

## Science Content-Specific Rubric

To be used together with Lesson Observation Form – Secondary PTEP, UNC

Teacher Candidates (TC) are expected to meet *Performance-Based Standards for Colorado* and *National Science Teacher Association (NSTA) Standards for Science Teacher Preparation* at the Proficient or Advanced level by the end of the student teaching experience. Not every performance indicator may be observed in individual lessons yet should be observed sometime over the 16 week student teaching experience.

0= Basic (B): Minimal understanding or demonstration of standard. Needs significant improvement to pass.

1= Developing (D): Understands the standard, but performs inconsistently. Needs improvement to pass.

2= Proficient (P): Consistently meets the standard's performance indicators. Passes.

3= Advanced (A): Exemplary performance, consistently exceeding standards.

Performance Indicator	Enter numeric value (0-3)
1. TC understands and is able to successfully convey to students the <b>major science concepts, principles, theories, laws, and interrelationships</b> of their area of science (biology, chemistry, physics, or earth science) and supporting fields.	
2. TC understands and is able to successfully convey to students the <b>unifying concepts of science</b> delineated by the Colorado Model Science Content Standards and the National Science Education Standards.	
3. TC understands and is able to successfully convey to students <b>important personal and technological applications of science</b> and <b>socially important issues</b> related to science and technology.	
4. TC understands and is able to successfully convey to students <b>the historical and cultural development of science</b> as a discipline.	
5. TC understands and is able to successfully convey to students the philosophical tenets, assumptions, goals, and values that <b>distinguish science from technology and from other ways of knowing</b> the world.	
6. TC engages students successfully in studies of the <b>nature of science</b> including, when possible, the critical analysis of false or doubtful assertions made in the name of science.	
7. TC will engage students successfully in developmentally appropriate <b>inquiries that require them to develop concepts and relationships</b> from their observations, data, and inferences in a scientific manner.	
8. TC will understand and demonstrate <b>safe and proper techniques</b> for the preparation, storage, dispensing, supervision, and disposal of all materials used in science education.	
9. TC will know and follow emergency procedures, maintain safety equipment, and <b>ensure safety procedures appropriate for the activities and abilities</b> of all students.	
10. TC will <b>treat all living organisms</b> used in the classroom or found in the field <b>in a safe, humane, and ethical manner</b> and respect legal restrictions on their collection, keeping and use. (For Biology TC's).	