

**Oklahoma Commission for Teacher Preparation
Program Report for the
Preparation of Science Teachers**

C O V E R S H E E T

Institution St Gregory's University **State** OK

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Program documented in this report:

Name of institution's program (s) Life Science/Biology

Grade levels for which candidates are being prepared 7-12

Degree or award level _____

Is this program offered at more than one site? **Yes** **No**

If yes, list the sites at which the program is offered _____

Title of the state license for which candidates are prepared

Biology 7-12

Program report status:

Initial review

New Program

Existing Program

**Response to One of the Following Decisions: Further Development
Required or Recognition with Probation**

Response to Recognition with Conditions

Is your unit seeking:

State accreditation for the first time (initial accreditation)

Continuing State accreditation

Revisions Made in This Program Review

Assessment 1-Oklahoma Subject Area Test

- Requirements to achieve successful overall performance on OSAT
- Table 2. Candidate's Scores on OSAT now includes a column for pass-rate of the program's candidates meeting minimum requirements.
- As of the time of this report there is no data to report in Table 2.

Assessment 2-Grades in Coursework

- Data has been entered in Table 3.

Assessment 3-Lesson Planning

- Data has been entered in Table 5.
- Additional requirements were added to the template in ATTACHMENT D: *Template for Life Science/Biology Lesson Plan/Unit Template: Standards Alignment*. Students are asked to also document NSES by number as required by Standard 6.
- Two rows were added to ATTACHMENT D: *Rubric for Life Science/Biology Lesson Plan/Unit with Alignment to NSTA Standards* to include the three components of Standard 8 (Knowledge and Use of Assessments).
- Two rows were added to ATTACHMENT D: *Rubric for Life Science/Biology Lesson Plan/Unit with Alignment to NSTA Standards* to include Standards 4a (Community and science) and 4b (Issues in science) as required by Standard 4.
- Two rows were added to ATTACHMENT D: *Rubric for Life Science/Biology Lesson Plan/Unit with Alignment to NSTA Standards* to include Unifying concepts in science and NSES alignment as required by Standard 6.
- Three rows were added to ATTACHMENT D: *Rubric for Life Science/Biology Lesson Plan/Unit with Alignment to NSTA Standards* to include all parts of Standard 9: Safety and Welfare.

Assessment 4- Student Teaching

- As of the time of this report there is no data to report in Table 6.
- Included all components of Standard 9 into Table 6: *Candidates' Mean Scores on the Student Teacher Monitoring Report*.
- Included all components of Standard 9 into Table 7: *Alignment of Student Teacher Monitoring Report to NSTA Standards*.
- The Scoring Rubric for the Student Teacher Monitoring Report now includes all components of Standard 9 to show candidate proficiency.

Assessment 5-Student Learning Impact Project

- As of the time of this report there is no data to report in Table 8.
- Two rows titled: Inquiry and Issues were added to the *Student Learning Impact Project Evaluation/Rubric* to address Standards 3b and 4b.
- Standard 4a was added to Table 9: *Alignment of SLIP components with NSTA standards: Use of available technology* due to prior omission.

- Standards 3b, 4a and 4b are now addressed in Table 9: *Alignment of SLIP components with NSTA standards.*

Assessment 6-Oklahoma Professional Teaching Exam

- As of the time of this report there is no data to report in Table 11.

Assessment 7-Portfolio

- As of the time of this report there is no data to report in Table 14.
- Changes to the language of Assessment 7: A Brief Analysis of Data to better describe the process for determining values or ranges of values associated with proficiency (target, satisfactory, needs improvement). The description of this process is now prior to Table 14 and the Portfolio Evaluation Rubric is now immediately after Table 14 instead of its prior placement which was after Attachment D.

Assessment 8-Safety

- As of the time of this report there is no data to report in Table 15.
- Assessment 8 is a separate Safety Assessment to specifically address Standard 9.

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SECTION I—CONTEXT

St. Gregory's University (SGU) promotes the education of the whole person in the context of a Christian community in which students are encouraged to develop a love of learning and live lives of balance, generosity, and integrity. Rooted in the university's Mission Statement (above), the SGU Department of Education has developed a Conceptual Framework, which guides the unit's instruction and assessment. It is called "The Reflective Practitioner". The term "Reflective Practitioner," as articulated by Donald Schön's (*The Reflective Practitioner*, 1987) research on preparing professionals, represented effectively the spirit of the Benedictine life of prayer and work. The most effective teacher would live a life of reflection about teaching practice - before that practice, during that practice, and after that practice. Schön's research in the preparation of professionals proved to be an appropriate expression of the mission for teacher preparation at St. Gregory's University.

St. Gregory's offers a liberal arts education in the Catholic and Benedictine tradition. Therefore, there is a core component to all degree programs in which students explore the ways of knowing in a variety of disciplines and meet the thinkers who have shaped Western civilization through a series of four *Tradition and Conversation* (Great Books) seminars. Building on that basis, the education programs at SGU are designed to support the standards of the National Council for Accreditation of Teacher Education (NCATE) and Oklahoma State Standards and General Competencies for Teacher Licensure and Certification, in addition to guidelines from the learned societies. The unit has also added institutional competencies, which align with the Conceptual Framework, which address knowledge of the Catholic perspective in education and reflective practice. To attain licensure, teacher candidates in Oklahoma take three professional exams that address general education (Oklahoma General Education Test, OGET), discipline knowledge (Oklahoma Subject Area Test, OSAT), and pedagogy (Oklahoma Professional Teaching Examination, OPTE). These requirements impact the design of the program, and both complement and reinforce the application of NCATE and state standards.

The unit's Conceptual Framework emphasizes knowledge of self and knowledge of the learner. Beginning with Foundations of Teaching, students initiate a reflective approach to self-awareness. The Writing Portfolio (freshman year) and the Comprehensive Learning Portfolio (CLP), based on Common Core objectives, also encourage students to set goals, analyze progress, and reflect upon personal growth prior to admission to Teacher Education. Teacher candidates gather knowledge about learners in coursework as they explore cultural diversity, multiple intelligences and the stages of psychological and cognitive development.

The unit uses a multi-level approach to field experiences. Candidates in secondary education complete a minimum of 75 hours of field experience before student teaching. During these field experiences the teacher candidate observes the actions of others and his/her own actions in the classroom and then reflects upon those observations to grow in professional confidence and expertise. This model of study, practice, and reflection is supported in writings of Donald Schön (1991), who points out:

Designing [learning experiences] must be learned by doing. However much students may learn about designing from lectures or readings, there is a

substantial component of educational design competence - indeed - the heart of it - that they cannot learn in this way. A quality educational practice is learnable but is not teachable by classroom methods. And when students are helped to learn this quality, the interventions most useful to them are more like coaching than teaching - as in reflective practice.

Thus, the unit has designed field experiences linked to specific coursework for teacher candidates, which provide the occasion for discussion of the teaching actions and sharing of field experience summaries.

Field Experiences Linked to Specific Coursework	Secondary Education Majors' Hours/ Category
Foundations of Teaching	15- Observation (Elementary, Middle Level, High School)
Catholic Perspectives in Education	10- Observation/directed assistance- Catholic School
Middle Level Education	15- Observation/directed assistance- Middle level School
Methods Coursework	15- directed assistance and supervised assistance (subject area and level)
Psychology of Students with Exceptionalities	10- Observation/directed assistance- Special Education
Professional Development/ Extracurricular Activities	10
Total Hours (minimum)	75

The Teacher Education program of study is designed and sequenced to provide field experiences at multiple levels of competency development in order to provide a thorough practice-base for reflection. Students are required to complete field experiences each semester while in the program, beginning with the sophomore year. The experiences are organized in six categories: (1) observation, (2) directed assistance, (3) supervised assistance, (4) supervised unit instruction, (5) supervised full responsibility, and (6) professional development. Each teacher candidate is directed through each level and area to experience general and specific activities in order to achieve a set of thorough and sequentially appropriate experiences before entering student teaching. Each teacher candidate keeps a journal record of experiences to be used for personal notes and reflection as well as for topics of discussion with peers and mentors.

The Reflective Practitioner Teacher Education program at St. Gregory's University places a high value on early systematic field experiences in a range of school settings, with a variety of students of varying cultural, socioeconomic, racial and ethnic backgrounds, including students with special needs. Field experiences include the following:

- At least one experience in an urban school, one in a suburban, and one in a rural school
- At least one experience in a school with a high multicultural population
- At least one experience in a school with a varied socioeconomic population
- At least one experience in a non-school educational program

During SO 3213 Fundamentals of Leadership, teacher candidates develop their leadership, organizational and instructional skills through campus or community leadership projects. The teacher candidate(s) organize and lead projects related to their major area or focus in education

in order to expand their leadership and content competencies. As the course progresses, teacher candidate(s) keep a journal record and write a reflective report at the conclusion of the project.

Student Teaching is a 12-week (60 days) placement during the senior year. This capstone experience calls for the teacher candidate to work with a cooperating teacher, who agrees to let the student teacher take responsibility for the classroom, in graduated levels, for ten of the twelve weeks. This cooperating teacher works closely with the student teacher, mentoring on a daily basis. The university supervisor observes at least three times during the teaching experience and meets the student teacher and/or cooperating teacher at each visit. In addition to these meetings, the student teacher provides a daily reflective journal to the university supervisor at the end of each week. The university supervisor also provides written feedback to the student teacher and to the Director of Teacher Education on a weekly basis.

During the student teaching semester, student teachers are enrolled in ED 4322, Student Teaching Seminar, to develop the Student Learning Impact Project (SLIP), by which they assess their impact on a class learning experience. This is further described in Assessment #5.

Effective teacher education requires a serious commitment to the development of teacher candidates' understanding of subject matter. Using the guidelines provided by the learned societies, the unit provides programs of study that foster solid knowledge acquisition in each major area.

Program of Study for Secondary Biology/Life Science Education

Secondary Biology/Life Science Education majors, in alignment with the National Science Teachers Association (NSTA), university and state standards, are required to complete the following coursework:

Common Core Course Requirements (57 credits)

HU 1112 - Seminar I: Ancient Near Eastern/Early Greek Thought & Culture (2 cr.)

HU 1122 - Seminar II: Classical and Early Christian Thought & Culture (2 cr.)

HU 2112 - Seminar III: Medieval and Renaissance Thought & Culture (2 cr.)

HU 2122 - Seminar IV: Modern Thought & Culture (2 cr.)

TH 1323 - Introduction to Sacred Scripture (3 cr.)

TH 2413 - Introduction to Christian Theology (3 cr.)

PH 1013 - Introduction to Philosophy (3 cr.)

PH 3063 - Philosophical Ethics and the Just Society (3 cr.)

EN 1113 - English Composition I (3 cr.)

EN 1323 - English Composition II (3 cr.)

CO 1713 - Fundamentals of Speech Communication (3 cr.)

Introductory Fine Arts (Dance, Music, Theatre, Visual Arts) Course (3 cr.)

HI 1483 - United States, 1492-1865 (3 cr.)

PO 1013 - Government of the United States (3 cr.)

PY 1113 - Elements of Psychology (3 cr.) or

SO 1113 - Introduction to Sociology (3 cr.)

SS 3213 - Fundamentals of Leadership (3 cr.)

MA 1513 - College Algebra (3 cr.)

LS1113/1111 Principles of Biology and Lab (4cr)

PS 1363/1361 General Chemistry and Lab (4cr)
KI 1072 - Concepts of Wellness (2 cr.) or Two (2) Physical Activity Courses

Biology/Life Science Subject Area Coursework (43 Credit Hours)

LS 1023 Environmental Science (3cr)
PS 1113/1111 College Physics I and Lab (4cr)
PS 1213/1211 College Physics II and Lab or PS 1473/1471 Gen Chemistry II and Lab (4cr)
LS 2014 General Zoology (4cr)
LS 3214 Human Physiology (4cr)
LS 3333 Genetics (3cr)
LS/NS/KI _____ (Upper Division Course) (3cr)
MA 1814 Pre-Calculus/Analytic Geometry or MA 2054 Calculus I (4cr)
MA 3013 Elementary Statistics (3cr)
NS 3263 Methods of Teaching Secondary Science (3cr)
PY 3113 Developmental Psychology or PY 4113 Cognitive Psychology (3cr)
PY 4132 Psychology of Teaching Students with Exceptionalities (2cr)
PY 4223 Tests and Measurement (3cr)

Professional Education Coursework (19 Credit Hours)

ED 3012 Foundations of Teaching (2 cr.)
ED 3022 Middle Level Education (2 cr.)
TH 3201 Catholic Perspectives on Education (1 cr.)
ED 3002 Educational Technology (2 cr.)
ED 4322 Student Teaching Seminar (2 cr.)
ED 4910 Student Teaching (10 cr.)

*Foreign Language Competency: Novice high-Listening/Speaking. Two semesters same language in college with “C” or better, or two years same language in high school with “B” or better, or pass CLEP test.

Admission to Teacher Education

Students apply to Teacher Education when the preconditions to admission are met, usually at the end of the sophomore year. The Admissions Committee of the Teacher Education Council considers applications for approval. The Director of Education arranges interviews for prospective teacher candidates. Once admitted, candidates maintain a 2.5 GPA and appropriate dispositions to remain in the program. Candidates must be admitted to Teacher Education to take Methods Coursework. Documentation of the following preconditions must accompany each application.

- Completed Application to Teacher Education
- Updated Field Experience Time Log and Summaries
- Written Personal Philosophy of Education
- Successful completion of “Foundations of Teaching” ED 3012 (or equivalent)
- Cumulative GPA of 2.5

- Oklahoma General Education Test (OGET) passing score
- C or better in all required education and/or major (content) courses
- Recommendations and Disposition Evaluation from
 - 1 advisor,
 - 3 SGU faculty members (2 of whom have taught the candidate), and
 - 1 one person outside SGU (character reference, work reference, i.e. paid or field experience, or volunteer position, or other non-academic reference)
- Unofficial transcript from SGU, official transcript(s) from other universities
- Completion of Professional Education Portfolio: Checkpoint 1
- Written essay
- Background Check
- Interview and recommendation by Admission to Teacher Education Committee

Candidates and Program Completers

Attachment A reports candidates and program completers for the past four years.

Attachment A

Year	# of Candidates Enrolled in the Program	# of Program Completers
2011-2012	1	0
2012-2013	1	0
2013-2014	1	0
2014-2015*	1	0

* There is one candidate currently in the program who is finishing the program this year (Sp2015). There are two freshmen that have declared secondary science (Biology/Life Science) education as their majors but have not yet met the criteria to be admitted to teacher education.

Attachment A shows one program completer over the past three years. There is one candidate currently in the program.

Faculty Information

Attachment B shows faculty who have taught Secondary Science Education candidates over the past 3 years.

Attachment B- Faculty Information

Faculty Member Name	Highest Degree, Field, & University	Assignment: Indicate the role of the faculty member	Faculty Rank	Tenure Track (Yes/ No)	Scholarship, Leadership in Professional Associations, and Service: List up to 3 major contributions in the past 3 years	Teaching or other professional experience in P-12 schools
Gayle Fischer	PhD Educational Psychology, University of Oklahoma	education coursework Foundations of Teaching, Middle Level Education, Student Teaching Seminar	Associate professor Director of Teacher Education	Yes	Membership in Oklahoma Association of Colleges of Teacher Education, Association of Curriculum and Supervision, Association for Childhood Education International, Service at SGU: Academic Council, Assessment Committee, Academic Committee of SGU Board of Directors and Chair of Teacher Education Council Community Service: Oklahoma Conference of Catholic Schools Accrediting Association; Teacher Competency Review Panel, OK State Dept of Ed	Teaching experience in elementary, middle level, HS (Alternative Ed) and special education for over thirty years Certification: Elem1-8, Mild-Moderate Special Education B-12, Elem Principal K-8, Social Studies Endorsement NBPTS –Special Education (Mild-Moderate)
Kipton Smilie	Ph.D. Historical, Philosophical, and Social Foundations of Education, University of Kansas	Faculty Supervision of Student Teachers Teacher-Secondary Methods	Assistant Professor	Yes	“Humanitarian and Humanistic Ideals: Charles W. Eliot, Irving Babbitt, and the American Curriculum at the Turn of the 20 th Century.” <i>The Journal of Thought</i> . Vol. 47, Spring/Summer 2012. Forthcoming. “Irving Babbitt's New Humanism: Education and the ‘Civil War in the Cave.’” Presented at the Humanities and Education Research Association Conference, Salt Lake City, Utah, 2012. Professional Associations: -National Council of Teachers of English	August 2004-May 2006: English Teacher , Ottawa High School, Ottawa, KS. Courses taught: 9th grade English, 9th grade College Prep English, 10th grade English, 10th grade College Prep English. August 2008-May 2011: English Teacher , Perry-Lecompton High School, Perry, KS.
Mary Ann Stevens	MS Natural Science, University of Oklahoma	Teach various life science courses: biology, human anatomy and physiology, microbiology,	Associate Professor	Yes	Member- National Science Teachers Association	OK Certification Areas: Biology, Chemistry, Physics, Earth Science, Botany, Zoology, Physical Science, Anatomy & Physiology (7-12)

	BA Secondary Science	medical vocabulary, histology, nutrition				
Melody Harrington	M.Ed. – Counseling Psychology University of Central Oklahoma LPC – Licensed Professional Counselor	Department Chair – Social Science Director of Counseling and Testing Faculty – Social Science	Associate Professor	Yes	Chair – Institutional Review Board - SGU Member of Oklahoma Association for the Improvement of Developmental Education Member of Oklahoma Counseling Assoc. Member of Texas Educational Diagnosticians Association	None
Donald Skinner- Noble	Ph.D. Poultry Science from The Ohio State University	Faculty	Assistant Professor	Yes	Invited Associate Editor, Journal of Applied Poultry Research Invited Associate Editor, Poultry Science journal Invited Reviewer, US/Israel Bi-National Agricultural Research and Development Fund (of USAID)	None
Robert Kinsey	M.Ed. in Educational Leadership from University of Oklahoma	Adjunct	Instructor	No	Received Oklahoma Homeland Security Grant for Tecumseh Public Schools to enhance security at Tecumseh Middle School	Science Teacher- H Sand Middle level- 2002-2009 Secondary Admin- 3 yrs Certification Areas: Biology, Chemistry, Physics, Earth Science, Botany, Zoology, Physical Science, Anatomy & Physiology (7-12), Middle School Science, Sec Admin
Valerie Plaus	PhD Physics, University of WI-Madison	Faculty	Assistant Professor	Yes		None

Kristina Adams	M.Ed, University of Oklahoma PhD Candidate, University of Oklahoma	Faculty	Assistant Professor	Yes	Member – National Science Teachers Association, Member - Oklahoma Association of Colleges of Teacher Education, project coordinator – Connecting STEM with Literacy (OK Higher Ed Grant recipient), STEM consultant for Edmond Schools (grant – math science partnership), lead teacher Integrated Math and Biology (DIMACS at Rutgers University), K20 ALT – professional development for teachers across Oklahoma with a focus on alternative schools, teaching through inquiry, and the implementation of standards in the 21 st century classroom	17 years of P-12 teaching experience – MS science, HS science, higher education science (10 years), National Board Certification in AYA – science – physics, Oklahoma state certification areas: middle level science, general science, physical science, physics, chemistry, zoology, biology
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SECTION II—ASSESSMENTS AND RELATED DATA

	Name of Assessment	Type or Form of Assessment	When the Assessment is Administered
1	Content Knowledge-Licensure Tests	OSAT	After all content coursework is completed
2	Assessment of content knowledge in conceptual science area to be taught	Grades in Coursework	Throughout Program
3	Pedagogical and Professional Knowledge, Skills and Dispositions – Planning Instruction	Lesson Plan Grades	During NS 3263 Methods of Teaching Secondary Science and Student Teaching
4	Pedagogical and Professional Knowledge, Skills and Dispositions – Student Teaching Assessment	Student Teacher Monitoring Report	Student Teaching
5	Effects on Student Learning	Student Learning Impact Project	Student Teaching
6	Pedagogical and Professional Knowledge, Skills and Dispositions – Legal/Safety/Ethical Issues	OPTE	After Student Teaching
7	Content Knowledge – Research & Investigation (optional)	Portfolio	Throughout Program
8	Content Knowledge – Contextual (optional)	Completion of Safety and Welfare Assignment	During NS 3263 Methods of Teaching Secondary Science and Student Teaching

SECTION III—STANDARDS AND ASSESSMENT CHART

OKLAHOMA STANDARD	APPLICABLE ASSESSMENTS FROM SECTION II
<p>1. Content. Teachers of science understand and can articulate the knowledge and practices of contemporary science. They can interrelate and interpret important concepts, ideas, and applications in their fields of licensure; and can conduct scientific investigations. To show that they are prepared in content, teachers of science must demonstrate that they (a) understand and can successfully convey to students the major concepts, principles, theories, laws, and interrelationships of their fields of licensure and supporting fields as recommended by the National Science Teachers Association; (b) understand and can successfully convey to students the unifying concepts of science delineated by the National Science Education Standards; (c) understand and can successfully convey to students important personal and technological applications of science in their fields of licensure; (d) understand research and can successfully design, conduct, report and (e) evaluate investigations in science; and understand and can successfully use mathematics to process and report data, and solve problems, in their field(s) of licensure.</p>	<p>X#1 <input type="checkbox"/>#3 X#5 <input type="checkbox"/>#7 X#2 X#4 <input type="checkbox"/>#6 <input type="checkbox"/>#8</p>
<p>2. Nature of Science. Teachers of science engage students effectively in studies of the history, philosophy, and practice of science. They enable students to distinguish science from non-science, understand the evolution and practice of science as a human endeavor, and critically analyze assertions made in the name of science. To show they are prepared to teach the nature of science, teachers of science must demonstrate that they (a) understand the historical and cultural development of science and the evolution of knowledge in their discipline; (b) understand the philosophical tenets, assumptions, goals, and values that distinguish science from technology and from other ways of knowing the world; and (c) engage students successfully in studies of the nature of science including, when possible, the critical analysis of false or doubtful assertions made in the name of science.</p>	<p>X#1 X#3 <input type="checkbox"/>#5 <input type="checkbox"/>#7 X#2 X#4 <input type="checkbox"/>#6 <input type="checkbox"/>#8</p>
<p>3. Inquiry. Teachers of science engage students both in studies of various methods of scientific inquiry and in active learning through scientific inquiry. They encourage students, individually and collaboratively, to observe, ask questions, design inquiries, and collect and interpret data in order to develop concepts and relationships from empirical experiences. To show that they are prepared to teach through inquiry, teachers of science must demonstrate that they (a) understand the processes, tenets, and assumptions of multiple methods of inquiry leading to scientific knowledge; and (b) engage students successfully in developmentally appropriate inquiries that require them to develop concepts and relationships from their observations, data, and inferences in a scientific manner.</p>	<p><input type="checkbox"/>#1 X#3 <input type="checkbox"/>#5 X#7 <input type="checkbox"/>#2 X#4 <input type="checkbox"/>#6 <input type="checkbox"/>#8</p>
<p>4. Issues. Teachers of science recognize that informed citizens must be prepared to make decisions and take action on contemporary science- and technology-related issues of interest to the general society. They require students to conduct inquiries into the factual basis of such issues and to assess possible actions and outcomes based upon their goals and values. To show that they are prepared to engage students in studies of issues related to science, teachers of science must demonstrate that they (a) understand socially important issues related to science and technology in their field of licensure, as well as processes used to analyze and make decisions on such issues; and (b) engage students successfully in the analysis of problems, including considerations of risks, costs, and benefits</p>	<p><input type="checkbox"/>#1 X#3 X#5 <input type="checkbox"/>#7 <input type="checkbox"/>#2 X#4 <input type="checkbox"/>#6 <input type="checkbox"/>#8</p>

OKLAHOMA STANDARD	APPLICABLE ASSESSMENTS FROM SECTION II
of alternative solutions; relating these to the knowledge, goals and values of the students.	
<p>5. General Skills of Teaching. Teachers of science create a community of diverse learners who construct meaning from their science experiences and possess a disposition for further exploration and learning. They use, and can justify, a variety of classroom arrangements, groupings, actions, strategies, and methodologies. To show that they are prepared to create a community of diverse learners, teachers of science must demonstrate that they (a) vary their teaching actions, strategies, and methods to promote the development of multiple student skills and levels of understanding; (b) successfully promote the learning of science by students with different abilities, needs, interests, and backgrounds; (c) successfully organize and engage students in collaborative learning using different student group learning strategies; (d) successfully use technological tools, including but not limited to computer technology, to access resources, collect and process data, and facilitate the learning of science; (e) understand and build effectively upon the prior beliefs, knowledge, experiences, and interests of students; and (f) create and maintain a psychologically and socially safe and supportive learning environment (optional to address this standard in the NSTA report).</p>	<input type="checkbox"/> #1 X #3 <input type="checkbox"/> #5 X #7 <input type="checkbox"/> #2 X #4 X #6 <input type="checkbox"/> #8
<p>6. Curriculum. Teachers of science plan and implement an active, coherent, and effective curriculum that is consistent with the goals and recommendations of the National Science Education Standards. They begin with the end in mind and effectively incorporate contemporary practices and resources into their planning and teaching. To show that they are prepared to plan and implement an effective science curriculum, teachers of science must demonstrate that they (a) understand the curricular recommendations of the National Science Education Standards, and can identify, access, and/or create resources and activities for science education that are consistent with the standards; and (b) plan and implement internally consistent units of study that address the diverse goals of the National Science Education Standards and the needs and abilities of students.</p>	<input type="checkbox"/> #1 X #3 X #5 <input type="checkbox"/> #7 <input type="checkbox"/> #2 <input type="checkbox"/> #4 <input type="checkbox"/> #6 <input type="checkbox"/> #8
<p>7. Science in the Community. Teachers of science relate their discipline to their local and regional communities, involving stakeholders and using the individual, institutional, and natural resources of the community in their teaching. They actively engage students in science-related studies or activities related to locally important issues. To show that they are prepared to relate science to the community, teachers of science must demonstrate that they (a) identify ways to relate science to the community, involve stakeholders, and use community resources to promote the learning of science; and (b) involve students successfully in activities that relate science to resources and stakeholders in the community or to the resolution of issues important to the community.</p>	<input type="checkbox"/> #1 <input type="checkbox"/> #3 <input type="checkbox"/> #5 X #7 <input type="checkbox"/> #2 X #4 <input type="checkbox"/> #6 <input type="checkbox"/> #8
<p>8. Assessment. Teachers of science construct and use effective assessment strategies to determine the backgrounds and achievements of learners and facilitate their intellectual, social, and personal development. They assess students fairly and equitably, and require that students engage in ongoing self-assessment. To show that they are prepared to use assessment effectively, teachers of science must demonstrate that they (a) use multiple assessment tools and strategies to achieve important goals for</p>	<input type="checkbox"/> #1 X #3 X #5 <input type="checkbox"/> #7 <input type="checkbox"/> #2 <input type="checkbox"/> #4 <input type="checkbox"/> #6 <input type="checkbox"/> #8

OKLAHOMA STANDARD	APPLICABLE ASSESSMENTS FROM SECTION II
<p>instruction that are aligned with methods of instruction and the needs of students; (b) use the results of multiple assessments to guide and modify instruction, the classroom environment, or the assessment process; and (c) use the results of assessments as vehicles for students to analyze their own learning, engaging students in reflective self-analysis of their own work.</p>	
<p>9. Safety and Welfare. Teachers of science organize safe and effective learning environments that promote the success of students and the welfare of all living things. They require and promote knowledge and respect for safety, and oversee the welfare of all living things used in the classroom or found in the field. To show that they are prepared, teachers of science must demonstrate that they (a) understand the legal and ethical responsibilities of science teachers for the welfare of their students, the proper treatment of animals, and the maintenance and disposal of materials; (b) know and practice safe and proper techniques for the preparation, storage, dispensing, supervision, and disposal of all materials used in science instruction; (c) know and follow emergency procedures, maintain safety equipment, and ensure safety procedures appropriate for the activities and the abilities of students; and (d) treat all living organisms used in the classroom or found in the field in a safe, humane, and ethical manner and respect legal restrictions on their collection, keeping, and use.</p>	<p><input type="checkbox"/>#1 <input checked="" type="checkbox"/>#3 <input type="checkbox"/>#5 <input type="checkbox"/>#7 <input type="checkbox"/>#2 <input checked="" type="checkbox"/>#4 <input type="checkbox"/>#6 <input checked="" type="checkbox"/>#8</p>
<p>10. Professional Growth. Teachers of science strive continuously to grow and change, personally and professionally, to meet the diverse needs of their students, school, community, and profession. They have a desire and disposition for growth and betterment. To show their disposition for growth, teachers of science must demonstrate that they (a) engage actively and continuously in opportunities for professional learning and leadership that reach beyond minimum job requirements; (b) reflect constantly upon their teaching and identify ways and means through which they may grow professionally; (c) use information from students, supervisors, colleagues and others to improve their teaching and facilitate their professional growth; and (d) interact effectively with colleagues, parents, and students; mentor new colleagues; and foster positive relationships with the community. (optional to address this standard in the NSTA report)</p>	<p><input type="checkbox"/>#1 <input type="checkbox"/>#3 <input checked="" type="checkbox"/>#5 <input checked="" type="checkbox"/>#7 <input type="checkbox"/>#2 <input type="checkbox"/>#4 <input type="checkbox"/>#6 <input type="checkbox"/>#8</p>

SECTION IV—EVIDENCE FOR MEETING STANDARDS

ASSESSMENT#1: CONTENT KNOWLEDGE

Description of the Assessment and its Use in the Program

Assessment #1 is the Oklahoma Subject Area Test (OSAT). The OSAT is a standardized examination for determining the content knowledge of pre-service teachers. The Biological Science OSAT includes approximately 80 selected-response questions and 1 constructed-response assignment. Candidates can score a maximum of 300 in each subarea and must score a composite of 240 to pass.

The OSAT results are used to assess candidates' overall content knowledge in biological sciences and are a requirement for licensure in the state of Oklahoma. Score information is also used by SGU to assess our candidates' performance relative to other candidates in this area both within our state and nationally. Table 1 shows the criteria and scoring guides for each test.

Table 1. Criteria and Scoring Guides for OSAT

Test Code	Sub Areas	# of Selected Response Questions	Proportion of Total Test Scaled Score to Selected Response	# of Constructed Response Questions	Proportion of Total Test Scaled Score to Constructed Response	Subarea Represented by Constructed Response
010	I. Foundations of Scientific Inquiry II. Cell Structure and Function III. Heredity and Biological Adaptation IV. Matter, Energy, and Organization in Organisms V. Interdependence of Organisms	80	85%	1	15%	Subarea I: Foundations of Scientific Inquiry

Brief Analysis of Data

Table 2 shows how data will be reported for OSAT scores for teacher candidates who complete the Secondary Life Science/Biology Education Program. A brief analysis of the data will follow.

Table 2. Candidate's Scores on OSAT*

Candidate(s) (yr)	Composite	Subarea 1 Foundations of Scientific Inquiry	Subarea 2 Cell Structure and Function	Subarea 3 Heredity and Biological Adaptation	Subarea 4 Matter, Energy, and Organization in Organisms	Subarea 5 Interdependence of Organisms	Pass-Rate: Candidates meeting minimum expectation
1 (yr)							
Statewide Mean Scaled Score							

Passing score=240

* The program currently has one candidate who has taken the OSAT but at the time of this report results were not available.

Alignment of the Assessment with NSTA standards

Attachment C illustrates how test competencies on the OSAT align with National Science Teachers Association (NSTA) standards. This information, provided by the state of Oklahoma, denotes a correlation between the OSAT test competencies and NSTA standards if the content of a standard is covered in whole or in part.

ATTACHMENT C

Standard	OSAT Competency
1a.Content: Understands and conveys to students the concepts, principles, theories, laws and interrelationships of their field of licensure as recommended by NSTA.	Anatomy and Physiology (0016,0017,0018,0019,0020, 0021,0022,0023,0024,0025) Ecology (0026,0027,0028,0029) Behavior (0019,0024) Evolution and Genetics (0012,0013,0014,0015) Cell Biology and Microbiology (0006,0007,0008,0009, 0010, 0011, 0017) Diversity (0015,0016) Growth (0011,0016,0017,0018,0019) Human Biology (0020,0021,0022,0023,0024,0025) Chemistry, Earth/Space Sciences/Physics (0001,0007, 0028) Mathematics/Statistics (0001,0004)
2a. Nature of Science: history, philosophy and practice of science	0001,0002,

How the Data Provides Evidence for Meeting the Standards

Analysis of the data in Table 2, makes it possible to identify areas in which students’ content knowledge is strong or weak (Foundations of Scientific Inquiry, Cell Structure and Function, Heredity and Biological Adaptation, Matter, Energy, and Organization in Organisms, and/or Interdependence of Organisms). This information will help the unit to make program and/or coursework changes. Because the unit has not had any program completers over the past three years, there is no data to report at this time. This is explained in Section I- Attachment A, Candidates and Program Completers.

ASSESSMENT #2- CONTENT KNOWLEDGE

ASSESSMENT#2: CONTENT KNOWLEDGE

Secondary Life Science/Biology Education majors must complete required science and math coursework aligned with state standards and NSTA guidelines. Candidates' grades from required coursework are another means by which the unit determines their knowledge of content in Biological Sciences.

Average course grades, with range and percent of candidates meeting minimum expectation are included. All candidates must achieve a C or better in all required coursework, and maintain an overall GPA of 2.5. Table 3 will be used to show candidates' grades in required science and math coursework. The Program of Study is included as Appendix I to this report.

Brief Analysis of Data

Table 3 will report candidates' grades in required science and math coursework with a brief analysis of the data.

Table 3. Candidates' Grades in Required Science and Math Coursework

Course	2015, N= 1		Year, N=		Year, N=	
	Mean course grade and range	% of candidates meeting minimum expectation	Mean course grade and range	% of candidates meeting minimum expectation	Mean course grade and range	% of candidates meeting minimum expectation
MA 1513	4.0 4.0-4.0	100				
LS 1113	4.0 4.0-4.0	100				
LS 1111	4.0 4.0-4.0	100				
PS 1363	4.0 4.0-4.0	100				
PS 1361	4.0 4.0-4.0	100				
LS 1023	4.0 4.0-4.0	100				
PS 1113	3.0 3.0-3.0	100				
PS 1111	3.0 3.0-3.0	100				
*PS 1213	NA	NA				
*PS 1211	NA	NA				
*PS 1473	4.0 4.0-4.0	100				
*PS 1471	3.0 3.0-3.0	100				
LS 2014	3.0 3.0-3.0	100				
LS 3214	3.0 3.0-3.0	100				
LS 3333	4.0 4.0-4.0	100				
KI 4263	4.0 4.0-4.0	100				

*MA1814	NA	NA			
*MA 2054	3.0 3.0-3.0	100			
MA 3013	4.0 4.0-4.0	100			
NS 3263	4.0 4.0-4.0	100			

A=4, B=3, C=2 * Denotes candidates have an option of either course

Grade Policy and Minimum Requirements: Students are graded on a four point scale (A= 4, B=3, C=2, D=1, F=0). According to the undergraduate catalog, A= Excellent, B= Above Average, C= Average, D= Below Average and F= Fail.

Alignment of coursework with NSTA Standards

All Secondary Life Science/Biology Education majors required coursework is aligned with Competency Requirements for All Science Teachers, Core Competencies for Biology, Advanced Competencies for Biology, Supporting Competencies and NSTA standards. Table 4 reports this alignment.

Table 4. Alignment of Coursework to NSTA Standards, *denotes option of either course

NSTA Standard	Competency Requirements for All Science Teachers	Required Course and Number	Course Description, if Necessary
1a	1-Multiple ways we organize our perceptions of the world and how systems organize the studies and knowledge of science.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab LS 1023 Environmental Science LS 2014 Zoology LS 3214 Human Physiology PS 1363 Chemistry I, PS 1361 Lab PS 1113 Physics I, PS 1111 Lab * PS 1473 Chemistry II, PS 1471 Lab or *PS 1213 Physics II, PS 1211 Lab	LS 1113 Principles of Biology This course provides the student with the basic principles of biology. These include cellular organization and function, genetics, reproduction and development, natural selection, classification of living organisms, representative taxa, ecology, and environmental and conservation issues.
2b	2-Nature of scientific evidence and the use of models for explanation.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab PS 1363 Chemistry I, PS 1361 Lab PS 1113 Physics I, PS 1111 Lab LS 1023 Environmental Science LS 2014 Zoology MA 3013 Elementary Statistics * PS 1473 Chemistry II, PS 1471 Lab or *PS 1213 Physics II, PS 1211 Lab	LS 1023 Environmental Science Students explore the interrelationships between humans and their world. Topics include environmental impacts of indigenous and industrial human activity, limiting factors that influence human populations, and strategies for sustainability. Discussions consider the social, political, ethical, and economic aspects of environmental decision-making.
1a	3-Measurement as a way of knowing and organizing observations of constancy and change.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab PS 1363 Chemistry I, PS 1361	

		Lab PS 1113 Physics I, PS 1111 Lab LS 2014 Zoology MA 3013 Elementary Statistics * PS 1473 Chemistry II, PS 1471 Lab or *PS 1213 Physics II, PS 1211 Lab	
2a	4-Evolution of natural systems and factors that result in evolution or equilibrium.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab LS 1023 Environmental Science LS 2014 Zoology LS 3214 Human Physiology LS 3333 Genetics	
1a	5-Interrelationships of form, function, and behaviors in living and nonliving systems.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab PS 1363 Chemistry I, PS 1361 Lab PS 1113 Physics I, PS 1111 Lab LS 1023 Environmental Science LS 2014 Zoology LS 3214 Human Physiology LS 3333 Genetics * PS 1473 Chemistry II, PS 1471 Lab or *PS 1213 Physics II, PS 1211 Lab	
Core Competencies for Biology			
1a	1-Life processes in living systems including organization of matter and energy.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab LS 1023 Environmental Science LS 2014 Zoology LS 3214 Human Physiology	
1a	2-Similarities and differences among animals, plants, fungi, microorganisms, and viruses.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab LS 2014 Zoology	
1a	3-Principles and practices of biological classification.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab LS 2014 Zoology	
2a	4-Scientific theory and principles of biological evolution	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab LS 2014 Zoology LS 1023 Environmental Science	

1a	5-Ecological systems including the interrelationships and dependencies of organisms with each other and their environments.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab LS 2014 Zoology LS 1023 Environmental Science	
1a	6-Population dynamics and the impact of population on its environment.	LS 2014 Zoology LS 1023 Environmental Science	
1a	7-General concepts of genetics and heredity.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab LS 2014 Zoology LS 3333 Genetics	
1a	8-Organization and functions of cells and multi-cellular systems.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab LS 2014 Zoology LS 3214 Human Physiology	
1a	9-Behavior of organisms and their relationships to social systems.	LS 2014 Zoology	
1a	10-Regulation of biological systems including homeostatic mechanisms.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab LS 2014 Zoology LS 3214 Human Physiology	
3a	11-Fundamental processes of modeling and investigating in the biological sciences.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab MA 3013 Elementary Statistics	
4a	12-Applications of biology in environmental quality and in personal and community health.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab LS 1023 Environmental Science LS 3214 Human Physiology	
Advanced Competencies for Biology			
1a	13-Bioenergetics including major biochemical pathways.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab LS 3214 Human Physiology	
1a	14-Biochemical interactions of organisms with their environments.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab LS 2014 Zoology	
1a	15-Molecular genetics and heredity and mechanisms of genetic modification.	LS 3333 Genetics	
2a	16-Molecular basis for evolutionary theory and classification.	LS 2014 Zoology LS 3333 Genetics	
1a	17-Causes, characteristics and avoidance of viral, bacterial, and	LS 2014 Zoology LS 3214 Human Physiology	

	parasitic diseases.		
4a	18-Issues related to living systems such as genetic modification, uses of biotechnology, cloning, and pollution from farming.	LS 2014 Zoology LS 3333 Genetics LS 1023 Environmental Science	
2a	19-Historical development and perspectives in biology including contributions of significant figures and underrepresented groups, and the evolution of theories in biology.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab LS 2014 Zoology LS 3333 Genetics	
1d	20-How to design, conduct, and report research in biology.	MA 3013 Elementary Statistics	
4a	21-Applications of biology and biotechnology in society, business, industry, and health fields.	LS 1113 Principles of Biology and LS 1111 Principles of Biology Lab LS 3214 Human Physiology LS 3333 Genetics	
Supporting Competencies			
1b	22-24 <u>Chemistry</u> , including general chemistry and biochemistry with basic laboratory techniques.	PS 1363 Chemistry I, PS 1361 Lab LS 3214 Human Physiology * PS 1473 Chemistry II, PS 1471 Lab (optional with Physics II)	
1b	25-31 <u>Physics</u> including light, sound, optics, electricity, energy and order, magnetism, and thermodynamics.	PS 1113 Physics I, PS 1111 Lab *PS 1213 Physics II, PS 1211 Lab (optional with Chemistry II)	
1b	32-37 <u>Earth and space sciences</u> including energy and geochemical cycles, climate, oceans, weather, natural resources, and changes in the Earth.	LS 1023 Environmental Science	
1e	38-39 <u>Mathematics</u> , including probability and statistics.	MA 3013 Elementary Statistics *MA 1814 Pre-Calculus/Analytic Geometry or *MA 2054 Calculus I	

Safety is addressed in all lab courses, at the beginning of the semester and then again at the start of each lab. Animal care protocols and standards are addressed throughout required science coursework. For example, appropriate euthanasia of dissection subjects is addressed in Zoology and euthanasia of fruit flies is covered in Genetics Lab. Although grade percentages for Safety and Welfare (standard 9 a-d) vary from class to class, they generally account for approximately 10% of the students' grade in that lab or class.

How the Data Provides Evidence for Meeting the Standards

The analysis of data from Table 3 make it possible to identify areas in which students content knowledge may be strong or weak, as a result of their coursework grades. This information helps

the unit make program and/or coursework changes and/or provide the candidate with additional instruction before taking the OSAT. Because the unit does not have any program completers over the past three years, there is no data to report at this time. This is explained in Section I-Attachment A, Candidates and Program Completers.

ASSESSMENT#3: LESSON PLANNING

Description of the Assessment

Lesson planning initially takes place in Methods of Teaching Secondary Life Science/Biology (NS 3263) and continues in Student Teaching. Specifically, candidates are required to develop lesson plans in Methods of Teaching Secondary Life Science/Biology for each of the science areas (biology, chemistry, physics, and earth/space science) and then one unit plan. Candidates implement a variety of teaching and assessment strategies within their lesson plans, which also include science experiments. They teach three lessons in class for their peers and two during the field experience component. During the methods course, candidates also are required to develop a yearlong curriculum in science and create an annotated reference and resource file for the scope and sequence curriculum they will be developing. Candidates are expected to align all lessons to both NSTA and NSES content standards. The lesson plan/unit template and rubric are included in Attachment D.

Brief Analysis of Data

Mean scores from the Unit Lesson Plan are reported in Table 5 (Final Grade on Unit Lesson Plan), along with range of scores. These scores are used to determine the effectiveness of the candidates' ability to develop and teach lessons. It is crucial that candidates make satisfactory progress in this area before Student Teaching. Candidates are required to resubmit any lesson plan with a score of less than "C" (2).

Table 5. Candidates' Final Grade on Unit Lesson Plan

Component of Evaluation	Year (2015), N= 1		Year (), N=		Year (), N=	
	Mean score and range	% of candidates meeting minimum expectation	Mean score and range	% of candidates meeting minimum expectation	Mean score and range	% of candidates meeting minimum expectation
Knowledge of student and cultural diversity	4.0 4.0-4.0	100				
Objectives aligned with state and (NSTA) content standards	4.0 4.0-4.0	100				
Unifying concepts of science *						
NSES alignment *						
Nature of Science	3.0 3.0-3.0	100				
Inquiry instruction and resources	4.0 4.0-4.0	100				
Issues in science *						
Community and science *						
Knowledge of and use of technology	4.0 4.0-4.0	100				
Knowledge and use of assessments	3.0 3.0-3.0	100				
Safety and Welfare - 9a *						
Safety and Welfare - 9b	4.0 4.0-4.0	100				
Safety and Welfare - 9c *						

Safety and Welfare - 9d *						
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4=Excellent, 3=Satisfactory, 2= Needs Improvement, 1= Unsatisfactory
 * Component was added after candidate completed methods coursework.

Alignment of Lesson Plan Rubric with NSTA Standards and NSES standards

Each lesson that candidates develop in Methods of Teaching Secondary Life Science/Biology also aligns with the NSTA Standards and the unifying concepts of science according to NSES. Attachment D contains the Lesson Plan/Unit Template and Evaluation Rubric, with alignment to state, NSTA, and NSES standards (in parentheses).

ATTACHMENT D

Template for Life Science/Biology Lesson Plan/Unit Template

Unit Title				
Grade Level				
Duration				
Unit Objectives, Strategies, Activities, etc	Standards Alignment (Oklahoma, NSTA, and NSES) Indicate standards by number	Assessments and modifications to instruction based on assessments	Materials, resources used, organization, safety and welfare procedures	Instructional groupings and strategies to differentiate instruction
*Add rows as necessary				

Rubric for Life Science/Biology Lesson Plan/Unit with Alignment to NSTA Standards

Components with (alignment)	Excellent (4)	Satisfactory (3)	Needs Improvement (2)	Unsatisfactory (1)	Score
Knowledge of student cultural diversity (5e)	Lesson clearly creates and maintains a safe and supportive learning environment through the promotion of science education to students of differing abilities, needs, interests, and backgrounds by building on their prior knowledge and experiences.	Lesson creates and a safe and supportive learning environment through the promotion of science education to students of differing abilities, needs, interests, and backgrounds by building on prior knowledge and	Lesson attempts to create a safe and supportive learning environment through the promotion of science education to students of differing abilities, needs, interests, and backgrounds.	Lesson does not create and maintain a safe and supportive learning environment through the promotion of science education to students of differing abilities, needs, interests, and backgrounds.	

		experiences.			
Objectives aligned with state and (NSTA) content standards (6a)	All objectives are aligned with state and NSTA standards. Lesson clearly demonstrates a thorough understanding of the curricular recommendations of the National Science Education Standards, and ability to identify, access, and/or create resources and activities for science education that are consistent with the standards.	All objectives are aligned with state and NSTA standards. Lesson demonstrates an understanding of the curricular recommendations of the National Science Education Standards, and ability to identify, access, and/or create resources and activities for science education that are consistent with the standards.	Most objectives are aligned with state and NSTA standards. Lesson demonstrates an understanding of the curricular recommendations of the National Science Education Standards and ability to identify or access resources and activities for science education that are consistent with the standards.	Most objectives are aligned with state and NSTA standards. Lesson plan narrowly demonstrates an understanding of the curricular recommendations of the National Science Education Standards and ability to identify or access resources and activities for science education that are consistent with the standards.	
Unifying concepts in science (1b)	Lesson clearly communicates unifying concepts of science delineated by the National Science Education Standards (NSES).	Lesson communicates unifying concepts of science delineated by the National Science Education Standards (NSES).	Lesson does not clearly communicate unifying concepts of science delineated by the National Science Education Standards (NSES).	Lesson does not address the National Science Education Standards (NSES).	
NSES alignment (6b)	Activities and resources are clearly consistent with NSES standards and the lesson clearly addresses the diverse goals of the standards as well as individual student needs and abilities.	Activities and resources are consistent with NSES standards and the lesson somewhat addresses the diverse goals of the standards as well as individual student needs and abilities.	Activities and resources are somewhat consistent with NSES standards and the lesson does not address the diverse goals of the standards as well as individual student needs and abilities.	Activities and resources are not clearly consistent with NSES standards and the lesson does not clearly address the diverse goals of the standards as well as individual student needs and abilities.	
Nature of Science (2c)	Lesson clearly shows an understanding of the history, philosophy, and practice of science by engaging students in critical analysis of theories made in the name of science.	Lesson demonstrates an understanding of the history, philosophy, and practice of science by providing students with critical analyses of theories made in the name of science.	Lesson demonstrates an understanding of the history, philosophy, and practice of science.	Lesson does not demonstrate an understanding of the history, philosophy, and practice of science	
Inquiry instruction and resources (3b)	Lesson clearly engages students in developmentally appropriate investigations that involve them in studies of various methods of scientific inquiry and in active learning by using a variety of classroom resources, groupings, actions, strategies, and methodologies.	Lesson exhibits plans that engage students in studies of various methods of scientific inquiry and in active learning by using a variety of classroom resources, groupings, actions, strategies, and methodologies.	Lesson exhibits plans that include various methods of scientific inquiry, using a variety of classroom resources, groupings, actions, strategies, and methodologies.	Lesson does not exhibit plans that include various methods of scientific inquiry, using a variety of classroom resources, groupings, actions, strategies, and methodologies.	

Issues in science (4b)	Lesson plans provide opportunities for students to analyze problems and consider risk, costs, and benefits of alternative solutions that relate to students' values.	Lesson plans provide opportunities for students to analyze problems and consider alternative solutions.	Lesson plans provide limited opportunities for students to analyze problems and consider alternative solutions.	Lesson plans do not provide opportunities for students to analyze problems and consider alternative solutions.	
Community and science (4a)	Lesson plans provide students opportunities to interact with local science resources and stakeholders to resolve issues relevant to the community.	Lesson plans provide students opportunities to resolve issues relevant to the community.	Lesson plans provide students limited opportunities to resolve issues relevant to the community.	Lesson plans do not provide students opportunities to resolve issues relevant to the community.	
Knowledge of and use of technology (5d)	Lesson clearly demonstrates knowledge and use of technology to facilitate scientific learning by accessing resources or collecting and exploring data.	Lesson demonstrates knowledge and use of technology to facilitate scientific learning by accessing resources or collecting and exploring data.	Lesson demonstrates some knowledge of technology to facilitate scientific learning by accessing resources or collecting and exploring data.	Lesson does not demonstrate knowledge or use of technology to facilitate scientific learning by accessing resources or collecting and exploring data.	
Use of assessments (8a)	Lesson describes multiple assessments aligned with objectives and adapted to meet the needs of individual students.	Lesson describes assessment aligned with objectives and adapted to meet the needs of individual students.	Lesson describes assessment partially aligned with objectives or do not adequately show how the lesson is adapted to meet the needs of individual students.	Lesson does not describe multiple assessments that are aligned with objectives. Lesson does not demonstrate how the lesson is adapted to meet the needs of individual students.	
Assessment results to guide instruction (8b)	Candidate uses the results of multiple assessments to make appropriate modifications to the instructional plan, the classroom environment, or the assessment process.	Candidate uses the results of multiple assessments to make appropriate modifications to the instructional plan or classroom environment or assessment process.	Candidate uses the results of an assessment to make appropriate modifications to the instructional plan or classroom environment or assessment process.	Candidate does not use results of assessments to modify instructional plans, classroom environment or assessment process.	
Use of assessment results for student reflective self-analysis (8c)	Candidate uses the results of multiple assessments as a vehicle to engage student in reflective self-analysis of their own work.	Candidate uses the results of a singular assessment as a vehicle to engage student in reflective self-analysis of their own work.	Candidate uses the results of assessment but not as a vehicle to engage students in reflective self-analysis of their own work.	Candidate does not use assessment results with students in any way.	
Safety and Welfare (9a)	Lesson clearly indicates the legal and ethical responsibilities of the teacher for the welfare of their students, the proper treatment of animals, and the maintenance and disposal materials.	Lesson clearly indicates 2 of the following 3 items: 1) the legal and ethical responsibilities of the teacher for the welfare of their students 2) the proper treatment of animals	Lesson clearly indicates 1 of the following 3 items OR is vague in addressing each item: 1) the legal and ethical responsibilities of the teacher for the welfare of their students 2) the proper treatment of animals	Lesson does not indicate the legal and ethical responsibilities of the teacher for the welfare of their students, the proper treatment of animals, and the maintenance and disposal materials.	

		the maintenance 3) disposal of materials.	the maintenance 3) disposal of materials.		
Safety and Welfare (9b)	Lesson clearly indicates appropriate preparation for a safe and effective learning environment that promotes the success of students and the welfare of all living things.	Lesson somewhat indicates appropriate preparation for a safe and effective learning environment.	Lesson vaguely indicates appropriate preparation (some of which is incorrect) for a safe and effective learning environment that promotes the success of students and the welfare of all living things.	Lesson does not indicate appropriate preparation for a safe and effective learning environment that promotes the success of students and the welfare of all living things.	
Safety and Welfare (9c)	Lesson clearly outlines appropriate emergency procedures and safety procedures for the activities and the abilities of students and indicates appropriate maintenance of safety equipment.	Lesson somewhat outlines appropriate emergency procedures and safety procedures for the activities and the abilities of students and indicates appropriate maintenance of safety equipment.	Lesson somewhat outlines appropriate emergency procedures and safety procedures for the activities and the abilities of students but does not indicate appropriate maintenance of safety equipment.	Lesson does not outline appropriate emergency procedures and safety procedures for the activities and the abilities of students and indicates appropriate maintenance of safety equipment.	
Safety and Welfare (9d)	Lesson clearly addresses humane and ethical treatment of living organisms used in the classroom or found in the field and respects legal restrictions on their collection, keeping, and use.	Lesson clearly addresses humane and ethical treatment of living organisms used in the classroom or found in the field.	Lesson somewhat addresses humane and ethical treatment of living organisms used in the classroom or found in the field.	Lesson does not clearly address humane and ethical treatment of living organisms used in the classroom or found in the field and respects legal restrictions on their collection, keeping, and use.	
Total Score= /64 = %					

How Data Provides Evidence for Meeting the Standards

Table 5 reports grades for life science/biology program completers in lesson planning. By analyzing data from this instrument, the unit can determine whether teacher candidates at SGU are able to successfully plan and implement lessons and units of study that address the diverse goals of the National Science Education Standards and meet the needs and abilities of all students. Scores for the one candidate currently in the program are shown in Table 5. The unit has added components to this rubric, as indicated with an asterisk, since the time the candidate completed methods coursework (NS 3263). The scores indicate the candidate successfully met each component of evaluation with a score of excellent or satisfactory.

ASSESSMENT#4: STUDENT TEACHING

Description of the Assessment

Candidates complete a 12-week (60 day) student teaching experience during their senior year. This calls for the candidate to work with a cooperating teacher in order to gain the necessary skills to be able to teach independently. The student teacher takes responsibility for teaching and managing the classroom in graduated increments over the 12 weeks, until he/she has full teaching and classroom management responsibilities. Both the cooperating teacher and the university supervisor evaluate the student teacher on the Student Teaching Monitoring Report (Attachment E) a minimum of three times during the 12-week period. Candidates must score a mean of 1.75 or better on each component of the Student Teaching Monitoring Report. It is expected that they may “need improvement” in some areas on their first evaluation.

Brief Analysis of Data

Table 6 illustrates how student teachers’ mean scores will be reported on the Student Teaching Monitoring Report. Both the cooperating teacher and university supervisor observe and document the candidates’ performance during the 12-week period. A rubric explaining the criteria for determining performance ratings is also provided (Attachment E).

Table 6. Candidates’ Mean Scores on the Student Teacher Monitoring Report

Component of Evaluation	Year (), N=		Year (), N=		Year (), N=	
	Mean score	% of candidates meeting minimum expectation	Mean score	% of candidates meeting minimum expectation	Mean score	% of candidates meeting minimum expectation
Classroom Management -5f						
Instructional Behaviors - 5a						
Safety and Welfare - 9a						
Safety and Welfare - 9b						
Safety and Welfare - 9c						
Safety and Welfare - 9d						
Curriculum and Planning – 8b						
Content Knowledge and Attitudes - 1a						
Content Knowledge and Attitudes - 2a						
Content Knowledge and Attitudes - 3a						
Content Knowledge and Attitudes - 4a						
Content Knowledge and Attitudes - 7b						
Professional Dispositions and Values - 10d						

3=Target, 2= Satisfactory, 1= Needs Improvement

Alignment of the Assessment with NSTA standards

Assessment #4 incorporates language of the NSTA standards, the Oklahoma Criteria for Effective Teaching, and the conceptual framework of the SGU education program. Table 7 demonstrates alignment of the five components of the Student Teaching Monitoring Report to NSTA standards.

Table 7. Alignment of Student Teacher Monitoring Report to NSTA Standards

Components of Student Teacher Monitoring Report	Alignment to NSTA Standards
Classroom Management	5f
Instructional behaviors	5a
Safety and Welfare	9a, 9b, 9c, 9d
Curriculum and Plans	8b
Content Knowledge and Attitudes	1a, 2a, 3a, 4a, 7b
Issues in science and Community and science	4a, 4b
Professional Dispositions and Values	10d

ATTACHMENT E

St. Gregory's University
Student Teacher Monitoring Report
Secondary Life Science and Biology

Semester: _____

Date: _____

Teacher Candidate _____ School/Grade _____

Cooperating Teacher _____ University Supervisor _____

Please check each item below for the teacher candidate.

SKILLS				
Classroom Management	Target	Satisfactory	Needs Improvement	Not Observed
Creates and maintain a psychologically and socially safe and supportive learning environment.				
Focuses attention and develops a readiness for the lesson.				
Uses time e appropriate to maximize time on task.				
Maintains appropriate classroom behavior/discipline.				
Discourages negative behaviors				
Encourages and facilitates positive student behaviors				
Defines expectations of students and consequences of behavior clearly				
Instructional behaviors	Target	Satisfactory	Needs Improvement	Not Observed
Communicates instructional objectives appropriately and simply.				
Understands and builds effectively upon the prior beliefs, knowledge, experiences, and interests of students.				
Helps students relate lesson to personal experiences.				
Successfully organizes and engages students in collaborative learning using different student group learning strategies.				
Modifies instruction effectively as needed for individualization.				
Includes all students meaningfully in the educational process, exhibiting both knowledge of and sensitivity to differences.				
Successfully uses technological tools, including but not limited to computer technology, to access resources, collect and process data, and facilitate the learning of science.				
Demonstrates developmentally appropriate attitudes and skills,				

presents examples of actions, processes, and products.				
Adjusts, modifies, and/or re-teaches based on monitoring and assessment of student progress.				
Guides the learner to perform the task while being supervised by the teacher.				
Provides opportunities for independent practice of skills without direct supervision by the teacher.				
Summarizes and fits into context what has been taught, actively involving the student.				
Safety and Welfare				
Understands the legal and ethical responsibilities of science teachers for the welfare of their students, the proper treatment of animals, and the maintenance and disposal materials.				
Organizes safe and effective learning environments that promote the success of students and the welfare of all living things.				
Know and follow emergency procedures, maintain safety equipment, and ensure safety procedures appropriate for the activities and the abilities of students.				
Treats all living organisms used in the classroom or found in the field in a safe, humane, ethical manner and respects legal restrictions on their collection, keeping, and use.				
Curriculum and Plans	Target	Satisfactory	Needs Improvement	Not Observed
Designs appropriate daily plans that provide integrated learning experiences that achieve objectives.				
Maintains accurate, well organized records of student progress.				
Utilizes multiple assessments to diagnose needs and to measure student achievement.				
Provides for a variety of instructional materials.				
Provides for diverse, global perspectives throughout the curriculum.				
Comments:				
KNOWLEDGE				
Content Knowledge and Attitudes	Target	Satisfactory	Needs Improvement	Not Observed
Understands and successfully conveys to students the major concepts, principles, theories, laws, and interrelationships of life science/biology.				
Understands and engages students successfully in studies of the nature of science, which include the evolution of natural systems and the interrelationships of form, function, and behaviors in living and nonliving systems.				
Understands scientific inquiry and engages students to use their observations and data to solve scientific investigations.				
Understands and engages students in analyzing socially important issues related to life science/biology				
Understands and effectively applies concepts from other sciences and mathematics to the teaching of life science/biology, which include the basic concepts of chemistry, physics and Earth and space sciences.				
Involves students successfully in activities that relate life science/ biology to resources and stakeholders in the community.				
Comments:				
DISPOSITIONS				
Professional	Target	Satisfactory	Needs Improvement	Not Observed
Maintains appropriate grooming, dress, posture, actions.				
Demonstrates reliability and dependability in fulfilling all responsibilities.				

Interacts effectively with colleagues, parents, and students.				
Exemplifies responsible and mature behavior.				
Helps to foster collaboration and cooperation with the community				
Produces effective written and oral communication.				
Shows effective critical thinking and problem solving skills.				
Uses information from students, supervisors, colleagues and others to reflect upon their teaching and identify ways and means through which they may grow professionally				
Values	Target	Satisfactory	Needs Improvement	Not Observed
Models living a life of balance.				
Provides meaningful character training and modeling for students.				
Demonstrates reflective practice				
Models intellectual curiosity, a love of learning, and search for wisdom				
Models responsibility and self-discipline.				
Comments:				

1. Describe how the student teacher demonstrates and uses appropriate knowledge of subject matter:
2. Describe how the student demonstrates skills and abilities in planning and implementing appropriate teaching strategies and methods.
3. Major strength areas:
4. Areas needing improvement:
5. Goals for improvement:
6. Future action plans:

Teacher Candidate signature: _____

Cooperating Teacher signature: _____

SGU Supervisor signature: _____

Scoring Rubric
Student Teacher Monitoring Report
Secondary Life Science/Biology

Classroom Management		
Target	Satisfactory	Needs Improvement
Creates and maintain a psychologically and socially safe and supportive learning environment.	Creates a psychologically and socially safe and supportive learning environment.	Does not create and maintain a psychologically and socially safe and supportive learning environment.
Focuses attention and develops a readiness for the lesson.	Develops a readiness for the lesson.	Displays difficulty focusing attention and developing a readiness for the lesson.
Uses time appropriate to maximize time on task.	Generally uses time appropriate to maximize time on task.	Does not use time appropriate to maximize time on task.
Maintains appropriate classroom behavior/discipline.	Generally maintains appropriate classroom behavior/discipline.	Has difficulty maintaining appropriate classroom behavior/discipline.
Discourages negative behaviors	Generally discourages negative behaviors	Has difficulty with discouraging negative behaviors
Encourages and facilitates positive student behaviors	Generally encourages and facilitates positive student behaviors	Has difficulty encouraging and facilitating positive student behaviors
Defines expectations of students and consequences of behavior clearly	Generally defines expectations of students and consequences of behavior clearly	Does not define expectations of students and consequences of behavior clearly
Instructional behaviors		

Target	Satisfactory	Needs Improvement
Communicates instructional objectives appropriately and simply.	Generally communicates instructional objectives appropriately and simply.	Does not communicate instructional objectives appropriately and simply.
Understands and builds effectively upon the prior beliefs, knowledge, experiences, and interests of students.	Understands and generally uses prior beliefs, knowledge, experiences, and interests of students.	Has difficulty building effectively upon the prior beliefs, knowledge, experiences, and interests of students.
Helps students relate lesson to personal experiences.	Generally relates lessons to students' personal experiences.	Has difficulty helping students relate lessons to personal experiences.
Successfully organizes and engages students in collaborative learning using different student group learning strategies.	Generally organizes and engages students in collaborative learning using different student group learning strategies.	Has difficulty organizing and engaging students in collaborative learning using different student group learning strategies.
Modifies instruction effectively as needed for individualization.	Generally modifies instruction effectively as needed for individualization.	Modifies instruction effectively as needed for individualization.
Includes all students meaningfully in the educational process, exhibiting both knowledge of and sensitivity to differences.	Includes all students meaningfully in the educational process, exhibiting both knowledge of and sensitivity to differences.	Includes all students meaningfully in the educational process, exhibiting both knowledge of and sensitivity to differences.
Successfully uses technological tools, including but not limited to computer technology, to access resources, collect and process data, and facilitate the learning of science.	Successfully uses technological tools, including but not limited to computer technology, to access resources, collect and process data, and facilitate the learning of science.	Successfully uses technological tools, including but not limited to computer technology, to access resources, collect and process data, and facilitate the learning of science.
Demonstrates developmentally appropriate attitudes and skills, presents examples of actions, processes, and products.	Demonstrates developmentally appropriate attitudes and skills, presents examples of actions, processes, and products.	Demonstrates developmentally appropriate attitudes and skills, presents examples of actions, processes, and products.
Adjusts, modifies, and/or re-teaches based on monitoring and assessment of student progress.	Adjusts, modifies, and/or re-teaches based on monitoring and assessment of student progress.	Adjusts, modifies, and/or re-teaches based on monitoring and assessment of student progress.
Guides the learner to perform the task while being supervised by the teacher.	Guides the learner to perform the task while being supervised by the teacher.	Guides the learner to perform the task while being supervised by the teacher.
Provides opportunities for independent practice of skills without direct supervision by the teacher.	Provides opportunities for independent practice of skills without direct supervision by the teacher.	Provides opportunities for independent practice of skills without direct supervision by the teacher.
Summarizes and fits into context what has been taught, actively involving the student.	Summarizes and fits into context what has been taught, actively involving the student.	Summarizes and fits into context what has been taught, actively involving the student.
Safety and Welfare		
Target	Satisfactory	Needs Improvement
Understands the legal and ethical responsibilities of science teachers for the welfare of their students, the proper treatment of animals, and the maintenance and disposal materials.	Generally understands the legal and ethical responsibilities of science teachers for the welfare of their students, the proper treatment of animals, and the maintenance and disposal materials.	Does not understand the legal and ethical responsibilities of science teachers for the welfare of their students, the proper treatment of animals, and the maintenance and disposal materials.
Organizes safe and effective learning environments that promote the success of students and the welfare of all living things.	Generally organizes safe and effective learning environments that promote the success of students and the welfare of all living things.	Does not organize safe and effective learning environments that promote the success of students and the welfare of all living things.
Know and follow emergency procedures, maintain safety equipment, and ensure safety procedures appropriate for the activities and the abilities of students.	Generally knows and follow emergency procedures, maintain safety equipment, and ensure safety procedures appropriate for the activities and the abilities of students.	Does not follow emergency procedures, maintain safety equipment, and ensure safety procedures appropriate for the activities and the abilities of students.
Treats all living organisms used in the classroom or found in the field in a safe, humane, ethical manner and respects legal restrictions on their collection, keeping, and use.	Generally treats all living organisms used in the classroom or found in the field in a safe, humane, ethical manner and respects legal restrictions on their collection, keeping, and use.	Does not appear to treat all living organisms used in the classroom or found in the field in a safe, humane, ethical manner and respects legal restrictions on their collection, keeping, and use.
Curriculum and Plans		
Target	Satisfactory	Needs Improvement
Designs appropriate daily plans that provide integrated learning experiences that achieve objectives.	Designs appropriate daily plans that achieve objectives.	Does not design appropriate daily plans that provide integrated learning and/or experiences that achieve objectives.
Maintains accurate, well organized records of student progress.	Generally, maintains accurate, well organized records of student progress.	Does not maintain accurate, well organized records of student progress.
Utilizes multiple assessments to diagnose needs and to measure student achievement.	Utilizes assessments to diagnose needs and to measure student achievement.	Utilizes assessments to measure student achievement.
Provides for a variety of appropriate instructional materials.	Provides for appropriate instructional materials.	Does not provide for a variety of appropriate instructional materials.
Provides for diverse, global perspectives throughout the curriculum.	Provides for global perspectives throughout the curriculum.	Does not provide for diverse, global perspectives throughout the curriculum.

Content Knowledge and Attitudes		
Target	Satisfactory	Needs Improvement
Understands and successfully conveys to students the major concepts, principles, theories, laws, and interrelationships of life science/biology.	Understands and conveys to students the major concepts, principles, theories, laws, and interrelationships of life science/biology.	Does not display a clear understanding when conveying to students the major concepts, principles, theories, laws, and interrelationships of life science/biology.
Understands and engages students successfully in studies of the nature of science, which include the evolution of natural systems and the interrelationships of form, function, and behaviors in living and nonliving systems.	Understands and teaches students the nature of science, which include the evolution of natural systems and the interrelationships of form, function, and behaviors in living and nonliving systems.	Does not show a clear understanding of the nature of science, which include the evolution of natural systems and the interrelationships of form, function, and behaviors in living and nonliving systems.
Understands scientific inquiry and successfully engages students to use their observations and data to solve scientific investigations.	Understands scientific inquiry and teaches students how to use their observations and data to solve scientific investigations	Does not show a clear understanding of scientific inquiry when teaching students how to use their observations and data to solve scientific investigations
Understands and engages students in analyzing socially important issues related to life science/biology	Understands and teaches students to analyze socially important issues related to life science/biology	Does not demonstrate a clear understanding of important issues related to life science/biology
Understands and effectively applies concepts from other sciences and mathematics to the teaching of life science/biology, which include the basic concepts of chemistry, physics and Earth and space sciences.	Understands and teaches concepts from other sciences and mathematics to the teaching of life science/biology, which include the basic concepts of chemistry, physics and Earth and space sciences.	Understands and generally teaches concepts from other sciences and mathematics to the teaching of life science/biology, which may or may not include the basic concepts of chemistry, physics and Earth and space sciences
Involves students successfully in activities that relate life science/ biology to resources and stakeholders in the community and to the resolution of local scientific issues.	Teaches students how life science/ biology relate to resources and stakeholders in the community and to the resolution of local scientific issues.	Does not clearly teach students how life science/ biology relate to resources and stakeholders in the community and to the resolution of local scientific issues.
Professional Dispositions		
Target	Satisfactory	Needs Improvement
Maintains appropriate grooming, dress, posture, actions.	Generally maintains appropriate grooming, dress, posture, actions.	Does not maintain appropriate grooming, dress, posture, actions.
Demonstrates reliability and dependability in fulfilling all responsibilities.	Generally demonstrates reliability and dependability in fulfilling all responsibilities.	Does not demonstrate reliability and dependability in fulfilling all responsibilities.
Interacts effectively with colleagues, parents, and students.	Generally interacts effectively with colleagues, parents, and students.	Does not interact effectively with colleagues, parents, and students.
Exemplifies responsible and mature behavior.	Generally exemplifies responsible and mature behavior.	Does not exemplify responsible and mature behavior.
Helps to foster collaboration and cooperation with the community	Generally fosters collaboration and cooperation with the community	Does not foster collaboration and cooperation with the community
Produces effective written and oral communication.	Generally, produces effective written and oral communication	Does not produce effective written and oral communication
Shows effective critical thinking and problem solving skills.	Generally, shows effective critical thinking and problem solving skills.	Shows effective critical thinking and problem solving skills.
Uses information from students, supervisors, colleagues and others to reflect upon their teaching and identify ways and means through which they may grow professionally		
Values		
Target	Satisfactory	Needs Improvement
Models living a life of balance.	Generally, models living a life of balance.	Does not model living a life of balance.
Provides meaningful character training and modeling for students.	Generally provides meaningful character training and modeling for students.	Does not provide meaningful character training and modeling for students.
Demonstrates reflective practice	Generally demonstrates reflective practice	Does not demonstrates reflective practice
Models intellectual curiosity, a love of learning, and search for wisdom	Generally models intellectual curiosity, a love of learning, and search for wisdom	Does not model intellectual curiosity, a love of learning, and search for wisdom
Models responsibility and self-discipline.	Generally, models responsibility and self-discipline.	Models responsibility and self-discipline.

How the Data Provides Evidence for Meeting the Standards

Data from Table 6 (Candidates' Mean Scores on the Student Teacher Monitoring Report) for all program completers is used as evidence to determine if student teachers have met NSTA

standards. Analysis of this data determine candidates' competency regarding their content knowledge and pedagogical skills, which are necessary to plan and provide an active, coherent, and effective curriculum at the appropriate levels that is consistent with the goals and recommendations of the National Science Education Standards (NSES). The unit has one candidate currently student teaching and at the time of this report data was not available.

ASSESSMENT#5: CANDIDATE EFFECT ON STUDENT LEARNING

Description of the Assessment

The Student Learning Impact Project (SLIP) is a required project during Student Teaching. All student teachers take a 2-hour course called Student Teaching Seminar and the SLIP is 30% of the grade in that class. The SLIP is specifically designed to dispose teacher candidates to:

- be reflective practitioners,
- thoughtfully and systematically consider the impact their instruction has on P-12 students, and
- use assessment, formal and informal, formative and summative, to inform instruction.

There are two components to this project. The first involves analyzing a small group or entire class after one unit of study or segment of teaching. The second part involves identifying a problem or topic (research question) and modifying instruction to improve student learning.

Brief Analysis of Data

Table 8 is used to report candidates' scores on the SLIP Evaluation and a brief analysis of data is included in this section.

Table 8. Candidates Mean Scores on SLIP

Component of Evaluation	Year (), N=		Year (), N=		Year (), N=	
	Mean score	% of candidates meeting minimum expectation	Mean score	% of candidates meeting minimum expectation	Mean score	% of candidates meeting minimum expectation
Knowledge of School Culture						
Knowledge of characteristics of students						
Significance, challenge, variety and appropriate level						
Alignment with state and NSTA standards						
Alignment of assessments to objectives at appropriate levels						
Use of available technology						
Reflective Practice						
Review of Current Research						
Adaptations to instruction based on assessments						
Implications of findings						

3=Excellent, 2=Expected, 1=Unacceptable

Attachment F provides specific guidelines to candidates for the Student Learning Impact Project with the Evaluation Instrument and Rubric.

ATTACHMENT F

Student Learning Impact Project (SLIP)

The following guidelines will assist you in this project:

- Early in the placement, discuss this project with your cooperating teacher and the SGU supervisor to determine the focus of your unit/lessons and when you will teach the unit/lessons
- PLAN AHEAD...schedule the project so that it will be completed in time for analysis, synthesis, and presentation.
- Plan your unit/lessons with your cooperating teacher
- Do your baseline assessment and plan the pre/post assessments
- Make any adjustments to your unit/lessons based upon what you learned from the pre-assessment results and your literature review
- Teach your unit/lessons with the adjustments made from pre-assessment results and literature review
- Complete the post-assessment. Review your project and write your analysis and reflection. Discuss all factors that may have impacted the outcomes, such as cultural differences, student attendance, student ability, and any other assessments (formal or informal) you utilize during this teaching experience. Your analysis will include your data sets and a narrative discussion of your findings. How can you validate your impact on student learning? What can you “take away with you” from this experience?

Your Project should be organized in the following manner:

PART I: DESCRIPTION OF CLASSROOM ENVIRONMENT

PART II: ASSESSMENT PLAN

PART III: OUTLINE FOR UNIT OF STUDY

PART IV: BASELINE/PRE ASSESSMENT

PART V: IDENTIFICATION OF CHANGES TO BE MADE (RESEARCH QUESTION)

PART VI: LITERATURE REVIEW (This might be conducted prior to deciding what changes should be made to instruction)

PART VII: IMPLEMENTATION CHANGES BASED ON DATA AND LITERATURE REVIEW

PART VIII: FINAL ASSESSMENT

PART IX: ANALYSIS OF DATA/REFLECTION

PART I: DESCRIPTION OF CLASSROOM ENVIRONMENT

Grade level(s) in class _____ # of students enrolled in class _____

Classroom Grouping (check all that apply)

Whole class Small groups Individual Peer teaching Other:

Instructional Materials (check all that apply)

Textbooks Manipulatives Technology

Other: _____

Resources (select one and list)

Well Equipped Adequately Equipped Poorly Equipped

List available resources:

Teaching interruptions (select one and describe)

___Few ___Some ___Many

Description:

Help available to you select all that apply and describe.

___Educational Assistants(s) ___Peer Tutors ___Parent Volunteers ___Resource Teachers
___Other:_____

Individual Differences

___# of students who are culturally diverse ___# of students with special needs
___# of students who are gifted/talented ___# of students who are Title I
___# of students who are male ___# of students who are female
___Other:_____

Describe the technological resources available to you in this classroom:

Describe the attitudes toward individual differences in this classroom:

Describe the physical organization of the classroom:

Describe the typical kinds of instructional methods employed in this classroom:

Describe the typical approach to assessment in this classroom:

Indicate any other aspects of this classroom that have not been addressed by the above:

PART II: ASSESSMENT PLAN

(These questions will be answered throughout the project and included in Part II and Part VIX)

Describe your baseline assessment and include a copy, if possible. Why did you select this particular assessment?

Describe your pre-assessment method(s) and include a copy if possible. Why did you select this particular pre-assessment method?

Describe your post-assessment method(s) and include a copy if possible. Why did you select this particular post-assessment method?

Describe anything else you did informally and formally during the course of the unit to assess student understanding and progress. How do these assessments affect your analysis of student learning?

Describe how your unit plan goals, objectives, baseline assessment, pre-assessment, instruction, and post-assessment are consistent with one another.

PART III: OUTLINE FOR UNIT OF STUDY

Complete the table below—add rows to the table as necessary

Lesson/Unit Title				
Grade Level				
Duration				
Lesson/Unit Goals				
Lesson/Unit Objectives, Strategies, Activities, etc	Standards Alignment (PASS/NSTA/NSES)	Assessment of Objective	Materials or Resources	Groupings and strategies to differentiate instruction
*Add rows as needed				
Describe your Lesson/Unit Closure				

PART IV: ASSESSMENT RESULTS WORKSHEET

Use a table format like the one below to record the assessment results for each student

NOTE: Use pseudonyms or numbers to protect your students' confidentiality!!

Students (No Names)	Column 1 Baseline	Column 2 Pre Assessment	Column 3 Post Assessment
------------------------	----------------------	----------------------------	-----------------------------

1.

2.

3. Add lines as needed

PART V: IDENTIFY A PROBLEM (RESEARCH QUESTION)

PART VI: LITERATURE REVIEW

PART VII: IMPLEMENTATION OF NEW TEACHING/MANAGEMENT

PART VIII: POST ASSESSMENT

PART VIx: ANALYSIS/REFLECTION

- How did the pre-assessment results inform your instructional plan—what modifications or changes did you make based upon the pre-assessment results?
- How many students accomplished the unit's goals/objectives? How do you know?

- How many students did not meet the unit’s goals/objectives? How do you know?
- What will be done to ensure that students not meeting the unit’s goals/objectives learn the material and/or what can be done to help students who did not master the unit’s goals/objectives to improve in these areas?
- Are there circumstances or conditions that should be considered regarding the students who did not meet the unit’s goals/objectives? Explain.
- Based on the results you obtained and your experience with this unit of instruction, what will you do differently in planning, teaching, and/or assessment the next time you teach this content?
- Describe your role in supporting student learning.
- Describe how you felt about this process.

Student Learning Impact Project Evaluation/Rubric Life Science/Biology

Candidate Name _____

Faculty Evaluator(s) _____

Date _____

Circle the rating for each area and return the completed rubric to the University Supervisor. For ratings of 1 please indicate directly on the rubric the rationale for the rating.

Component	Excellent (3)	Expected (2)	Unacceptable (1)	Score
Knowledge of school culture	Integrates understanding of the characteristics of students, parents, and the community to plan instruction.	Demonstrates an understanding of the characteristics of students, parents, and the community.	Does not use knowledge of the characteristics of students, parents, and the community to plan instruction.	
Knowledge of characteristics of students	Successfully promotes the learning of science by students with different abilities, needs, interests, and backgrounds	Successfully promotes the learning of science by students with different abilities, needs, interests, and backgrounds	Successfully promotes the learning of science by students with different abilities, needs, interests, and backgrounds	
Significance, challenge, variety and appropriate level	Varies teaching actions, strategies, and methods to promote the development of multiple student skills and levels of understanding.	Varies teaching strategies and methods to address students’ levels of understanding.	Does not vary teaching actions, strategies, and methods to promote the development of multiple student skills and levels of understanding.	
Aligned with state and NSTA standards	All objectives are aligned with state and NSTA standards. Lesson clearly demonstrates a thorough understanding of the curricular recommendations of the National Science Education Standards and the ability to identify, access, and/or create resources and activities for science education that are consistent with the standards.	Objectives are aligned with state and NSTA standards. Lesson demonstrates an understanding of the curricular recommendations of the National Science Education Standards and the ability to identify and access resources and activities for science education that are consistent with the standards.	Objectives may or may not be aligned with state and NSTA standards. Lesson demonstrates a narrow understanding of the curricular recommendations of the National Science Education Standards as evidenced by resources and activities chosen for science education.	

Alignment of assessments to objectives at appropriate levels	Uses multiple assessment tools and strategies to achieve important goals for instruction that are aligned with methods of instruction and the needs of students.	Uses assessment tools and strategies to achieve important goals for instruction that are aligned with methods of instruction and the needs of students.	Does not use multiple assessment tools and strategies to achieve important goals for instruction that are aligned with methods of instruction and the needs of students.	
Inquiry	Engages students successfully in studies of the nature of science in developmentally appropriate inquiries that require them to develop concepts and relationships from their observations, data, and inferences in a scientific manner.	Engages students in studies of the nature of science that require them to develop concepts and relationships from their observations, data, and inferences in a scientific manner but is not developmentally appropriate.	Does not engage students in studies of the nature of science.	
Issues	Engages students successfully in the analysis of problems, including considerations of risks, costs, and benefits of alternative solutions; relating these to the knowledge, goals and values of the students.	Demonstrates limited student engagement in the analysis of relevant problems and alternative solutions.	Does not engage students in the analysis of problems, which have relevance to the lives of students.	
Use of available technology	Understands and engages students to use technology successfully within the field of biology and supporting fields	Understands and uses technology successfully within the field of biology and supporting fields	Somewhat understands and uses technology within the field of biology and supporting fields	
Reflective Practice	Reflects constantly upon teaching to identify ways and means through which to grow professionally	Reflects upon teaching to identify ways and means through which to grow professionally.	Does not reflect upon teaching to identify ways and means through which to grow professionally.	
Review of Current Research	Understands research in their field and successfully summarizes theories of best practice, explains how the research relates to their own lesson and uses this information to make adjustments in teaching.	Understands research in their field, summarizes theories, and explains how the research relates to their own lesson.	Does not demonstrate an understanding of research in their field by their summaries of theories or explanation of how the research relates to their own lesson.	
Adaptations to instruction based on assessments	Uses the results of multiple assessments to guide and modify instruction, the classroom environment, or the assessment process.	Uses the results of assessment to guide and modify instruction, the classroom environment, or the assessment process.	Does not use the results of assessment to guide and modify instruction, the classroom environment, or the assessment process.	
Implications of findings	Provides ideas for redesigning learning goals, assessment, and instruction and explains why these modifications would	Provides ideas for redesigning learning goals, assessment, and instruction.	Does not provide ideas for redesigning learning goals, assessment, and instruction or explains why these modifications would	

	improve student learning.		improve student learning.	
Total Score= ____ /36 or ____%				
Comments:				

All candidates must score a 70% or better on the SLIP evaluation to pass this portion of the Student Teaching Seminar. Candidates scoring below 70% will need to resubmit the project.

Alignment of Assessment with NSTA Standards

Table 9 demonstrates how the Student Learning Impact Project components align with NSTA standards.

Table 9. Alignment of SLIP components with NSTA standards

SLIP Assessment Components	NSTA Standards
Knowledge of school culture	10c
Knowledge of student cultural diversity	5b
Significance, challenge, variety and appropriate level for students	5a
Aligned with state and NSTA standards	6a
Alignment of assessments to objectives at appropriate levels	8a
Inquiry	3b
Issues related to science and technology	4a
Issues related to analysis of problems	4b
Use of available technology	1c
Reflective Practice	10b
Review of Current Research	1d
Adaptations to instruction based on assessments	8b
Implications of findings	1d

How the Data Provides Evidence for Meeting the Standards

Scores from the Student Learning Impact Project Evaluation (Table 8) provide evidence to determine if candidates have an impact on student learning. In addition to the evaluation grades, candidates present their findings and defend their projects at the university wide *Senior Presentations*. At this time faculty and students throughout the university and across disciplines have an opportunity to ask teacher candidates questions about their projects and analysis results. The unit has one candidate currently working on a Student Learning Impact Project and at the time of this report data was not available.

ASSESSMENT#6: OKLAHOMA PROFESSIONAL TEACHING EXAM

Description of the Assessment

The purpose of the Oklahoma Professional Teaching Examination (OPTE) is to help identify those examinees who have demonstrated the level of professional teaching knowledge necessary for entry-level educators in Oklahoma. The content covered by the OPTE is organized into subareas of test content as described below. Candidates usually take the OPTE at the end of the Student Teaching Internship and it is a requirement for licensure in Oklahoma.

SUBAREA I—LEARNERS AND THE LEARNING ENVIRONMENT

- **Competency 0001**-The teacher understands how students learn and develop and can provide learning opportunities that support their intellectual, social, and physical development at all grade levels, including early childhood, elementary, middle level, and secondary.
- **Competency 0002**-The teacher understands that students vary in their approaches to learning and creates instructional opportunities that are adaptable to individual differences of learners.
- **Competency 0003**-The teacher uses best practices related to motivation and behavior to create learning environments that encourage positive social interaction, self-motivation, and active engagement in learning, thus providing opportunities for success.
- **Competency 0004**-The teacher understands the process of continuous lifelong learning, the concept of making learning enjoyable, and the need for a willingness to change when the change leads to greater student learning and development.

SUBAREA II—INSTRUCTION AND ASSESSMENT

- **Competency 0005**-The teacher plans instruction based upon curriculum goals, knowledge of the teaching/learning process, subject matter, students' abilities and differences, and the community, and adapts instruction based upon assessment and reflection.
- **Competency 0006**-The teacher understands curriculum integration processes and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills and effective use of technology.
- **Competency 0007**-The teacher develops a knowledge of and uses a variety of effective communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.
- **Competency 0008**-The teacher understands and uses a variety of assessment strategies to evaluate and modify the teaching/learning process ensuring the continuous intellectual, social, and physical development of the learner.
- **Competency 0009**-The teacher shall have an understanding of the importance of assisting students with career awareness and the application of career concepts to the academic curriculum

SUBAREA III—THE PROFESSIONAL ENVIRONMENT

- **Competency 0010**-The teacher evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community), modifies

those actions when needed, and actively seeks opportunities for continued professional growth.

- **Competency 0011**-The teacher understands the State teacher evaluation process, "Oklahoma Criteria for Effective Teaching Performance," and how to incorporate these criteria in designing instructional strategies.
- **Competency 0012**- The teacher fosters positive interaction with school colleagues, parents/families, and organizations in the community to actively engage them in support of students' learning and well-being.
- **Competency 0013**- The teacher understands the legal aspects of teaching, including the rights of students and parents/families, as well as the legal rights and responsibilities of the teacher.

CONSTRUCTED-RESPONSE MODULES

The content covered by the modules is assessed through the constructed-response component of the OPTE.

- CRITICAL ANALYSIS MODULE: Learners and the Learning Environment
- STUDENT INQUIRY MODULE: Instruction and Assessment
- TEACHER ASSIGNMENT MODULE: The Professional Environment

Table 10 displays the criteria and guides used to score candidate responses on the OPTE.

Table 10: Criteria and Scoring Guides for Secondary Life Science/Biology OPTE Exams

Test Level	Sub Areas	# of Selected Response Questions	Proportion of Total Test Scaled Score to Selected Response	# of Constructed Response Questions	Proportion of Total Test Scaled Score to Constructed Response	Subarea Represented by Constructed Response
7-12	I-Learners and the Learning Environment II Instruction and Assessment III The Professional Environment	75	70%	3	30%	I0%-Critical Analysis-Subarea I I0%-Student Inquiry-Subarea II I0%-Teacher Assignment Subarea III

Brief Analysis of Data

Table 11 shows how data will be reported for OPTE scores for teacher candidates who complete the Secondary Life Science/Biology Education Program. Candidates can score a maximum of 300 and must score a total of 240 to pass. The one candidate currently in the program recently took this exam and scores were not available at the time of this report.

Table 11: Candidates' Scores on OPTE Certification Exam

Candidate (year)	OPTE Scores					
	Selected Response			Constructed Response		
	Subarea I	Subarea II	Subarea III	Critical Analysis	Student Inquiry	Teacher Assignment
1(year)						
2(year)						

Maximum score=300, Passing score=240

Alignment of Assessment with NSTA Standards

Table 12 shows the alignment of the OPTE competencies with NSTA standards within each subarea. This information, provided by the state of Oklahoma, denotes a correlation between the OPTE test competencies and NSTA standards if the content of a standard is covered in whole or in part.

Table 12. Alignment of OPTE components with NSTA standards

Subarea	OPTE Competencies	NSTA Standards
I	Competency 0001	5b
I	Competency 0002	5b
II	Competency 0005	6b
II	Competency 0006	4b
II	Competency 0007	5f
III	Competency 0010	10b

How the Data Provides Evidence for Meeting the Standards

The analysis of scores from Table 11 helps demonstrate the level of professional teaching knowledge of SGU candidates and provides information needed to make decisions about changes in the unit's coursework and field experience requirements. The unit has one candidate currently in the program that has taken this assessment but at the time of this report data was not available.

ASSESSMENT#7: PORTFOLIO ASSESSMENT

Description of the Assessment

Beginning in the freshman year, students at SGU complete portfolios. The first checkpoint is in the spring of the freshman year. This is the writing portfolio, which is coordinated by instructors of the freshmen composition courses. The writing portfolio contains samples of writing, gathered from a variety of coursework that address the Common Core Student Learning Outcomes (SLO). The second checkpoint is fall of the junior year. It addresses Common Core SLOs, and, if applicable, one or two outcomes within the student's major.

The SGU Teacher Education Portfolio is an edited collection of teacher candidates' evidence of professional growth and reflections representing progress through the entire professional education program. It demonstrates the candidates' progress toward meeting teacher education learning outcomes (General Competencies for Teacher Licensure and Certification and NSTA Standards), the SGU education conceptual framework, the university's mission goals and personal goals for a balanced life. It is first submitted to the Teacher Education Admission Committee, as part of the admission process to the program. The final checkpoint is during the Senior Seminar or, for education majors, during the Student Teaching Seminar (ED 4322).

Artifacts and reflections show how candidates have met the Teacher Education Major Learning Outcomes (MLO) and reflect the philosophy of the program. A personal philosophy of education must be included. Throughout the SGU program, teacher candidates assemble the items of evidence that best represent growth toward each of the required major learning outcomes and present that evidence in a professional format. There are a number of purposes for development of the Teacher Education Portfolio:

- To demonstrate the talents, skills, and experiences of the teacher candidate. This demonstration indicates professional growth in becoming an effective teacher.
- To demonstrate a unique, fluid and evolving display of life-long learning. The candidate bases the portfolio on personal goals as they relate to state standards and the impact of learning communities. While learning outcomes are standard, the portfolio must reflect a personal creative style demonstrating additional knowledge and skills.
- To document a teacher candidate's skills, accomplishments, learning, and strengths related to learning outcomes, standards and outcomes.
- To provide examples of the quality of the SGU Teacher Education program. The portfolios are units of measure which present evidence that SGU is providing initial and on-going assessment that focuses on opportunities and experiences which lead to student development of learning outcomes, standards, and outcomes determined by the Commission, the Oklahoma Regents, the State Department of Education, and St. Gregory's University.
- To demonstrate to prospective employers the evidence of a candidate's professional growth. Work on a professional portfolio will assist a candidate in developing the skills to be used throughout a teacher's teaching career and to document professional development.

Table 13 shows checkpoints for the Teacher Education Portfolio throughout the program.

Table 13. Checkpoints for Teacher Education Portfolio

	Criteria for Evaluation	Time of Evaluation
Checkpoint 1	Organizational set up, Philosophy of Education, Summary of field experiences, Artifacts and reflection from 2 competencies, OGET, transcripts, letters of recommendation.	Foundations of Teaching (ED 3012) (Admission to Teacher Education)
Checkpoint 2	Resume, Goals for Personal and Professional Development, Artifacts from 3 additional competencies, summary of field experiences, revised work from previous checkpoint	Completion of Middle Level Education ED 3023
Checkpoint 3	Artifacts from 5 additional competencies, summary of field experiences, revised work from previous checkpoint	Application to Student Teaching
Checkpoint 4 (Final)	Artifacts from 5 additional competencies, summary of field experiences, evaluation of portfolio revised work from previous checkpoint	Student Teaching Seminar, Prior to graduation

Portfolio Guidelines

A. Introduction: Your introduction should include:

- The purpose of the Portfolio
- A general summary of the contents
- Your Philosophy of Education

B. Table of Contents:

The organization of your portfolio can be personal but needs to include:

- Your field experience log and all field experience summaries
- Any professional development activities you have attended and membership in professional organizations
- Certification Test Scores
- Resume
- Letters of Recommendation
- Major Core Learning Outcomes

For each Outcome, provide at least 1 artifact (your item of evidence) and a reflection on that artifact. Provide hyperlinks between the Outcome, the reflections and the artifacts.

- Evaluation of your portfolio.

C. Artifacts:

- Each artifact should show a clear connection to the Learning Outcome it illustrates. You should have an at least one reflection/artifact for each Outcome in the Portfolio. For some Outcomes, you may need more than one reflection/artifact.
- Examples of artifacts include essays, research papers, journal entries, classroom assignments, field experience summaries, exams or quizzes, performance evaluations, projects you have completed individually or with a partner/group (leadership, observation, family, etc), your Student Learning Impact Project, professional development activities, newsletters to parents, etc.

- **Template for Artifacts:** This is how each Learning Outcome/artifact should be set up in your portfolio

Artifact for Learning Outcome X: (*List Learning Outcome – type out*)

Identification: (*Name the artifact as e.g. a journal entry, lesson plan, etc*)

Course or Activity: (*Identify by department, number, and title for courses*)

Date: *Semester and year is adequate*

Reflective Statement:

D. Reflections of outcomes:

- You should include a personal, thoughtful interpretation of the artifacts you chose to illustrate a particular Major Learning Outcome.
- Your Reflections are **the most important part** of your Portfolio. Each reflection interprets your artifact. It states how you met the Major Learning Outcome, based on the artifact (evidence) you chose. It should:
Use the template in Section C.
Describe the artifact (evidence) and **hyperlink** to it.
Explain how the artifact shows that you have met the Major Learning Outcome.
Explain how the artifact shows that you have developed into a well-rounded person, as called for by the University's Mission Statement and the Conceptual Framework of the Department of Education
Each reflection should be 300-500 words, well-written, with correct grammar, spelling and good organization.

E. Evaluation: Your evaluation should be **600-1000 words**. Use the following questions to guide your evaluation.

- How does this portfolio present you as a reflective practitioner?
- How does this portfolio show that you understand how to teach your subject matter so that all students will be successful?
- How does the portfolio provide evidence that you understand and use a variety of instructional strategies to encourage students' development of critical thinking, problem solving, performance skills, and effective use of technology?
- What best practices related to motivation and behavior do you use to create learning environments that encourage positive social interaction, self-motivation and active engagement in learning, thus, providing opportunities for success?
- How does the portfolio provide evidence that you plan instruction based upon educational standards, curriculum goals, knowledge of the teaching/learning process, subject matter, students' abilities and differences, and the community; and adapt instruction based upon assessment and reflection?
- How does the portfolio provide evidence that you foster positive interaction with school colleagues, parent/families, and organizations in the community to actively engage them in support of students' learning and well-being?
- How does the portfolio demonstrate that you take an active part in your profession and are an advocate for children and youth?
- How does your portfolio reflect your dedication to living a life of balance?
- What goals have I you set for yourself in your teaching career? What goals have you set for yourself in your personal and professional portfolio?

Brief Analysis of Data

Scores from the Portfolio Evaluation will be reported in Table 14 below, with an analysis of data. At each checkpoint candidates’ portfolios receive a number ranking 3=Target, 2= Satisfactory, and 1= Needs Improvement on each Major Learning Objective (MLO). The rubric used to explain the criteria for determining performance rankings is the Portfolio Evaluation Rubric, shown after Table 14. The evaluation instrument is included in Attachment G. Scores of 1 (or lower) or “not acceptable” on any item require the candidate to resubmit the item at the next checkpoint. At the final checkpoint, Student Teaching Seminar, all artifacts and reflections for MLOs must receive a satisfactory score (2) or better. Three faculty members evaluate candidates’ final portfolio. Candidates’ mean scores on the portfolio evaluation can be used to determine overall program effectiveness. Mean scores on individual Major Learning Objectives will be analyzed to determine specific changes that need to be made in coursework or experiences within the program.

Table 14. Candidates Scores on the Major Learning Portfolio Evaluation

Major Learning Objectives	Candidates Scores on the Portfolio			
	1(year)	2(year)	3(year)	4(year)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
Mean Score				

3=Target 2= Satisfactory 1= Needs Improvement

Portfolio Evaluation Rubric

Scoring of Elements of Portfolio			
	Present and Acceptable	Present but Not Acceptable	Not Present
Table of Contents	Organized and contains all elements of portfolio	Organized but does not contain all elements	Portfolio does not have a Table of Contents
Introduction	Contains purpose of the portfolio, summary of contents, and philosophy of education	Does not have all elements of Introduction	There is no introduction
Field Experiences	Contains log and all field experience summaries, including student teaching journals	Log is not complete and totaled, there is not a summary for every entry on log	Either log or summaries are missing
Professional Information	Includes professional development activities attended, membership in professional organizations, certification scores, resume	Does not include all elements of professional information	Professional Information is missing
Conclusion	600-1000 words, using evaluation questions as a guide (p49 Handbook)	Present but not appropriate length or thought out, grammar and punctuation mistakes	Conclusion is missing
Scoring of Major Learning Objectives			
	Artifact is acceptable.	Reflection shows correlation between artifact and outcome and demonstrates achievement of outcome.	Reflection is well thought out, organized, appropriate length (300-600 words) with proper grammar and punctuation.
3	Multiple artifacts (2-3) clearly address all elements of learning outcome.	Reflection clearly shows correlation between artifact and outcome and demonstrates achievement of outcome.	Reflection is well thought out, organized, appropriate length with no grammar or punctuation errors.
2	1-2 artifact(s) address most elements of learning outcome.	Reflection shows correlation between artifact and most of the learning outcome and demonstrates some achievement of the learning outcome.	Reflection is organized, with proper grammar and punctuation, but needs to be expanded on.
1	Artifact addresses some of the learning outcome.	Reflection shows little correlation between artifact and learning objective. Achievement of the outcome is not clear.	Reflection is poorly organized, needs to be expanded on and has a few grammar and punctuation errors.
0	Artifact does not address learning outcome.	Reflection does not show correlation between artifact and outcome or demonstrate achievement of outcome.	Reflection is poorly organized and needs to be expanded on with several grammar and punctuation errors.

***ratings of “unacceptable” or MLOs with scores below 2 must be resubmitted at next checkpoint**

ATTACHMENT G

Major Learning Portfolio Stage II: _____ Major Reviewer Responses

Student Advisor and department Faculty review each student; a third Instructor will review if there are major differences in responses
 Student Name _____ Advisor _____ Reviewer 1 _____ (Reviewer 2) _____ Date _____

MAJOR STUDENT LEARNING OUTCOMES Upon completion of the common core curriculum, the student will be able to:	Artifact is acceptable; Reflection shows correlation between artifact & outcome. 0-1-2-3 <i>comment required for score below 2</i>	Reflection demonstrates achievement of outcome 0-1-2-3 <i>comment required for score below 2</i>	Reflection is well thought out, organized, grammatically correct 0-1-2-3 <i>comment required for score below 2</i>	Total Score
MLO #1: Demonstrate and apply the central concepts and methods of inquiry of the subject matter discipline(s) that I teach.				
MLO #2: Identify how students learn and develop and how they vary in their approaches to learning.				
MLO# 3: Devise and design learning experiences that make subject matter meaningful to students and support students' intellectual, social, and physical development.				
MLO#4: Compare and contrast the curriculum integration process with other approaches to teaching and use a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.				
MLO#5: Identify, synthesize, and apply best practices related to motivation and behavior for the purpose of creating learning environments that encourage positive social interaction, self-motivating behavior, and active engagement in learning.				

	Artifact is acceptable; Reflection shows correlation between artifact & outcome. 0-1-2-3 <i>comment required for score below 2</i>	Reflection demonstrates achievement of outcome 0-1-2-3 <i>comment required for score below 2</i>	Reflection is well thought out, organized, grammatically correct 0-1-2-3 <i>comment required for score below 2</i>	Total Score
MLO#6. Demonstrate a knowledge of and use of communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.				
MLO#7: Mastery of effective technology application.				
MLO#8: Devise and design instruction based upon the Oklahoma core curriculum, knowledge of the teaching/learning process, subject matter, students' abilities and differences, and the community.				
MLO#9: Comprehend, design, and apply a variety of assessment strategies to evaluate and modify the teaching/learning process ensuring adaptation of instruction based upon assessment and reflection.				
MLO#10: Evaluate the effects of choices and actions on others, modifying those actions when needed, and actively seeking opportunities for continued professional growth.				

	Artifact is acceptable; Reflection shows correlation between artifact & outcome. 0-1-2-3 <i>comment required for score below 2</i>	Reflection demonstrates achievement of outcome 0-1-2-3 <i>comment required for score below 2</i>	Reflection is well thought out, organized, grammatically correct 0-1-2-3 <i>comment required for score below 2</i>	Total Score
MLO#11: Relate positively with school colleagues, parents/families, and organizations in the community and actively engage them in support of students' learning and well-being.				
MLO#12. Comprehend the importance of assisting students with career awareness and apply career concepts to the academic curriculum.				
MLO#13 Comprehend the process of continuous lifelong learning, the concept of making learning enjoyable, and modify instruction when change leads to greater student learning and development.				
MLO#14 Interpret the legal aspects of teaching including the rights of students, parents/families, as well as the legal rights and responsibilities of the teacher.				
MLO#15: Describe the Catholic Perspective in education and relate principle and theories to actual practice, demonstrating the reflective practitioner framework and a life of balance.				

Alignment of Assessment with NSTA Standards

Table 15 shows the alignment of the Portfolio Components with NSTA Standards.

Table 15. Alignment of Portfolio Components with NSTA Standards

Major Learning Objectives	NSTA Standards
MLO #1	3a
MLO #2	5a
MLO #3	3b
MLO #4	4b
MLO #5	5f
MLO #6	5c
MLO #7	5d
MLO #8	6b
MLO #9	8b
MLO #10	10c
MLO #11	10d
MLO #12	7a
MLO #13	10a
MLO #14	9a
MLO #15	

How the Data Provides Evidence for Meeting the Standards

Scores from the Portfolio Evaluation (Table 14) will be used to determine candidates' mastery of the knowledge, skills and attitudes expected of a teacher education candidate during their time at St. Gregory's University. The Portfolios also demonstrate the effectiveness of the University in guiding candidates' learning, and they will offer implications to improve our educational practices.

The culminating evaluation instrument is The *Comprehensive Learning Portfolio Score Summary*, which is included as Attachment H, is a record of the evaluation results from the Common Core and Major Learning Portfolio and submitted to the registrar by the candidate's advisor. Failure to complete the portfolio process will result in an "Incomplete" for the Student Teaching Seminar. This instrument is also used to determine all teacher candidates' mastery of the education major learning objectives and make program changes to improve their knowledge and skills in areas of weakness.

The unit has one candidate currently preparing a Teacher Education Portfolio and at the time of this report data was not available.

Attachment H



Comprehensive Learning Portfolio Score Summary

STUDENT: _____

MAJOR: _____

CHECKLIST

The following items are present in the portfolio: *(NOTE: ALL ITEMS MUST BE CHECKED ON FINAL SUBMISSION)*

- Table of Contents with page numbers and active hyperlinks.
- Table of Contents clearly states to which CCO# or MCO# each Reflection and Artifact is related.
- Introduction.
- Numbered list of Common Core Student Learning Outcomes (CCO) is present.
- Numbered list of Major Core Student Learning Outcomes (MCO) is present.
- Conclusion (Evaluation).

REFLECTIONS AND ARTIFACTS

Scoring:

- 7.5 or better = Pass with distinction May be given for unusual or creative artifact; superior demonstration of achievement of outcome; creative reflection; reflection demonstrates exceptional vocabulary and writing.
- 4.5-7.49 = Pass Comments optional
- 2.5-4.49 = Pass with reservations Comments required
- Below 2.49 = Not Passing Comments required

NOTE: A ZERO IN ANY CATEGORY SCORES A ZERO FOR THE TOTAL

SCORE SUMMARY

CCO 1 _____	CCO 6 _____	MCO 1 _____	MCO 6 _____	MCO 11 _____
CCO 2 _____	CCO 7 _____	MCO 2 _____	MCO 7 _____	MCO 12 _____
CCO 3 _____	CCO 8 _____	MCO 3 _____	MCO 8 _____	MCO 13 _____
CCO 4 _____	CCO 9 _____	MCO 4 _____	MCO 9 _____	MCO 14 _____
CCO 5 _____	CCO 10 _____	MCO 5 _____	MCO 10 _____	MCO 15 _____

MEAN SCORE COMMON
CORE: _____

MEAN SCORE MAJOR
CORE: _____

TABLE OF CONTENTS : _____ INTRODUCTION : _____ CONCLUSION : _____

GRAND TOTAL: _____

Evaluator 1 _____
Evaluator 2 _____
Evaluator 3 _____
(if necessary)

ASSESSMENT #8: SAFETY ASSESSMENT

Description of the Assessment and its Use in the Program

Instruction and assessment of safety is addressed several times throughout candidates programs: science coursework, science methods course, and student teaching experience. Assessment comes from evaluation of their performance on a safety assignment during their methods course, their inclusion of the safety component in their lesson plans, and during observation of teaching in the classroom by their methods instructor. The safety assignment is described below:

SAFETY, ANIMAL WELFARE, AND LEGAL RESPONSIBILITIES ASSIGNMENT

Use the following resources to complete tasks 1-6.

- Visit the Council of State Science Supervisors website (www.csss-science.org) and visit the safety resources section. Download the secondary safety PDF and read through all of the safety issues.
- Review the NSTA Position Statement
<http://www.nsta.org/about/positions/safety.aspx>
- Sign up to receive Science Department Meeting Safety Notes from Flinn.
(<http://www.flinnsci.com/Sections/Safety/safety.asp>)
- Read the Flinn Scientific, Inc. Science Department Safety Training Notes Vol. 10 (1). (http://www.flinnsci.com/Sections/Safety/snotes/snotes10_01.pdf)
- Read Where and why accidents occur.
(<http://www.flinnsci.com/Sections/Safety/generalSafety/accidents.asp>)
- Read Safety in Science Classrooms: What research and best practices say.
(<http://www.bio.txstate.edu/safety/Safety/safety1.pdf>)
- Examine the Safety Contracts and Exams found at:
http://www.flinnsci.com/Sections/Safety/safety_contracts.asp.

1. Write a half page summary of the legal responsibilities you have as a science teacher. Provide an explanation for how you would address all of these responsibilities.
2. Find an appropriate science safety checklist and use it to evaluate your classroom AND your unit.
3. Write a half page explaining how safety contracts can be used for helping students understand the importance of safety?
4. Summarize in one page (bulleted points are fine) what you plan to do to develop a safe classroom environment.
5. Find, print, and analyze three labs that include: the use of chemicals, dissection, and live specimen collection. Write a half page listing for each lab that addresses: the legal responsibilities of the teacher, the safety considerations for the storage, preparation, handling, disposal, accident response for the chemicals associated with each lab, considerations for the ethical care, treatment, and disposal of the organisms associated with each lab.
6. Identify 4 demonstrations from the web (or self-created) that would be useful to show

students the purpose of safety. Write a short paragraph explaining how your selections may help develop student understanding of the importance of lab safety.

A Brief Analysis of Data Findings

Table 15 shows the range and mean of scores for each safety standard. This is a new assessment and the one candidate currently in the program had completed the course work associated with this assessment, so there is no data available at this time.

Table 16: The range and mean of scores for safety standard 9.

Standard	Year ()		Year ()		Year ()	
	Range	Mean	Range		Range	Mean
9a: Legal and Ethical Responsibilities						
9b: Understand Safe Techniques						
9c: Know Emergency Procedures						
9d: Understand Safe and Humane Treatment of Animals						

Alignment of Assessment with Standards

The rubric presented in table 16 describes the alignment of the safety assignment to the standards.

Table 17: Rubric for safety assignment.

Standard	Excellent (5)	Expected (3)	Unsatisfactory (1)
9a: Understand the legal and ethical responsibilities of science teachers for the welfare of their students, the proper treatment of animals, and the maintenance and disposal of materials. Score: _____	Within self-developed lessons and unit: Consistently identifies the legal responsibilities of the teacher AND Able to describe how to address these responsibilities	Able to list the legal responsibilities as a teacher AND Able to describe how hypothetically address these responsibilities	Unable to list the legal responsibilities as a teacher AND Unable to describe how to address these responsibilities
9b: Know and practice safe and proper techniques for the preparation, storage, dispensing, supervision, and disposal of all materials used in science instruction	Within self-developed lessons and unit: Safely prepare, store, dispense, and dispose of materials used during science instruction AND Provide appropriate	Able list safe practices associated with non-living materials including preparation, storage, disposal and supervision	Unable to list safe practices associated with non-living materials

Score: _____	emergency procedures to share with students for the activity within the lesson		
9c: Know and follow emergency procedures, maintain safety equipment, and ensure safety procedures appropriate for the activities and the abilities of students Score: _____	Within self-developed lessons and unit: Able to articulate to students safety concerns associated, appropriate emergency procedures, and what safety equipment should be available	Able describe emergency procedures, explain the maintenance of primary safety equipment and determine and address safety concerns associated with a particular activity	Unable to describe emergency procedures, explain maintenance of any safety equipment, or determine and address safety concerns associated with a particular activity
9d: Treat all living organisms used in the classroom or found in the field in a safe, humane, and ethical manner and respect legal restrictions on their collection, keeping, and use Score: _____	Within self-developed lessons and unit: Able to articulate to students safe and ethical practices associated with living organisms including humane and ethical treatment, safety (both human and of the living organism), husbandry or disposal	Able to list safe and ethical practices associated with living organisms including humane and ethical treatment, safety (both human and of the living organism), husbandry or disposal	Unable to list safe and ethical practices associated with living organisms
Total: /20 = % (Any score below 3 on standards 9a,b,c,d is resubmitted by the student until all scores are at or above the expected level.)			

How the Data Provides Evidence for Meeting the Standards

As the rubric presented in table 16 is specifically aligned with the standards identified by NSTA for the safety assessment, a rating of expected or above would indicate evidence for meeting the standards. While concern for safety and animal welfare is clearly unique to the sciences, not all lessons necessarily present safety concerns beyond what other disciplines might present. The use of modeling, computer simulations, etc. may result in candidates not always presenting lessons with safety challenges unique to science. A rating of excellent indicates the candidate incorporates safety into the development of lesson plans and thematic units. This is a new assessment for the unit so there is no data to report at this time. The one candidate currently in the program has already completed all coursework associated with this assessment and is currently student teaching. This assessment was not in place for this candidate.

Section V-USE OF ASSESSMENT RESULTS TO IMPROVE CANDIDATE PERFORMANCE

Although we have not had any program completers over the past three years, the unit has made some adjustments to the program based on changes in administration, faculty, feedback from students in course evaluations, and recommendations from the Teacher Education Council.

Changes for all Education Majors (2009-2010):

- The Professional Education Mentoring course was eliminated and all clinical experiences are now linked to specific coursework. Secondary majors are required to complete a minimum of 75 hours and elementary majors are required to complete a minimum of 100 hours prior to student teaching.

Changes for all Education Majors (2010-2011):

- All education majors take PY4223 Tests and Measurement instead of ED 4132 Education Evaluation in order to enhance their practical understanding and application of issues, theory, and uses of educational evaluation and assessment; criteria, construction and evaluation of teacher-designed tests; and values and limitations of tests.
- During Foundations of Teaching (ED 3012), prospective teacher education candidates are given the practice test for the Oklahoma General Education Test (OGET). Passing this test is a requirement for admission to the Teacher Education Program. This change has proven to be a satisfactory way to screen students who will be unlikely to succeed in this program and advise them into other, more appropriate, programs of study. It is anticipated that this change will also improve the quality of content knowledge and skills for all teacher education candidates.

Changes for all Secondary Life Science/Biology Majors (2011-2012):

- Due to changes in science faculty, Secondary Life Science/Biology Majors are no longer required to take 6 hours of Environmental Science. They now take LS 1023 Environmental Science and an upper level science of their choice in Natural or Life Science.

Changes for all Education Majors (2011-2012):

- All student teachers are now required to keep a daily electronic journal of what they see and do, including specific behavioral and/or academic accomplishments or concerns in order to improve their reflective practice. This journal will be emailed to the university supervisor each Friday by 6:00pm and the supervisor will respond to and return the journal by Sunday at 6:00pm. The journal will be included in the Education Portfolio and count as 25% of the grade in Student Teaching Seminar (ED 4322).

- Prior to 2010, candidates were regarded as program completers (on Title II reports, etc) when they successfully completed all coursework and field experience requisites. However, some program completers went directly into graduate school without taking the OSAT and/or OPTE or waited for an extended period of time before taking these certification exams. The wait was most often due to financial constraints. Nevertheless, this delay had a negative effect on the graduates' test scores. The Teacher Education Council voted to change this requirement as follows: to pass the Student Teaching Seminar (ED 4322), candidates must successfully complete the Student Learning Impact Project, the Education Portfolio, student teaching daily journals, and pass all certification exams. Candidates receive in "I" in Student Teaching Seminar (ED 4322) until all of these requirements are met. Candidates who cannot meet the education program requirements after an extended period of time may choose to receive a degree in Liberal Arts, Social Sciences, or whichever subject area discipline corresponds to the coursework they have completed.
- Because the university faculty voted to eliminate Fundamentals of Leadership (SS 3213) from the Common Core requirements, exploring the teacher's role as an educational leader and developing a *Leadership Project* will be included in ED 3002 Middle Level Education beginning fall 2012.
- It was determined by the Teacher Education Council that the dispositions of all candidates were not being evaluated systematically throughout the program. Therefore, an evaluation instrument was developed collaboratively with the TEC, faculty and students taking education coursework for this purpose.

Appendix I: Program of Study

ST. GREGORY'S UNIVERSITY PROGRAM OF STUDY

Bachelor of Natural Science

Major: 502-Secondary Life Science/Biology Education

For the 2012-2013 Academic Year

Student Name: _____

Date: _____

Student ID#: _____

Advisor: _____

COMMON CORE CURRICULUM (57 CREDITS)

HU	1112 TC Seminar I	2
HU	1122 TC Seminar II	2
HU	2112 TC Seminar III	2
HU	2122 TC Seminar IV	2
HU	1101 First Year Experience I	1
HU	1201 First Year Experience II	1
EN	1113 English Composition I	3
En	1323 English Composition II	3
CO	1717 Fundamentals of Speech or	3
CO	2013 Business & Professional Communications	
_____	_____ Fine Arts: _____	3
PH	1013 Introductory to Philosophy	3
PH/TH	_____ Ethics (Philosophical, Business, Health Care or Christian)	3
TH	1323 Introduction to Sacred Scripture	3
TH	2413 Introduction to Christian Theology	3
HI	1483 United States History (1492-1865) or	3
HI	1493 United States History (1865-Present)	
PO	1013 Government of the U.S.	3
PY	1113 Elements of Psychology or	
SO	1113 Intro to Sociology	3
HU	2651 Liberal Arts Core Seminar	1
MA	1513 College Algebra	3
LS	1113 Principles of Biology	3
LS	1111 Principles of Biology Lab	1
PS	1363 Gen Chemistry I	3
PS	1361 Gen Chemistry I Lab	1
KI	1072 Concepts of Wellness or	2
KI	_____ Activity Course: _____ and	

KI _____ Activity Course: _____

LIFE SCIENCE/BIOLOGY EDUCATION MAJOR (62 Credits)

LS		1023 Environmental Science	3
PS		1113 College Physics I and	
PS		1111 College Physics I Lab	4
PS		1213 College Physics II and	
PS		1211 College Physics II Lab or	
	PS	1473 General Chemistry II and	
	PS	1471 General Chemistry II Lab	4
LS		2014 General Zoology	4
LS		3214 Human Physiology	4
LS		3333 Genetics	3
LS/NS		_____	3
		Upper Level NS or LS	
MA		1814 Pre-Calculus/Analytic Geometry or	
	MA	2054 Calculus I	4
MA		3013 Elementary Statistics	3
NS		3263 Methods of Teaching Sec Science	3
PY		3113 Developmental Psychology or	
	PY	4113 Cognitive Psychology	3
PY		4132 Psy of Students with Exceptionalities	2
TH		3201 Catholic Perspectives in Education	1
ED		3002 Educational Technology	2
ED		3012 Foundations of Teaching	2
ED		3022 Middle Level Education	2
PY		4223 Tests and Measurement	3
ED		4322 Student Teaching Seminar	2
ED		4920 Student Teaching	10

*Foreign Language Requirement: 2 years HS of same language with a B or better or 2 years college with a C or better, or CLEP Test

ELECTIVES (10 Credits)

_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

SUMMARY

Academic Requirements

Comp.	Req.
_____	56 Common Core Curriculum
_____	62 Elementary Education Major
_____	10 Electives
_____	128 Total Credit Hours
_____	Last 30 credit hours from SGU

Graduation Requirements

_____	OGET/OSAT/OPTE Tests Passed
_____	Field Hours Completed
_____	Foreign Language Requirement
_____	Min 2.5 Grade Point Average
_____	Core Curriculum Portfolio
_____	Education Portfolio

Total number of transfer hours accepted toward degree _____

Total number of transfer hours accepted toward electives _____

OK to confer degree on:

by:

