University of Central Oklahoma
MENTOR/SUPERVISOR ASSESSMENT OF STUDENT TEACHER
Science
(Sample – assessment will be emailed to mentor/supervisor)

Dear mentor teachers and university supervisors:

Dr. Elizabeth Allen, UCO science education program coordinator, has requested that mentors and supervisors of science student teachers complete this rubric which has been suggested by the National Science Teachers Association (NSTA). This instrument will provide data for program review and help UCO determine how well our teacher candidates meet the NSTA standards for science educators.

The instrument and information collected will be used with the current assessment instrument (scantron) that provides data for the entire student teaching cohort. Please complete both assessment instruments – scantron and rubric. While we realize that this request involves additional time and effort on your part, please know that you are providing a valuable service as part of project. Please return all assessment forms in the envelope provided

We appreciate your time and effort on behalf of UCO's teacher preparation program and Oklahoma's students. Should you have questions about this rubric, please call Dr. Allen at 405-974-5782.

Student Teacher Name: _____

Mentor teacher Name: _____

School: _____

University Supervisor: _____

MENTOR/SUPERVISOR ASSESSMENT OF STUDENT TEACHER
Science

Please review the proficiency items below and indicate the performance level of the student teacher by writing U, B, P, or A in the blank in the left standards column. Please return this assessment form in the envelope provided.

Standards	Unacceptable (U)	Basic (B)	Proficient (P)	Accomplished (A)
1. The student teacher understands the central concepts, tools of inquiry, and structures of the discipline he or she teaches and can create learning experiences that make these aspects of subject matter meaningful to students.				
_____ 1a. Knows and understands major concepts and principles of the science being taught.	Makes serious mistakes in content instruction and may overlook or ignore such mistakes. Teaches largely by rote and recitation, from the textbook, with little depth or understanding.	Makes some mistakes but tries to correct them when noted. May have some difficulty elaborating or clarifying some ideas or making relationships clear among concepts.	Makes few or no mistakes and displays facility in conveying the subject to students. Has alternative explanations and can usually address student questions well. Connects new knowledge to that previously learned.	Shows strong knowledge, creativity and considerable flexibility in selecting how to convey the knowledge to students. Creates important interconnections among concepts to build a framework of broad ideas.
_____ 1b. Adapts content to the student's level of understanding.	Displays strong personal content knowledge but displays little or no ability to adjust its form, level or complexity to the needs and abilities of students.	Displays strong personal content knowledge and displays an evolving ability to adjust its form, level or complexity to the needs and abilities of students	Displays strong personal content knowledge and displays a consistent ability to adjust its form, level or complexity to the needs and abilities of students	Displays strong personal content knowledge and displays a practiced and skillful ability to adjust its form, level or complexity to the needs and abilities of students
_____ 1c. Knows how to design and explain investigations and foster the effective analysis of data.	Does not know how to design investigations properly or makes serious mistakes in the analysis of data from classroom activities and/or cannot explain this content to students effectively.	Displays knowledge of how to design investigations properly and makes few or no serious mistakes in analysis of student data from classroom activities. Generally can explain such content to students.	Displays solid knowledge of how to design investigations properly and makes no serious mistakes in analysis of student data from classroom activities and effectively promotes student understanding of related concepts.	Is highly proficient in the design of investigations and the analysis of student data from classroom activities and is highly effective in engaging students in research design and data analysis.

Standards	Unacceptable (U)	Basic (B)	Proficient (P)	Accomplished (A)
_____ 1d. Engages students in study of the nature and tenets of science as a philosophy, activity and profession.	Does not involve students in activities leading them to an understanding the nature and tenets of science as a philosophy, an activity and a profession.	Involves students in a limited number of activities related to the nature of science.	Explores the nature of science as a philosophy, an activity and a profession through cases studies, questioning.	Incorporates nature of science as a philosophy, an activity and a profession in a thematic way to scaffold inquiry.
_____ 1e. Engages students in effective science inquiry and investigation.	Seldom or never provides students with opportunities for effective inquiry.	Provides students with opportunities to engage in a limited number of directed or partially directed science inquiries.	Regularly provides students with opportunities to engage in directed or partially directed inquiries.	Provides students with opportunities to occasionally design investigations as well as conduct partially directed or directed science inquiries.
_____ 1f. Relates science to technology, its applications, culture and human values.	Seldom engages students in study of the relationship of science to cultural and social values, to technology and to needs and practices in such fields as agriculture, business and industry, literature and the arts.	Occasionally engages students in study of the relationship of science to cultural and social values, to technology and to needs and practices in such fields as agriculture, business and industry, literature and the arts	Regularly engages students in study of the relationship of science to cultural and social values, to technology and to needs and practices in such fields as agriculture, business and industry, literature and the arts.	Includes study of the relationship of science to cultural and social values, to technology and to needs and practices in such fields as agriculture, business and industry, literature and the arts as an organizing curricular theme.
2. The student teacher understands how students learn and develop and can provide learning opportunities that support a student's intellectual, social, and personal development.				
_____ 2a. Addresses multiple dimensions of student personal, social, intellectual development.	Does not deliberately consider or address multiple dimensions of student development.	Deliberately plans learning activities fostering student development in different dimensions but tends to focus on a limited range of knowledge or skills.	Deliberately plans learning activities to foster development in multiple dimensions both related to science and to the students' individual development.	Skillfully plans and implements learning activities that integrate social and personal and social development with intellectual growth and learning of subject matter.

Standards	Unacceptable (U)	Basic (B)	Proficient (P)	Accomplished (A)
3. The student teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.				
_____ 3a. Addresses student needs and differences when planning and teaching science.	Seldom varies instruction to address developmental and learning style differences among students.	Considers differences among students in planning, and instruction by varying instruction to address different learning styles and student interests.	Considers differences among students by varying instruction and by targeting students with distinctly different needs for particular attention.	Shows considerable ability in identifying differences among students and planning instruction to meet the specific needs and interests of individuals as well as the general needs of the group.
4. The student teacher understands and uses a variety of instructional strategies to encourage student development of critical thinking, problem solving, and performance skills.				
_____ 4a. Uses multiple and effective science teaching strategies.	Is unable to effectively employ a range of actions, strategies and methods to teach science.	Demonstrates the ability to effectively employ a range of actions, strategies and methods to teach science.	Demonstrates the ability to effectively design and employ a range of actions, strategies and methods to teach science normal for most practicing teachers.	Demonstrates a highly creative ability to effectively design and employ a range of actions, strategies and methods to teach science.
_____ 4b. Knows and addresses student misconceptions and preconceptions.	Makes few attempts to determine and respond to student misconceptions or preconceptions and understanding of ideas during instruction.	Attempts to determine and respond to student misconceptions or preconceptions and understanding of ideas before and during instruction, with variable success.	Determines and responds to student misconceptions or preconceptions and understanding of ideas regularly before and during instruction.	Determines and responds to student misconceptions or preconceptions and understanding of ideas regularly and often, both before and during instruction.
_____ 4c. Relates science to the personal lives, needs and interests of students.	Rarely relates science to the things that are personally relevant to students.	Makes some personally-relevant connections meaningful to students.	Makes many personally relevant connections meaningful to students.	Regularly organizes instruction in personal contexts that are relevant and meaningful to students.

Standards	Unacceptable (U)	Basic (B)	Proficient (P)	Accomplished (A)
5. The student teacher uses an understanding of individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation.				
____ 5a. Creates enthusiasm and motivation for science.	Has difficulty engaging students in learning activities and creates little interest or enthusiasm for the subject among students over time.	Engages students in most learning activities successfully, with variable success in creating interest and enthusiasm for learning the subject among students over time.	Engages students in most learning activities successfully and develops a moderate to high level of participation and enthusiasm for learning the subject among students over time	Consistently engages students in learning activities and sustains a high level of participation and enthusiasm for the subject among students over time.
_____ 5b. Creates an effective environment for learning.	Generally fails to maintain an orderly environment for learning consistent with the goals and nature of the subject and expectations of the school.	Maintains a generally orderly learning environment, but does not have established and consistent routines and may not exhibit firm control in all situations.	Maintains an orderly functional learning environment consistently through established routines and respect for the teacher's authority and leadership.	Maintains a functional orderly learning environment consistently through established routines and student interest, participation, and self-motivation.
_____ 5c. Organizes and manages diverse and effective student groups.	Is not effective in organizing and managing students in diverse groupings and roles.	Organizes and manages students in a limited number of different group configurations with some role differentiation.	Regularly and effectively organizes and manages students in diverse and appropriate group configurations with assigned student roles.	Organizes and manages student learning in diverse group configurations and roles required by different goals for learning.
_____ 5d. Uses instructional time effectively.	Wastes significant instructional time under routine conditions due to poor planning and management.	Uses instructional time inconsistently, though generally effectively. May lose time in transitions and at the beginning and end of classes.	Generally uses instructional time effectively. Transitions are usually handled routinely and smoothly.	Uses instructional time effectively. Transitions are routine and smooth, even when unexpected events disrupt a planned activity.

Standards	Unacceptable (U)	Basic (B)	Proficient (P)	Accomplished (A)
_____ 5e. Maintains safety and ensures proper treatment of animals.	Fails to attend to, obey or enforce rules for safety or proper and ethical treatment of animals.	Generally attends to, obeys and enforces rules for safety or proper and ethical treatment of animals.	Generally attends to, obeys and enforces rules for safety or proper and ethical treatment of animals and discusses reasons for such rules with students.	Generally attends to, obeys and enforces rules for safety or proper and ethical treatment of animals and incorporates discussion of such rules and ethics into the broader science curriculum.
6. The student teacher uses knowledge of effective verbal, non-verbal and media communication techniques and appropriate technology to foster active inquiry, collaboration, and supportive interaction in the classroom				
_____ 6a. Displays effective verbal, nonverbal and media communication skills.	Does not display effective communication skills	Displays acceptable communication skills with some improvements needed	Displays effective verbal, nonverbal and media communication skills	Displays exceptional degrees of skills in communications of all three types.
_____ 6b. Uses technology effectively to teach science.	Seldom or never uses technology and media communications to support learning by students.	Occasionally uses available and appropriate technology and media communications to support learning by students.	Regularly and effectively uses available and appropriate technology and media communications to support learning by students.	Integrates available and appropriate technology and media communications to achieve goals related to the ability to students to know and use technology.
_____ 6c. Facilitates active inquiry, collaboration and supportive interactions.	Does not effectively facilitate active inquiry, collaboration and supportive classroom interactions.	Supports active inquiry, collaboration and supportive classroom interactions from time to time but has difficulty directing them.	Skillfully supports active inquiry, collaboration and supportive classroom interactions.	Skillfully integrates active inquiry, collaboration and supportive classroom interactions as the basis for science instruction.
1. The student teacher plans instruction based upon knowledge of subject matter, state and national standards, students, and the community.				

Standards	Unacceptable (U)	Basic (B)	Proficient (P)	Accomplished (A)
_____ 7a. Effectively plans and implements instruction.	Demonstrates consistently poor planning and implementation skills.	Has lesson and unit plans but activities may not always be cohesive or aligned with curriculum goals or needs and abilities of students.	Has good lesson and unit plans with activities that are cohesive, aligned with appropriate curriculum goals, and consistent with needs and abilities of most students.	Has a demonstrably effective lesson and unit plan with diverse activities showing strong knowledge of students and the community as well as subject and curriculum goals.
_____ 7b. Bases science instruction on state and national standards.	Does not relate plans and activities to state and national standards.	Relates plans and activities to isolated state and national standards on lesson plans.	Relates plans and activities to multiple state and national standards on lesson plans demonstrating that more than one standard may be met by a given activity	Relates plans and activities to state and national standards on lesson plans and ensures that all standards are addressed on a regular basis.
_____ 7c. Uses community resources to facilitate learning of science	Seldom or never makes use of community resources to advance student learning and understanding of science.	Makes limited use of limited community resources to advance student learning and understanding of science.	Makes regular use of community resources to advance student learning and understanding of science with moderate success.	Makes extensive and continuous use of community resources to advance student learning and understanding of science with moderate success.
2. The student teacher understands and uses formal and informal assessment strategies, consistent with instructional goals, to evaluate and ensure the continuous intellectual, social, and physical development of the learner.				
_____ 8a. Aligns goals, strategies and assessments.	Assessment strategies and tools are often not aligned with instruction, are poorly designed or are not valid tools for measuring student achievement and growth.	Uses a limited variety of valid assessment tools that are aligned with instruction. Tendency for assessment to focus on knowledge acquisition and convergent responses.	Uses a variety of assessment tools aligned with instruction leading to desired knowledge and skills, with increasing emphasis on understanding, reasoning, and divergent responses.	Encourages student self-assessment and individual awareness of intellectual, personal and social growth. Uses a variety of assessment tools that are aligned with instruction and emphasize understanding and divergent responses.

Standards	Unacceptable (U)	Basic (B)	Proficient (P)	Accomplished (A)
_____ 8b. Uses a variety of assessments including authentic assessments.	Uses a very limited number and type of assessment, primarily traditional assessments of content knowledge (subject matter).	Uses some authentic assessments in addition to traditional assessments to successfully assess knowledge other than content knowledge.	Uses a variety of assessment instruments and methods to assess attitudes, understanding and skill development as well as content knowledge.	Meets standard for proficient and Incorporates student self-assessment with teacher assessments and makes use of such assessments to motivate and direct student learning.
_____ 8c. Plans and makes changes in instruction based on assessment data.	Makes few or no changes in planning or instruction based on data from student assessments and reflection.	Reflects on data from informal and formal student assessments and shows the ability to make changes based on these assessments.	Uses informal and formal assessments regularly to determine student needs and to plan alternative instruction needed to achieve defined outcomes.	Aligns informal and formal assessments and regularly and flexibly bases instruction on the demonstrated performances of students.
9. The student teacher is a reflective practitioner who continually evaluates the effects of his or her choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow professionally.				
_____ 9a. Engages in reflective practices.	Provides little evidence of reflective practice in making decisions and avoids or does not engage in reflective discussions with colleagues or supervisors.	Engages in reflective practice inconsistently. Seldom engages in reflective discussions with colleagues or supervisors.	Appreciates the value of reflective practice and discussion with colleagues and uses consequent understanding to change practices.	Clearly values reflection: Provides students with opportunities to reflect on their own work. Shares reflections and insights with colleagues.
_____ 9b. Seeks to grow and develop professionally.	Seldom or never seeks opportunities for professional development and resists suggestions by supervisors.	Seeks some opportunities for growth and development and listens to suggestions.	Seeks opportunities for growth and development and seeks suggestions for changes and improvement.	Actively and enthusiastically pursues professional growth as an adjunct to personal growth, regularly testing and evaluating new methods and strategies.

Standards	Unacceptable (U)	Basic (B)	Proficient (P)	Accomplished (A)
10. The student teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students and well being.				
_____ 10a. Interacts well with colleagues and others	Does not interact well with school colleagues, parents, and agencies in the larger community and/or makes judgments about people based solely on their cultural, racial, gender or ethnic backgrounds or special needs.	Generally interacts well with school colleagues, parents, and agencies in the larger community and does not make judgments about people based solely on their cultural, racial, gender or ethnic backgrounds or special needs.	Exhibits a proactive and equitable professional relationship with school colleagues, parents, and agencies in the larger community that facilitates positive interactions and strong communications of benefit to students and the school	Advocates and promotes the development of strong, equitable and proactive relationships with and among others in the school and community and provides leadership in creation of a positive human environment.
_____ 10b. Builds relationships to support students and their well-being.	Seldom or never interacts with school colleagues (other than supervisors), parents, or agencies in the larger community to encourage students' well-being.	Occasionally interacts with school colleagues (other than supervisors), parents, or agencies in the larger community to encourage students' well-being.	Frequently interacts with school colleagues (other than supervisors), parents, or agencies in the larger community to encourage students' well-being.	Systematically interacts with school colleagues (other than supervisors), parents, or agencies in the larger community to encourage students' well-being.