suggested by NCATE as a useful cross-reference to the more recent standards

E. **National Science Education Standards (NSES):**
   - Unifying Concepts and Processes (UCP)
   - Content Standard A (A): Science as Inquiry
   - Content Standard B (B): Physical Science
   - Content Standard C (C): Life Science
   - Content Standard D (D): Earth and Space Science
   - Content Standard E (E): Science and Technology
   - Content Standard F (F): Science in Personal and Social Perspectives
   - Content Standard G (G): History and Nature of Science
   - Grades K-4: E
   - Grades 5-8: M
   - Grades 9-12: H

F. **S 1,4** = Show Me Science Content Knowledge Standards, standards 1 and 4

G. **ETS 0245, I** = Educational Testing Service (ETS) Praxis II test “Chemistry: Content Knowledge” (test 0245), Topic I (Matter and Energy; Heat, Thermodynamics, and Thermochemistry) (i.e., the information provided in “Tests at a Glance” description of the contents of the high school chemistry test)

Finally, the following materials are provided in this Chemistry package:

1. a 2-column table representation of science competencies for the beginning high school chemistry teacher

2. a “narrative” (or list) of the same information in a conventional word processing format
The beginning (preservice) **Chemistry 9-12** teacher will demonstrate knowledge of and/or competency in the following areas of study:

| 1: Unifying Concepts and Processes | 1.1 systems, order, and organization;  
|                                  | 1.2 evidence, models, and explanation;  
|                                  | 1.3 change, constancy, and measurement;  
|                                  | 1.4 evolution and equilibrium; and  
|                                  | 1.5 form and function |

The beginning teacher of science is familiar with, and teaches, the major concepts and principles that unify all scientific effort and that are used in each of the science disciplines.  
(1997 SSC: 1.2; CR GenEd, III.Sc-Chem; NSTA [2001]: Standard 1; NSTA [1998], Standard 1; NSES: UCP-1-5)

| 2: Science As Inquiry | 2.1 identify questions and concepts that guide scientific investigations.  
|                       | 2.2 design and conduct scientific investigations, including understanding of the major concepts in the area being investigated, of proper equipment, of safety precautions; resolving methodological problems; using technologies; clarifying ideas that guide the inquiry; and obtaining scientific knowledge from sources other than the actual investigation; clarifying the question, method, controls, and variables; organizing and displaying data; revising methods and explanations; and public presentation of the results with a critical response from peers; using evidence; applying logic; and constructing an argument for the proposed explanations.  
|                       | 2.3 use appropriate tools (e.g., hand tools, measuring instruments, calculators, and computers for the collection, summary, and display of evidence), techniques, and mathematics to gather, analyze, and interpret data, including selecting the scientific apparatus or instrument appropriate to a specified laboratory or field task and identifying proper operation of such equipment; using the metric system of measurement, recognizing equivalents within that system and selecting units appropriate to a given laboratory or field task; converting between scientific notation and conventional numerals and using scientific notation to perform calculations.  
|                       | 2.4 formulate and revise scientific explanations and models using logic and evidence, including discussing, formulating, and revising an explanation or physical, conceptual, and/or mathematical models based on scientific knowledge, use of logic, and evidence from the investigation.  
|                       | 2.5 think critically and logically to make the relationships between evidence and explanations, including deciding what evidence should be used and accounting for anomalous data; reviewing data from an experiment, summarizing the data, and forming a logical argument about the cause-and-effect relationships in the experiment; and stating some explanations in terms of the relationship between two or more variables. |

2.1 identify questions and concepts that guide scientific investigations.  
2.2 design and conduct scientific investigations, including understanding of the major concepts in the area being investigated, of proper equipment, of safety precautions; resolving methodological problems; using technologies; clarifying ideas that guide the inquiry; and obtaining scientific knowledge from sources other than the actual investigation; clarifying the question, method, controls, and variables; organizing and displaying data; revising methods and explanations; and public presentation of the results with a critical response from peers; using evidence; applying logic; and constructing an argument for the proposed explanations.  
2.3 use appropriate tools (e.g., hand tools, measuring instruments, calculators, and computers for the collection, summary, and display of evidence), techniques, and mathematics to gather, analyze, and interpret data, including selecting the scientific apparatus or instrument appropriate to a specified laboratory or field task and identifying proper operation of such equipment; using the metric system of measurement, recognizing equivalents within that system and selecting units appropriate to a given laboratory or field task; converting between scientific notation and conventional numerals and using scientific notation to perform calculations.  
2.4 formulate and revise scientific explanations and models using logic and evidence, including discussing, formulating, and revising an explanation or physical, conceptual, and/or mathematical models based on scientific knowledge, use of logic, and evidence from the investigation.  
2.5 think critically and logically to make the relationships between evidence and explanations, including deciding what evidence should be used and accounting for anomalous data; reviewing data from an experiment, summarizing the data, and forming a logical argument about the cause-and-effect relationships in the experiment; and stating some explanations in terms of the relationship between two or more variables.

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1 S = Show Me Science Content Standard
2.6 recognize, construct, and analyze alternative explanations and models, including the abilities of analyzing an argument by reviewing current scientific understanding, weighing the evidence, examining the logic so as to decide which explanations and models are best, and using scientific criteria to find the preferred explanations.

2.7 communicate and defend a scientific argument, including writing and following procedures, expressing concepts, reviewing information, summarizing data, using language appropriately, developing diagrams and charts, explaining statistical analysis, speaking clearly and logically, constructing a reasoned argument, and responding appropriately to critical comments.

2.8 use mathematics in all aspects of scientific inquiry to ask questions; to gather, organize, and present data; and to structure convincing explanations.

2.9 handle, label, store, and dispose of chemicals, electrical equipment, and scientific apparatuses and take actions to prevent or report an emergencies, including, but not limited to, general first aid as it relates to incidents in the science classroom or laboratory. (NSTA 9.b)

2.10 understand liability and negligence, especially as applied to science teaching and can take action to prevent potential problems. (NSTA 9.c)

<table>
<thead>
<tr>
<th>3: Physical Science</th>
<th>4: Life Science</th>
<th>5: Earth and Space Science</th>
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<tbody>
<tr>
<td>The beginning teacher of science understands the central concepts, tools of inquiry, and structures of the physical sciences and makes these aspects of subject matter meaningful for students. (1997 SSC: 2.1-.8; CR GenEd, III.Sc-Chem; NSTA [2001]: Rationale; Standard 1; NSTA [1998], Standard 1; NSES: H-B1, B2, B3, B5, B6; S 1, 2, 7-8; ETS 0245: 1, II, IV)</td>
<td>The beginning teacher of science understands the central concepts, tools of inquiry, and structures of the life sciences and makes these aspects of subject matter meaningful for students. (1997 SSC 4.1-.7, 5.1-.6; CR GenEd, III.Sc-Chem; NSTA [2001]: Rationale; Standard 1; NSTA [1998], Standard 1; NSES: H-C1, C2, C5, C6; S 3, 4, 7-8; ETS 0245: 1, IV)</td>
<td>The beginning teacher of science understands the central concepts, tools of inquiry, and structures of “Earth Processes and Interactions” &amp; “Earth-</td>
</tr>
<tr>
<td>3.1 Structure of Atoms (NSES: H-B1)</td>
<td>4.1 Structure and Function in Living Systems (1997 SSC: 4.3-.7; NSES: high-school extension of M-C1)</td>
<td>5.1 Properties of Earth Materials (1997 SSC: 6.1-.3, 6.5-.6; extension of elementary &amp; middle school competencies)</td>
</tr>
</tbody>
</table>
### Moon Systems

The beginning teacher of science understands the central concepts, tools of inquiry, and structures of the earth and space sciences and makes these aspects of subject matter meaningful for students.

- **(1997 SSC 6.1-.7, 7.1-.5; CR GenEd, III.Sc-Chem; NSTA [2001]: Rationale; Standard 1; NSTA [1998], Standard 1; NSES: H-D1, D2, D3, D4; S 5-8; S 5-8; ETS 0245: I, IV, V)**

## 5: Energy in the Earth System

- **5.2 Energy in the Earth System**
  - (1997 SSC: 6.1-.7; NSES: H-D1)

## 5: Geochemical Cycles

- **5.3 Geochemical Cycles**
  - (1997 SSC: 6.5; NSES: H-D2)

## 5: Origin and Evolution of the Earth System

- **5.4 Origin and Evolution of the Earth System**
  - (1997 SSC: 6.2; NSES: H-D3)

## 5: Origin and Evolution of the Universe

- **5.5 Origin and Evolution of the Universe**
  - (1997 SSC: 7.3-.5; NSES: H-D4)

### 6: Science and Technology

The beginning teacher of science understands the relationship between science and technology, can distinguish between natural objects and objects made by humans, and makes these aspects of subject matter meaningful for students by creating experiences in making models of useful things and by developing students’ abilities to identify and communicate a problem and to design, implement, and evaluate a solution.


## 6: Energy in the Earth System

- **6.1 compare/contrast scientific inquiry and technological design**
  - (NSSE: H-E2)

## 6: Geochemical Cycles

- **6.2 explain the reciprocal relationship between science and technology**
  - (NSSE: H-E2)

## 6: Origin and Evolution of the Earth System

- **6.3 explain why technological knowledge is often not made public (e.g., patents and the financial potential of the idea or invention) while scientific knowledge is made public through presentations at professional meetings and publications in scientific journals**
  - (NSSE: H-E2)

## 6: Origin and Evolution of the Universe

- **6.4 explain the intended and unintended consequences of technological designs**
  - (NSSE: H-E2)

## 6: Science and Technology

- **6.5 identify appropriate problems for technological design**
  - (NSSE: H-E2)

## 6: Technology

- **6.6 use computer and related technologies to extend investigative activities**
  - (NSSE: H-E2)

## 6: Measurement

- **6.7 identify and organize materials and other resources, choose suitable tools and techniques, and work with appropriate measurement methods to ensure adequate accuracy in the implementation of a proposed design.**
  - (NSSE: H-E1)

## 6: Analysis

- **6.8 analyze and interpret data obtained from an experiment or investigation, including graphical data, and identify and demonstrate an understanding of sources of error in data that is presented**
  - (NSSE: H-E1)

## 6: Communication

- **6.9 demonstrate understanding of scientific measurement and notation systems, including systems for describing very large and very small units**
  - (NSSE: H-E1)

## 6: Teamwork

- **6.10 collaborate as a team-member in the identification, communication, and resolution of scientific and technological problems.**
  - (NSSE: H-E2)

## 6: Investigation

- **6.11 describe how scientific investigations require the contributions of individuals from different disciplines, including engineering, and how problems contribute to the formation of new disciplines of science (e.g., geophysics, biochemistry)**
  - (NSSE: H-E1)

## 6: Design

- **6.12 use words, drawings, and models to communicate the process and products of technological design and scientific investigation**
  - (NSSE: H-E1)

## 6: Evaluation

- **6.13 use criteria relevant to the original purpose or need to evaluate completed technological designs or products**
  - (NSSE: H-E1)
## 7: Science in Personal and Social Perspectives

The beginning teacher of science understands the context of science (i.e., relationships among systems of human endeavor including science and technology; relationships among scientific, technological, personal, social and cultural values; and the relevance and importance of science to the personal lives of students) and the social context of science teaching (i.e., the social and community support network within which science teaching and learning occur; relationship of science teaching and learning to the needs and values of the community; and involvement of people and institutions from the community in the teaching of science) and uses this knowledge to enrich the science learning of all students.

(1997 SSC: 1.3, 4.3, 4.6, 5.1, 5.4-.6, 6.1; NSTA [2001]: Standards 4, 7; NSTA [1998], Standards 4, 7; NSES: H-F1, F2, F3, F4, F5, F6; S 1, 3-5; ETS 0245: VI)

| (NSSS: H-E1) | 7.1 Personal and Community Health  
(1997 SSC: 4.3, 4.6; NSES: H-F1)  
7.2 Population Growth  
(1997 SSC: 5.1, 5.4-.6; NSES: H-F2)  
7.3 Natural Resources  
(1997 SSC: 6.1; NSES: H-F3)  
7.4 Environmental Quality  
(1997 SSC: 5.1, 5.6; NSES: H-F4)  
7.5 Natural and Human-induced Hazards  
(1997 SSC: 1.3; NSES: H-F5)  
7.6 Risks and Benefits  
(1997 SSC: 1.3; high-school extension of NSES: M-F4)  
7.7 Science and Technology in Local, National, and Global Challenges  
(1997 SSC: 1.3; NSES: H-F6) |
|---|---|

## 8: History and Nature of Science

(includes the existing strand “The Nature of Science”): The beginning teacher of science understands the history and nature of science as a human endeavor and uses this knowledge to make subject matter meaningful for students.

(1997 SSC: 1.2, 1.5, 1.6; NSTA [2001]: Standard 2.a & 2.b, 4; Standard 7; NSTA [1998], Standard 2.d, 4.b; NSES: H-G1, G2, G3; S 1-8; ETS 0245: VI)

| (NSSS: H-E1) | 8.1 Science as a Human Endeavor  
(1997 SSC: 1.2, 1.5, 1.6; NSES: H-G1)  
8.2 Nature of Scientific Knowledge  
(1997 SSC: 1.2, 1.5, 1.6; NSES: H-G2)  
8.3 Historical Perspectives  
(1997 SSC: 1.2, 1.5, 1.6; NSES: H-G3) |
SCIENCE EDUCATION PORTFOLIO GUIDELINES

Each Quality Indicator requires "understanding" of a body of professional knowledge AND a demonstration of the candidate's ability to "apply" that professional knowledge to the classroom.

- In your reflections for Checkpoint 2 you will be “making a case” that you have achieved an understanding of the professional knowledge. You can also make a case that you can apply the professional knowledge while teaching if you have artifacts that provide evidence of your teaching effectiveness.
- In your reflections for Checkpoint 3, you will be “making a case” that you can apply the knowledge to the classroom.

MoSTEP Quality Indicators

Write ONE reflection for each MoSTEP. The single reflection should reference all the artifacts that provide evidence for that quality indicator. Reflections in the portfolio must address the rationale for the artifact's inclusion in the portfolio by discussing each of the following four questions:

- **Rationale/Context** - Why did I select this artifact? What purpose and in what setting was the artifact created?
- **Theoretical Knowledge** - What does it show about my knowledge and skills in reference to the specific performance indicators?
- **Practical Knowledge** - What did I learn from the experience that resulted in this artifact?
- **Professional Goals** - What do I still have to learn about this quality indicator? Which performance indicators still need improvement?

Science Specialty Area Indicators

The reflections in this section must discuss the science knowledge and skills you’ve mastered during your college science courses. Use the same reflection format for the Science Indicators as you used for the MoSTEP indicators.

Write ONE reflection for each of the following Science Specialty Area Indicators:

2. Science As Inquiry
6. Science and Technology
7. Science in Personal and Social Perspectives
8. History and the Nature of Science

**Science Specialty Area Indicators 1, 3, 4, and 5 should be addressed in the reflection for MoSTEP 1.2.1.**
Appendix 1: Portfolio Content and Requirements

- Access the portfolio website for further details at: http://education.smsu.edu.peu/student_portfolios
- Candidates (students) starting the program in fall 2001 semester will be expected to develop the portfolio in an electronic format (web-based and/or zip disk or CD).
- There are four sections to the portfolio as noted below.
- Candidates that wish to maintain a hard copy of the portfolio, along with a copy in an electronic format, may purchase tabs that correspond to the following section at the University bookstore (Spring, 2002).
- The number and type of artifacts will correspond to the program assessment plan. See program faculty for guidance.
- Candidates should record progress toward meeting professional standards on the Portfolio Guide (see downloadable forms).

Portfolio Sections

Section I. Introduction

Section I contains the professional education candidate’s:
- Educational Philosophy
- Resume'
- Log of Clinical Placements assigned during the program (downloadable form)

Section II. Professional Practice

Section II includes artifacts that represent performances aligned to the Conceptual Framework (CF) MoSTEP and specialty area standards.
- Download a copy of the Portfolio Guide (replaces the old Table of Contents) specific to your area of study. The Portfolio Guide should be kept in Section II of the portfolio with artifacts reflecting the required standards placed after the guide. Candidates are expected to monitor progress toward standards on the Portfolio Guide (downloadable form).
- Artifacts that reflect the SMSU (CF) Learner Outcomes, the MoSTEP Standards and the specialty area standards will be placed in Section II of the portfolio. Artifacts must be accompanied by an Artifact Cover Sheet that documents the nature of the project as well as performances related to standards. (See downloadable forms to access the Artifact Cover Sheet and corresponding Directions for the Artifact Cover Sheet.

Section III. Showcase

Section III is the student Showcase Section. This is optional for students who elect to include items that will further illustrate their experiences in the professional education program as well as showcase mastery of professional standards and the Conceptual Framework general outcomes.

Section IV. Field Evaluations

This section should include practicum and student teaching field evaluations. See your program faculty for guidance regarding practicum materials and evaluations. For student teaching, include the evaluation of the cooperating teacher and the University supervisor of all placements in the student teaching semester.
DIRECTIONS FOR THE ARTIFACT COVER SHEET

Cover sheets should be attached to artifacts within the Professional Preparation Portfolio as directed by program faculty. The purpose of the cover sheet is to ensure reflection and review regarding performances related to the SMSU Professional Education Unit (PEU) Conceptual Framework (CF), the MoSTEP standards and your Specialty Area standards. Information provided on the cover sheet yields evidence of your progress in meeting professional education standards.

Directions for completing the sections of the cover sheet follow.

1. “Title of artifact”: Typically, an artifact will have a designated title. If it does not, provide a brief description or name.

2. “Date this artifact was collected”: When was the item completed, graded, or made available for inclusion in the portfolio? If necessary, give a more general time, e.g. “Fall Semester 2001.”

3. “Course or experience where the artifact was developed”: Provide both the course code and course title. If the item was not developed for a course, describe the experience corresponding to development.

4. “Quality indicators addressed by this artifact”: Identify the quality indicators/learner outcomes that are represented within the artifact.
   - CF: Include general learning outcome(s). Include number and name (e.g. “9. Diversity”).
   - Generally list one MoSTEP quality indicator (possibly more than one can be cited—check with your department). Include the text and number of the quality indicator being addressed in your reflection.
   - Specialty Area: Include the text and number of the strand and competency.

Cover sheet examples for some programs are available at [http://education.smsu.edu/peu/student_portfolios/coversheetexamples](http://education.smsu.edu/peu/student_portfolios/coversheetexamples). Programs limit the number of standards to be addressed by a single artifact; therefore, it is very important to see your program faculty for guidance.

5. “Reflective Narrative”: This section includes a summary of candidate performances that correspond to the quality indicator and learner outcomes listed. The narrative should indicate what you know (knowledge) and what you are able to do (skills). Use the performance indicators corresponding to each quality indicator as a guide. This section requires analysis and synthesis of performances related to standards and should be written as a narrative summary rather than a list. The narrative should document that you have demonstrated performances consistent with the CF Learner Outcomes, the MoSTEP and the Specialty Area standards noted above.

Cover sheet examples for some programs are available at [http://education.smsu.edu/peu/student_portfolios/coversheetexamples](http://education.smsu.edu/peu/student_portfolios/coversheetexamples). Some programs have specific requirements for narrative preparation; therefore, it is very important to see your program faculty for guidance.
Quality Indicator Reflection of Progress

Student Name:

Major/Certification Area:

Quality indicator addressed by this reflection: MoSTEP _______ or Science Indicator _______

Reflective narrative:

**Rationale/Context** - *Why did I select these artifacts?* What purpose and in what setting were the artifacts created?

**Theoretical Knowledge** - *What do the artifacts show about my knowledge and skills in reference to the specific performance indicators?* Reference performance indicators by number in your reflection.

**Practical Knowledge** - *What did I learn from the experiences that resulted in these artifacts?*

**Professional Goals** - *What do I still have to learn about this quality indicator? Which performance indicators still need improvement?*
Appendix 3: CF General Learning Outcomes

The curricula of professional education programs at Southwest Missouri State University reflect our commitment to these beliefs. Further, they reflect and are aligned with the professional standards specified by state, national and professional accreditation organizations. Our initial and advanced programs are designed to develop candidate knowledge, skills, and dispositions associated with successful professional educational practice.

SMSU professional education graduates will demonstrate competence in:

1. **Foundations**: knowledge of the historical development of the profession, and foundational issues and arguments underlying its practices, as well as understanding of the importance of integrated learning across disciplines.
2. **Subject Matter**: knowledge of subject matter discipline content and the ability to integrate content with pedagogy appropriate to the candidate’s field of study.
3. **Learning and Development**: knowledge of human development and motivation, theories of learning, pedagogy and assessment.
4. **Reflective skills**: communication skills, critical and creative thinking abilities and other skills crucial to reflective decision-making.
5. **Technology**: knowledge and skills in the use of technology appropriate to the candidate’s field of study.
6. **Professional Skills**: the practical abilities to implement the skills, techniques, and strategies associated with student learning and development in the educational context in which they practice.
7. **Assessment Skills**: the skills to conduct valid and reliable assessments of their students’ learning, and use that assessment to improve learning and development for their students.
8. **Dispositions**: the intellectual, social, ethical, and other personal attributes and beliefs previously ascribed to reflective decision-makers in a variety of professional settings, including a commitment to their own lifelong learning and professional development.
9. **Diversity**: the ability to skillfully facilitate and promote the learning of all students, including those from diverse cultural, racial and economic backgrounds, and those with disabilities.
10. **Collaboration and Leadership**: the ability and skills to foster and maintain collaborative, empowering relationships with other professionals within schools and the community.