**Section IV**
**Assessment #1—Content Knowledge**
**Praxis II**

## Narrative

### 1. A brief description of the assessment and its use in the program

The Praxis II content knowledge test is required for certification in Biology, Chemistry, Earth/Space, General Science, and Physical Science. It is not a Keene State College graduation requirement for graduation, but it is a NH state requirement for teacher licensure: General Science, 10425 (147 minimum required); Biology, 20235 (153); Chemistry 20245 (153); Earth/Space, 20571 (148); Physical Science, 20481 (148). Over the past three years, there have been program completers in Biology, General Science, and Chemistry. There have been no program completers in Earth/Space or Physical Science

### 2. A description of how this assessment specifically aligns with the standards

The note in the *Guidebook for Program Planners and Review Writers, Chapter 4, NSTA Reviewer Criteria,* states "Praxis II should be assumed to align with NSTA standards." This assessment aligns with Standard 1a, understanding major concepts, principles, theories, laws, and interrelationships in their fields of licensure.

### 3. A brief analysis of the data findings

There were fewer than 10 secondary science education candidates over the past three years. Data demonstrate that Keene State College has achieved over an 80% pass rate on the Praxis II Content Knowledge exam as required by NCATE. Of the four Biology program completers that took the Praxis II Biology exam, all passed. Of the three General Science program completers that took the Praxis II General Science exam, two passed, and one failed. One of the two Chemistry program completers took and passed the Chemistry Praxis II exam. This gives us an 87.5% pass rate (seven out of eight) over the last three years. (Because the test is not a requirement for program completion, Keene graduates who end up teaching in another state may not take the Praxis exam. For example, nearby states of Massachusetts and New York require non-ETS based licensure exams.)

### 4. An interpretation of how that data provides evidence for meeting standards

The Praxis II content knowledge exam, as acknowledged by both NSTA and KSC faculty, is an excellent indicator of the candidates' knowledge of (1a) understanding the major concepts, principles, theories, laws, and interrelationships of their fields of licensure and supporting fields as recommended by the National Science Teachers Association. Because five of the six program completers over the past three years passed the test (87.5%), Praxis II provides evidence that our candidates meet NSTA/NCATE Standard 1a.

## 5. Assessment Documentation

### 5A: Assessment Tool/Description

Praxis II (Biology, Chemistry, Earth/Space, General Science, Physical Science)

### 5B: Scoring Guide

Educational Testing Service (ETS) provides scores. The State of New Hampshire decides the required score of candidates for each Content Knowledge exam.

### 5C: Candidate Data
**(Numbers in parentheses refer to score received by test-taker, if known.)**

| Year | Biology 20235 NH Pass Score 153 | | | Chemistry 20245 NH Pass Score 153 | | | Gen. Science 10435 NH Pass Score 147 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Completers | Took Test | Passed Test | Completers | Took Test | Passed Test | Completers | Took Test | Passed Test |
| 2005-06 | 2 | 2 | 2 (182 & 173) | 1 | 0 | -- | 1 | 1 | 0 |
| 2004-05 | 1 | 1 | 1 | 0 | | | 1 | 1 | 1 (160) |
| 2003-04 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

*Subscores were provided to us by three graduates. See below.

**Graduate 1: Subscores received on Biology #20235 (2005-06) Score Range: 100-200, Average Performance Range: 149-172**

| | Basic Principles of Science | Molecular and Cellular Biology | Classical Genetics and Evolution | Diversity of Life, Plants, and Animals | Ecology | Science, Technology, and Society |
|---|---|---|---|---|---|---|
| Score | 10 | 29 | 20 | 33 | 20 | 8 |
| Possible Points | 12 | 37 | 24 | 43 | 22 | 11 |
| Avg. Performance | 7-10 | 18-26 | 11-18 | 21-29 | 13-17 | 6-9 |

**Graduate 2: Subscores received on Biology #20235 (2005-2006) Score Range: 100-200, Average Performance Range: 149-172**

| | Basic Principles of Science | Molecular and Cellular Biology | Classical Genetics and Evolution | Diversity of Life, Plants, and Animals | Ecology | Science, Technology, and Society |
|---|---|---|---|---|---|---|
| **Score** | **12** | **31** | **16** | **30** | **19** | **9** |
| **Possible Points** | **13** | **38** | **23** | **44** | **22** | **10** |
| **Avg. Performance** | **7-11** | **17-27** | **10-12** | **18-29** | **12-18** | **5-8** |

**Graduate 3: Subscores received on General Science (2004-05) Score Range: 100-200, Average Performance Range: 155-181**

| | Scientific Methodology, Techniques and History | Physical Science | Life Sciences | Earth Science | Scientific Methodology, Techniques and History |
|---|---|---|---|---|---|
| **Score** | **6** | **6** | **14** | **17** | **9** |
| **Possible Points** | **12** | **12** | **24** | **24** | **12** |
| **Avg. Performance** | **7-10** | **7-10** | **12-19** | **13-19** | **7-10** |