Portfolio Evaluation Rubric for SCIE 201

REFLECTION CRITERIA	BELOW STANDARD (0 = F)	TARGET (1 = C)	DISTINGUISHED (2 = A)
Demonstration of content mastery	o We **KNOW** you're learning something – **PROVE** to us that you know it too! At this point, you haven't because the items you've included (including but not limited to: concept maps, activity reflections and data, work samples & reflective narratives) are not related to the topics covered or do not show mastery at the college level. You have not gone beyond where your opening reflection/pre-test indicated you were.	o **You're on the Right Track, but we know you can do better!** The items you've included (including but not limited to: Concept maps, activity reflections and data, work samples & reflective narratives) satisfactorily demonstrate that you've learned the content in this module/unit. You've connected the new material to your prior learning, and thought about topics at a high enough level for a college student. You've illustrated your progress from where you were in the pre-test (or pre-unit evaluation) to where you are now, and shown that you can solve problems related to the topic. You've shown that you've made progress toward the goal of developing your skill as a researcher. There's still more you can learn, or greater depth of thought to strive for. You should challenge yourself to reach the distinguished level.	o **BRAVO!!! Pat yourself on the back!** The items you've included (including, but not limited to: concept maps, activity reflections and data, work samples & reflective narratives) clearly & directly indicate you've mastered this material. You've connected the assignment / problem / project to your prior experience and have clearly documented your content knowledge & learning. You've demonstrated your concern for evidence; you have considered multiple perspectives; have developed theories and hypotheses consistent with your evidence; and you've considered why this topic is important. Most importantly, you've shown how your understanding has grown beyond that which was merely expected – you went above and beyond, and are well on your way to "proficient" status in this topic area.

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Demonstration of metacognitive development	o **Stage 1** of Reflection: primarily description of classroom activities and learners, or reports about the applications of skills and technical knowledge you have gained. **Reflections are focused on "What" I did or "How" I did it.**	o **Stage 2** of Reflection: It is deeper and occurs at a higher level of awareness and interaction with teaching and learning, which is revealed by your responses to assumptions and beliefs that you hold about the content that you are learning, how you actually learn, and your beliefs about teaching, the reality of classroom life, and your understanding about your impact on student learning, motivation, and classroom climate. **Reflections are focused more on "why" rather than how or what.**	o **Stage 3** of Reflection: **critical reflection**. You are able to engage in self-dialog more purposefully and analytically to reveal the holistic nature of teaching and learning by examining, questioning, and investigating through research what is taught, how it is taught, why it is taught and the possibility of teaching differently. At this level of inquiry you interact more deeply to fully experience and learn from your teaching, and seek answers to classroom problems, issues, and challenges. Generating your own insightful questions that may not be answerable now, but could be. **At this level reflections really focus on "so what", i.e. so why does it matter anyway?**

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Demonstration of use of activities to build own content knowledge.	o Did the activity and understood what it represented but did not connect it to anything else such as other activities, and prior knowledge and experience o Did not describe how the activity enhanced concept mastery. o Did not identify any underlying scientific principles. o No self-generated questions.	o Transferred the knowledge from one activity to another and connected it to prior knowledge and experience. Misidentified underlying scientific principle(s) or only curtly addressed them. o Described how the activity enhanced their content mastery o Generated questions but many times the self-generated question did not lead to more knowledge or a deeper understanding.	o Transferred the knowledge gained from one activity to another activity. Connected concepts and ideas. Connected to prior knowledge and experience. Recognized the underlying scientific principle(s) o Described how activity enhanced their content mastery o Generated own questions which led to more knowledge and understanding. Related the new knowledge/understanding to a classroom activity
Demonstration of ability to connect activities to elementary school science teaching.	o Did not relate the concepts to the state standards. o Developed and implemented lesson plans for the Dakota school.	o Connected concepts from the activity at least one State Academic Standards for at least one grade level. o Considered how to adapt the activity to at least one grade level in elementary school o Lesson plans that include clear objectives o Reflected on the developed lesson plans for the Dakota School	o Connected concepts from the activity to appropriate State Academic Standards for different grade levels (if it relates to different grade levels) o Considered how to adapt an activity for the different grade levels (for example, how would you do/change the activity for 1st grader vs. 5th grader.) o Lesson plans that include (1) how they think elementary school students will react to the activity, (2) the knowledge they could gain connected to clear objectives, (3) misconceptions students might have. o Reflection and thoughts on corrections to the lesson plans for the Dakota School