

Indiana Wesleyan University Differentiated Lesson Plan
Science Education Student Teaching Admission Summary Scoring Sheet

The following lesson plan assignment description and assessment rubric is a required element in the student teaching application and admission process.

Candidates. Submit your completed lesson plan to a teacher education or content faculty of your choosing for assessment. When you have achieved a passing score, include this entire packet with your student-teaching application materials.

Faculty. Use the attached rubric to assess the candidate's lesson plan; complete the following summary table prior to returning the scored lesson plan to the candidate.

Lesson Plan Elements	NI	EC	C	O	Score
InTASC 7.1 Goals/Objectives/Standards					
<input type="checkbox"/> Progression 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
<input type="checkbox"/> Progression 2					
<input type="checkbox"/> Progression 3					
InTASC 7.3					
<input type="checkbox"/> Progression 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
<input type="checkbox"/> Progression 2					
<input type="checkbox"/> Progression 3					
Anticipatory Set	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
Purpose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
Adaptations: Diverse Students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
Lesson Presentation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
Check for Understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
Review/Closure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
Independent Practice/ Extending the Learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
Variety of strategies and inquiry approaches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
Confronting naïve concepts and preconceptions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
Selection of teaching and learning activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
Indiana Standard 7: Reading Instruction					
<input type="checkbox"/> Progression 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
<input type="checkbox"/> Progression 2					
<input type="checkbox"/> Progression 3					
Formative and summative assessment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
InTASC 7.2					
<input type="checkbox"/> Progression 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
<input type="checkbox"/> Progression 2					
<input type="checkbox"/> Progression 3					
Assessment strategies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
Technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
Planning learning experiences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
Reflection and post-lesson analysis	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	/4
Total (passing = 57/76)					

Scoring Guide. Check the box that corresponds to the rating you gave to each element of the lesson plan. Add the individual element scores (NI=1; EC=2; C=3; O=4) to calculate the total lesson plan score.

Lesson Plan is:

- Approved
 Not Approved; revisions and resubmission required.

Faculty Assessor _____

Candidate _____

Date _____



INDIANA WESLEYAN UNIVERSITY
Science Education Lesson Plan Assignment Description and Assessment Rubric
2011 National Science Teacher Association Standards

Administration and Purpose. While your lesson plans will be assessed multiple times throughout your program of study, your “official” lesson plan is assessed as part of the materials you will submit with your student teaching admission application. You will choose your assessor from the teacher education faculty.

The lesson plan assessment has three related purposes. The first and perhaps most obvious is to document your ability to plan effective instruction; this is one of the hallmarks of the best, most successful teachers. These teachers consider not only the needs of their students as they plan, but also multiple pathways to achieve learning goals for each lesson so that each student becomes a successful learner. The second purpose is to habituate you to the instructional cycle. It consists of planning for and delivering instruction, assessing student learning, modifying future lessons based on assessment data, followed by planning for new lessons. The cycle does not end until all students learn the intended material. The third, overarching purpose of the lesson plan assessment is to provide you with the means to internalize the discipline necessary to become a successful teacher. The fact is that no teacher, no matter how talented, will ever achieve long-term effectiveness with diverse populations of students without developing the self-discipline necessary to plan effective instruction, consistently, over time.

Content of Assessment. The lesson plan assessment is divided into the following sections:
Readiness. Preparing the groundwork for effective instruction.
Plan for Instruction. The blueprint that guides your instruction for each lesson.
Plan for Assessment. Your plan for determining how well your students learn what you teach.
Reflection and Post-Lesson Analysis. One of the characteristics of the most successful teachers is that they reflect on their teaching. They think about what went well and what could be improved in each lesson, and they take steps to make each lesson better than the last.

In addition to these lesson plan elements, this assessment also includes the following alignments:

- National Science Teacher Association (NSTA) 2011 standards. The IWU Science education program is nationally recognized by National Science Teacher Association; this assessment is one of several used to affirm the strength of our program by that organization.
- Interstate New Teacher Assessment and Support Consortium (InTASC). The InTASC Standards outline the common principles and foundations of teaching practice that cut across all subject areas and grade levels and that are necessary to improve student achievement. The ten InTASC Standards are incorporated into this assessment, and are divided into four categories:
 - ✓ Learner and Learning (InTASC Standards 1, 2 and 3)
 - ✓ Content (InTASC Standards 4 and 5)
 - ✓ Instructional Practice (InTASC Standards 6, 7 and 8)
 - ✓ Professional Responsibility (InTASC Standards 9 and 10)
- Diversity Thread. Teacher candidates are expected to teach all students well.
- Technology Thread. Teacher candidates are expected to integrate technology into their teaching as a means to improve student learning.

Criterion for Success. *Candidates must achieve a rating of Competent to pass this assessment. For this assessment, Competent is defined as 80% or more of all rubric elements scored as competent or higher. No domain or assessment element may be scored as Needs Improvement.*

Indiana Wesleyan University Differentiated Lesson Plan Science Education—2011 NSTA Standards

Assignment Description

The Indiana Wesleyan University differentiated lesson plan combines elements of the Direct Instruction lesson-planning model with elements requiring the candidate to differentiate and modify plans, activities, and assessments to meet the needs of all students. The candidate will utilize concepts in learning theory, curriculum development and instructional effectiveness to produce lesson plans that are aligned with Indiana Science Education standards, INTASC principles, and National Science Teacher Association (NSTA) standards.

The concept of differentiated instruction is founded on an active, student centered, meaning-making approach to teaching and learning. The theoretical and philosophical influences embedded in differentiated instruction include these key elements: readiness, interest, and learner profile.¹

The science education lesson plan format includes the follow elements: readiness (goals/objectives, standards, anticipatory set), instruction (input, modeling, checking for understanding), accommodation (addressing the needs of students with exceptional circumstances and conditions), and assessment.

Additionally, the science education lesson plan includes a final evaluation section for the candidate to self-assess the degree to which the lesson was taught successfully. These post-lesson self-analysis questions are designed to help the candidate think about the instructional process and how it might be improved in future lessons.

The science education lesson plan design structure is as follows:

Science Education Differentiated Lesson Plan 2011 NSTA Standards

Name _____

READINESS

- I. Goals/Objectives/Standard(s)
 - A. Goal(s)—Unit
 - B. Objective(s)
Provide: 1.) conditions; 2.) desired learning; 3.) observable behavior; and 4.) accuracy (as necessary)
 - C. Standard(s): learned society; state; district

- II. Anticipatory Set
 - This is a “bridge” from the past learning to present learning
 - Must be understood by all

- III. Purpose: must be stated to the students! Why do we need to learn this?

¹ Tomlinson, C., and S. Allen (2000). Leadership for Differentiating Schools & Classrooms. Alexandria, VA: ASCD.

PLAN FOR INSTRUCTION (Remember modeling, check for understanding)

- IV. Adaptations for students with special needs. Depending on the nature and complexity of the lesson, what adjustments and/or adaptations will you make to accommodate all students in the class?
- Remediation: students who didn't master the objective(s)
 - Enrichment: gifted/mastery students
 - ESL—mainstreamed
 - Others?
- V. Safety: What safety issues will you encounter as a result of teaching this content, and how will you address those concerns? Address these NSTA standards in your plan as they apply to the content of the lesson:

NSTA Standard 3d Plan a learning environment and learning experiences for all students that demonstrate chemical safety, safety procedures, and the ethical treatment of living organisms within their licensure area.

- VI. Lesson Presentation (Input/Output)
- Include: active participation and questions to be asked
 - Include: technology and adaptations for students with special needs
 - Include: modeling/monitoring

Address these NSTA standards in your lesson plan:

NSTA Standard 2a Incorporate a variety of inquiry approaches that demonstrate your knowledge and understanding of how students learn science.

NSTA Standard 2c Design instruction and assessment strategies that confront and address students' naïve concepts/preconceptions about the science content of your lesson.

NSTA Standard 3a Incorporate a variety of strategies demonstrating your knowledge and understanding of how to select the appropriate teaching and learning activities – including laboratory or field settings - to help all students learn.

- VII. Check for understanding. How do you know students have learned? What strategies will you implement if all students have not met lesson outcomes? Employ one or more strategies to determine student learning:
- Guided practice. Teacher models; students complete exercises with the teacher; the teacher checks for understanding before students work alone.
 - Reteach: whole group, small group, individuals
 - Suggested strategies: index card summaries; hand signals; question board/box; concept maps; oral questioning; follow-up probes; misconception checks
- VIII. Review learning outcomes / Closure
- IX. Independent practice/extending the learning
- If the checking for understanding has gone well, students are ready to complete an assignment alone.
 - The assignment must relate directly to the lesson objective.

PLAN FOR READING (AND WRITING) INSTRUCTION

At its most basic, teaching reading in the content areas is helping learners to make connections between what they already know and “new” information presented in the text. As students make these connections, they create meaning; they comprehend what they are reading. Teaching reading in the content areas, therefore, is not so much about teaching students basic reading skills as it is about teaching students how to use reading as a tool for thinking and learning. Until recently, learning was thought to be a passive activity: teachers poured their knowledge into the receptive minds of students. Reading was thought to be passive as well. The words of the text contained meaning; reading simply entailed decoding the words on the page. Recent research indicates, however, that learning and reading are active processes. Readers construct meaning as they read. Effective readers are strategic. They make predictions, organize information, and interact with the text. They evaluate the ideas they are reading about in light of what they already know. They monitor their comprehension, and know when and how to modify their reading behaviors when they have problems understanding what they read.²

Teaching reading is a complex process. The best teachers develop an extensive knowledge base and draw on a repertoire of strategies for working with struggling students. Specifically, all teachers should learn how to provide effective vocabulary instruction in their subject areas; all teachers should learn how to provide instruction in reading comprehension strategies that can help students make sense of content-area texts; all teachers should learn how to design reading and writing assignments that are likely to motivate students who lack engagement in school activities; and all teachers should learn how to teach students to read and write in the ways that are distinct to their own content areas.³

As you plan for literacy development in the context of your lesson content, also incorporate these or other strategies in your lesson plan to build your students’ reading and writing skills:

- Strategy 1: Provide explicit instruction and supportive practice in the use of effective comprehension strategies throughout the lesson.⁴
- Strategy 2: Increase the amount and quality of open, sustained discussion of reading content.
- Strategy 3: Set and maintain high standards for text, conversation, questions, and vocabulary.
- Strategy 4: Increase students’ motivation and engagement with reading.
- Strategy 5: Teach essential content knowledge so that all students master critical concepts.

PLAN FOR ASSESSMENT

NSTA Standard 3c Plan fair and equitable assessment strategies to analyze student learning and to evaluate if the learning goals are met. Assessment strategies are designed to continuously evaluate preconceptions and ideas that students hold and the understandings that students have formulated.

² Adapted from http://www.ascd.org/ascd/pdf/books/billmeyer1998_sample_chapters.pdf; retrieved from the internet on July 12, 2017.

³ Adapted from http://www.adlit.org/adlit_101/improving_literacy_instruction_in_your_school/teaching_reading_and_writing_content_areas/; retrieved from the internet on July 12, 2017.

⁴ Adapted from <http://www.adlit.org/article/19999/>; retrieved from the internet on July 12, 2017.

Develop a plan for assessing the degree to which your students have mastered the learning outcomes from this lesson. Your plan should include formative assessments at a minimum, and may also include summative and/or authentic assessments depending on the nature of the learning outcomes and the placement of the lesson within the context of the unit.

Formative. *Formative assessments* are on-going assessments, reviews, and observations in a classroom. Use formative assessment to improve instructional methods and student feedback throughout the teaching and learning process. For example, if some students do not grasp a concept, you might design a review activity or use a different instructional strategy. Likewise, students can monitor their progress with periodic quizzes and performance tasks. The results of formative assessments are used to modify and validate instruction.

Summative. *Summative assessments* are typically used to evaluate the effectiveness of instructional programs and services at the end of lesson or instructional unit. The goal of summative assessment is to make a judgment of student competency after an instructional phase is complete. Summative evaluations are used to determine if students have mastered specific competencies and to identify instructional areas that need additional attention.⁵

Authentic. *Authentic assessment* is a form of assessment in which students are asked to perform real-world tasks that demonstrate meaningful application of essential knowledge and skills. These tasks—authentic assessments—are either replicas of or analogous to the kinds of problems faced by adults or consumers or professionals in the field. Authentic assessment requires students to demonstrate specific skills and competencies, that is, to apply the skills and knowledge they have mastered. An authentic assessment usually includes a task for students to perform and a rubric by which their performance on the task will be evaluated.⁶

Authentic assessment can be either a short-term or long-term assignment for students. There is no specific length of time attached to an authentic assessment learning opportunity. However, "within a complete assessment system, there should be a balance of longer performance assessments and shorter ones" (Valencia, 1997). According to Lawrence Rudner, authentic assessment should require that students be active participants in learning and be able to demonstrate knowledge and skills. The following is a list of examples of authentic assessment that meet one or both of these requirements - active participation and/or demonstration of knowledge and skills. As you read through this list, keep in mind that some of the examples will work better for you depending on your grade level and topic area. Make a note of the examples of assessment that you could use in your own classroom.⁷

Authentic Assessment examples:

- Conduction research and writing a report
- Character analysis
- Student debates (individual or group)
- Drawing and writing about a story or chapter
- Experiments - trial and error learning
- Journal entries (reflective writing)
- Discussion partners or groups
- Student self-assessment
- Peer assessment and evaluation
- Presentations
- Projects
- Portfolios

REFLECTION AND POST-LESSON ANALYSIS

⁵ Adapted from <http://fcit.usf.edu/assessment/basic/basic.html>. Taken from the Internet on July 20 2012.

⁶ Adapted from <http://jfmueLLer.faculty.noctrl.edu/toolbox/whatisit.htm>. Taken from the Internet on July 20, 2012.

⁷ Taken from http://tccl.rit.albany.edu/knilt/index.php/Unit_2:_Types_of_Authentic_Assessment on July 23, 2012.

1. How many students achieved the lesson objective(s)? For those who did not, why not?
2. What were my strengths and weaknesses?
3. How should I alter this lesson?
4. How would I pace it differently?
5. Were all students actively participating? If not, why not?
6. What adjustments did I make to reach varied learning styles and ability levels?
 - a. Bloom's Taxonomy
 - b. Gardner's Multiple Intelligences

Indiana Wesleyan University
Science Lesson Plan Design and Assessment Rubric

NOTE: InTASC progressions have been added to this lesson plan assessment rubric. These progressions describe the increasing complexity and sophistication of teaching practice for each core standard across the three developmental levels: Progression 1 is approximately equal to IWU practicum 1 expectations; Progression 2 is approximately equal to IWU practicum 2 expectations; and Progression 3 is approximately equal to student teaching expectations. Please use the following descriptors to assess the InTASC Progressions embedded in the lesson plan:

InTASC Progressions Legend
<p>Emerging Competence: The candidate demonstrates awareness of the Progression expectations and occasionally includes them in his or her planning, but has not yet reached a level of consistency that would indicate a rating of competence.</p> <p><i>Or...</i></p> <p>The candidate incorporates some Progression elements, but omits or underemphasizes others in his or her lesson planning.</p> <p>Competent: The candidate regularly and consistently incorporates Progression expectations in his or her lesson planning.</p> <p>Outstanding: The candidate's depth of insight and quality of work is distinctly superior to normally-accepted standards.</p>

Readiness

	Needs Improvement	Progression 1	Progression 2	Progression 3
<p style="text-align: center;">Goals/ Objectives/ Standards</p> <p>InTASC 7.1 The candidate selects, creates, and sequences learning experiences and performance tasks that support learners in reaching rigorous curriculum goals based on content standards and cross-disciplinary skills.</p>	<p>The candidate does not use curriculum materials or content standards to identify learning objectives;</p> <p><i>Or...</i></p> <p>He or she does not plan or sequence common learning experiences or performance tasks linked to the objectives;</p> <p><i>Or...</i></p> <p>He or she does not identify learners who need additional support or acceleration;</p> <p><i>Or...</i></p> <p>He or she does not integrate technology into instructional plans.</p>	<p>The candidate</p> <ul style="list-style-type: none"> • Uses curriculum materials and content standards to identify measurable learning objectives; <p><i>And...</i></p> <ul style="list-style-type: none"> • Plans and sequences common learning experiences and performance tasks linked to the learning objectives; makes content relevant to learners; <p><i>And...</i></p> <ul style="list-style-type: none"> • Identifies learners who need additional support and/or acceleration and designs learning experiences to support their progress; <p><i>And...</i></p> <ul style="list-style-type: none"> • Integrates technology resources into instructional plans. 	<p>Progression 1 <i>And...</i></p> <p>The candidate</p> <ul style="list-style-type: none"> • Refines learning objectives based on an understanding of student learning progressions and his or her students' development; <p><i>And...</i></p> <ul style="list-style-type: none"> • Plans a variety of resources and learning experiences that build cross-disciplinary skills; <p><i>And...</i></p> <ul style="list-style-type: none"> • Structures time in the plan to work with learners to build prerequisite skills, support steady progress, and/or extend learning; 	<p>Progression 2 <i>And...</i></p> <p>The candidate</p> <ul style="list-style-type: none"> • Collaborates with learners in identifying personalized learning objectives to reach long-term goals; <p><i>And...</i></p> <ul style="list-style-type: none"> • Works with learners to identify pathways to goal achievement using a range of resources and learning experiences; <p><i>And...</i></p> <ul style="list-style-type: none"> • Incorporates technology in a variety of innovative ways in planning (e.g., managing learner records, expanding options for learner choice, and documenting performance).
		EC C O	EC C O	EC C O

Readiness, con't.

	Needs Improvement	Progression 1	Progression 2	Progression 3				
InTASC 7.3 The candidate plans instruction by collaborating with colleagues, specialists, community resources, families and learners to meet individual learning needs.	The candidate does not use learner performance data or his or her knowledge of learners to identify learners who need learning interventions; <i>Or...</i> He or she does not use learner performance data over time to inform planning.	The candidate <ul style="list-style-type: none"> • Uses learner performance data and his or her knowledge of learners to identify learners who need significant intervention to support or advance learning; <i>And...</i> <ul style="list-style-type: none"> • He or she uses data on learner performance over time to inform planning, making adjustments for recurring learning needs. 	Progression 1 <i>And...</i> The candidate <ul style="list-style-type: none"> • Uses learner performance data and his or her knowledge of learners to identify specific learning needs of individuals and groups. 	Progression 2 <i>And...</i> The candidate <ul style="list-style-type: none"> • Uses a wide repertoire of supports in planning to address individualized learner needs and interests in ongoing ways; 				
		EC	C	O	EC	C	O	EC

	Needs Improvement	Emerging Competence	Competent	Outstanding
Anticipatory Set InTASC Standard 8	The anticipatory set is missing or has little or no connection to the goal or content of the lesson.	The connection between the anticipatory set and lesson objectives and content is weak or unclear.	The anticipatory set is clear and direct and focuses students' attention on the lesson.	The anticipatory set connects the current lesson with previous and future learning and focuses students' minds and attention on the day's lesson.
Purpose	The statement of purpose is ambiguous or worded so generally that the connection with the content of the lesson is not apparent.	A statement of purpose is included in the LP, but has little power to motivate students and capture their imaginations.	The statement of purpose is clearly connected to the content of the lesson and is presented in terms that are easily understood by students.	The statement of purpose has the power to capture the imaginations of students and motivate them to accomplish the expected learning.

Plan of Instruction

	Needs Improvement	Emerging Competence	Competent	Outstanding
Adaptations: Special Needs Students InTASC Standard 2 Diversity	Few or no adaptations are included for students with special needs.	Lesson adaptations are written generally and/or are not designed to meet specific learning issues of individual students.	Plans for differentiating instruction are included; adequate and appropriate adaptations are included for all students who require them.	The LP includes differentiated instruction for students with special needs; lesson adaptations are thoughtfully and thoroughly planned and are designed to bring all students into full participation and mastery of lesson goals and objectives.

Plan of Instruction, con't.

	Needs Improvement	Emerging Competence	Competent	Outstanding
<p>Lesson Presentation</p> <p>InTASC Standard 5</p>	<p>The presentation does not involve the active participation of students. Essential questions are not listed or are unrelated to the content of the lesson. Little or no provision is made for technology or diverse students.</p> <p>Little or no provision is made for modeling or mentoring of students.</p>	<p>The presentation includes activities that have little relation to the content of the lesson. Essential questions are poorly written or are not adequate for the scope of the lesson. Provisions for technology and diverse students are inadequate.</p> <p>Plans for teacher modeling and mentoring of students could be better developed.</p>	<p>The lesson presentation provides for the active participation of students. Essential questions are listed; provisions for technology and diversity issues are included.</p> <p>The modeling and monitoring of student work and learning sections are included in sufficient detail.</p>	<p>The lesson presentation is clearly designed to actively involve all students for the duration of the learning process. Essential questions are designed to cause students to think deeply and critically about the content of the lesson. Technology is integrated seamlessly and appropriately. The learning needs of all students are accounted for in the presentation section.</p> <p>Teacher modeling and mentoring of students is designed to help all learners understand and master the content of the lesson.</p>
<p>Check for Understanding</p> <p>InTASC Standard 4</p>	<p>Little or no provision is included to check for student understanding or to reteach concepts that elude students during the initial presentation.</p>	<p>A guided practice section is included in the lesson plan, but the connection with the lesson presentation is weak and/or unclear.</p>	<p>The lesson plan includes a plan and the means to check for student understanding of the lesson. A provision is included to reteach all or part of the lesson to all or part of the class.</p>	<p>Plans to check for student understanding of the content are an integral part of the lesson, and include frequent questions and other actively engaging forms of formative assessment during guided practice.</p>
<p>Review/closure</p> <p>InTASC Standard 4</p>	<p>Lesson closure is not included, or is not related to the goals and/or content of the lesson.</p>	<p>Lesson closure is weak and/or poorly written.</p>	<p>Lesson closure relates directly to the lesson purpose and/or objective.</p>	<p>Lesson closure is clearly correlated to the content of the lesson and actively engages students in summarizing the essential elements of the lesson.</p>
<p>Independent Practice/Extending the Learning</p> <p>InTASC Standard 5</p>	<p>No independent practice activities are included in the lesson, or activities are unrelated to the content of the lesson.</p>	<p>Independent practice activities are not well conceived and/or written; student accomplishment of IP activities is not likely to result in lesson mastery.</p>	<p>Assignments or activities are included that provide students with the opportunity to practice learned skills; All activities match lesson objectives.</p>	<p>Independent practice activities are highly correlated to lesson objectives and content and lead to student mastery.</p>
<p>Variety of strategies and inquiry approaches</p> <p>NSTA Standard 2a InTASC Standard 8</p>	<p>The instructional strategies and/or inquiry approaches included in the candidate's unit plan are not adequate for the subject matter. They do not demonstrate how students learn science.</p>	<p>The candidate's unit plan includes strategies and inquiry approaches that demonstrate his or her knowledge but lacks understanding of how students learn science</p>	<p>The candidate's unit plan includes a variety of strategies and inquiry approaches that demonstrate his or her knowledge and understanding of how students learn science.</p>	<p>The candidate's unit plan includes multiple strategies and inquiry approaches carefully aligned with unit subject matter that demonstrate his or her thorough knowledge and understanding of how students learn science.</p>

Plan of Instruction, con't.

	Needs Improvement	Emerging Competence	Competent	Outstanding
Confronting naïve concepts and preconceptions NSTA 2c InTASC Standard 8	The candidate's instruction and assessment strategies do not confront or address students' naïve concepts and/or preconceptions.	The candidate's instruction and assessment strategies address students' naïve concepts and/or preconceptions.	The candidate designs instruction and assessment strategies that confront and address naïve concepts/ preconceptions.	The candidate researches and designs a variety of instruction and assessment strategies that confront and address naïve concepts/ preconceptions.
Selection of teaching and learning activities NSTA 3a InTASC Standard 8	The candidate's teaching strategies do not demonstrate knowledge or understanding of how to select appropriate teaching and learning activities.	The candidate uses strategies that demonstrate his or her developing knowledge and understanding of how to select appropriate teaching and learning activities.	The candidate uses a variety of strategies that demonstrate his or her knowledge and understanding of how to select the appropriate teaching and learning activities – including laboratory or field settings - to help all students learn.	The candidate regularly and appropriately uses a variety of strategies that demonstrate his or her knowledge and understanding of how to select the appropriate teaching and learning activities – including laboratory or field settings - to help all students learn.

Indiana Standard 7: Reading Instruction

	Needs Improvement	Progression 1	Progression 2	Progression 3				
Indiana Standard 7: Reading Instruction. The candidate has a broad and comprehensive understanding of content-area and disciplinary literacy skills, and demonstrates the ability to plan and deliver integrated content-area reading instruction that is based on student learning standards, student literacy needs and strengths as reflected in ongoing student data, and scientifically based reading research.	The candidate does not incorporate foundations of content-area or disciplinary literacy in his or her lesson planning or instructional delivery; <i>Or...</i> He or she fails to select evidence-based reading instruction based on SBRR or RtI elements; <i>Or...</i> Does not use evidence-based instructional practices to develop students' writing skills in his or her discipline.	The candidate <ul style="list-style-type: none"> Employs skills and practices of effective content-area reading instruction based on SBRR and RtI elements, including evidence-based instructional strategies that are aligned to learning goals and student needs; <i>And...</i> <ul style="list-style-type: none"> Uses evidence-based instructional strategies to develop students' vocabulary and language related to content-area reading and writing in his or her discipline; <i>And...</i> <ul style="list-style-type: none"> Uses evidence-based instructional practices to deepen comprehension, and to develop students' text-based reading skills and their use of comprehension strategies in his or her discipline 	Progression 1 <i>And...</i> The candidate <ul style="list-style-type: none"> Uses ongoing student data to inform reading-related instruction; <i>And...</i> <ul style="list-style-type: none"> Uses evidence-based skills and strategies for facilitating students' comprehension before during, and after reading content-area texts in his or her discipline. <i>And...</i> <ul style="list-style-type: none"> Uses evidence-based instructional practices to develop students' writing skills in his or her discipline. 	Progression 2 <i>And...</i> The candidate <ul style="list-style-type: none"> Uses evidence-based practices effectively to create a literacy-rich classroom environment that fosters and supports the literacy development of all students; <i>And...</i> <ul style="list-style-type: none"> Engages all students as agents in their own literacy development. 				
					EC	C	O	EC

Assessment Plan

	Needs Improvement	Emerging Competence	Competent	Outstanding
Formative and Summative Assessment InTASC Standard	The lesson plan does not include assessment activities, or there is little or no correlation between planned assessment activities and lesson goals and objectives.	Assessment activities are included in the lesson, but they are not well correlated to and/or do not cover the full range of LP goals and objectives.	A plan for informal, ongoing assessment throughout the lesson is included. A summative assessment plan is included if appropriate for the lesson.	Formative and summative assessment activities are a seamless and integrated part of the lesson. Assessment activities are highly correlated with the goals and objectives of the lesson.

Assessment Plan, con't.

	Needs Improvement	Progression 1	Progression 2	Progression 3				
InTASC 7.2 The teacher plans instruction based on information from formative and summative assessments as well as other sources and systematically adjusts plans to meet each student's learning needs.	The candidate does not plan instruction using formative or summative data; Or... He or she does not use data from formative assessments to identify adjustments in planning.	The candidate <ul style="list-style-type: none"> Plans instruction using formative and summative data from digital and/or other records of prior performance together with what he or she knows about learners, including developmental levels, prior learning, and interests; And... <ul style="list-style-type: none"> Uses data from formative assessments to identify adjustments in planning. 	Progression 1 And... The candidate <ul style="list-style-type: none"> Aggregates and disaggregates formative and summative data, identifies patterns, and uses these data to inform planning; And... <ul style="list-style-type: none"> Uses data from formative assessments to adjust instruction in the moment, to modify planned scaffolds, and/or to provide additional supports/ acceleration for individuals and groups of learners. 	Progression 2 And... The candidate <ul style="list-style-type: none"> Engages learners in assessing their own learning and uses this as one source of data to individualize and adjust plans; And... <ul style="list-style-type: none"> Uses summative assessment data over time to identify and plan for areas where learners typically will need additional supports or acceleration. 				
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	Needs Improvement	Emerging Competence	Competent	Outstanding
Assessment strategies NSTA 3c InTASC Standard 5	The candidate's assessment plans and strategies are not fair or equitable. His or her assessment strategies are not designed to evaluate preconceptions and ideas that students hold and the understandings that students have formulated.	The candidate plans assessment strategies to analyze student learning and to evaluate if the learning goals are met. Assessment strategies are not consistently designed to evaluate preconceptions and ideas that students hold and the understandings that students have formulated.	The candidate plans fair and equitable assessment strategies to analyze student learning and to evaluate if the learning goals are met. His or her assessment strategies are designed to continuously evaluate preconceptions and ideas that students hold and the understandings that students have formulated.	The candidate plans a variety of fair and equitable assessment strategies to analyze the degree to which students have met planned learning goals. His or her assessment strategies are designed to identify and continuously evaluate students' preconceptions and ideas and their previously-formulated understandings.

Technology

	Needs Improvement	Emerging Competence	Competent	Outstanding
Technology InTASC Standard 7 Technology Thread	The lesson plan reflects educational decision making regarding available technology that adversely impacts student learning and/or fails to engage students at the necessary level to meet lesson objectives.	The lesson plan reflects insufficient or misaligned decision making regarding available technology; statements indicating the use of instructional, assistive, or other technologies are written in general terms or in terms unlikely to impact student learning.	The lesson plan reflects educationally sound decisions regarding available technology (including, but not limited to, instructional and assistive technologies) to support learner needs and the curriculum.	The lesson plan reflects educationally sound decisions regarding available technology (including, but not limited to, instructional and assistive technologies) that engage students, enhance the learning process, and/or extend opportunities for learning.

Safety in the Science Classroom

	Needs Improvement	Emerging Competence	Competent	Outstanding
<p>Planning learning experiences NSTA 3d</p>	<p>The candidate does not plan adequate safety procedures.</p>	<p>The candidate plans learning experiences that demonstrate safety procedures in his or her classroom.</p>	<p>The candidate plans a learning environment and learning experiences for all students that demonstrates chemical safety, safety procedures, and the ethical treatment of living organisms within his or her licensure area(s).</p>	<p>The candidate anticipates areas of concern for his or her instructional unit, and plans a learning environment and a variety of learning experiences for all students demonstrating chemical safety, safety procedures, and the ethical treatment of living organisms within his or her licensure area(s).</p>

Evaluation

	Needs Improvement	Emerging Competence	Competent	Outstanding
<p>Reflection and Post-Lesson Analysis InTASC Standard 9</p>	<p>Self-answer questions are not included in the lesson plan.</p>	<p>Self-answer questions are included, but do not fit the content or purposes of the lesson.</p>	<p>The lesson plan includes all required self-answer questions.</p>	<p>Additional self-answer questions are included that specifically address unique lesson content and methodology.</p>

Revised July 12, 2017
 2011 NSTA Standards
 2013 InTASC Standards
 2010 Indiana Developmental Standards