

**Assessment of Classroom Teaching
Science Education
Virginia Tech**

Intern: Ashley Grapes

Name of Lesson: Natural Selection & Darwin's Finches

Observer: J. KEITH

Taught on Nov. 8 + 9

Date: 11/22/10

School/Grade: Dalton Int.

1. How was the lesson constructed and organized?

Ashley's lesson plans were in-depth and well written. She followed them as well as can be expected due to the fact that I have several behavior problems that she dealt with like a true professional.

2. What strategies did the teacher use for engaging students?

She had a wonderful activity where beads were the "bird seeds" and each child in a group had a different "beak." Beaks were 5 fingers, no thumb, a spoon, a fork, and a clothespin. The students attempted to pick up the seeds with their beaks and determine which beak adapted best to the bead environment.

3. How did the teacher manage and monitor student learning?

Ashley had great classroom management. She continually walked from group to group to make sure they understood what they were to do and to keep them on task. She has no problem at all correcting a student who is misbehaving so that she can continue with her lesson.

4. How did the students respond to the activities?

The students loved this activity. They competed against each other deciding which "tool" worked the best. They learned about adapting to ones environment. As a follow up, they had 5 questions to answer about this activity.

5. What are suggestions for this lesson and for future planning?

Ashley also taught a lesson on the African Food Wed on Sept 20.

Secondary Science Education Licensure Program

School of Education

Virginia Tech

SCIENCE INTERNSHIP ASSESSMENT

Student Teacher: *Ashley Grapes* Semester: *1st* Year: *2010-2011*
 Cooperating Teacher: *J. KEITH* School: *Radford City - Dalton Int.*
 Subject(s): *Life Science?* Grade(s): *7*
 University Supervisor: *Mythianne Shelton*
 Form completed by: Cooperating Teacher
 University Supervisor

Signature: *Joyce C. Keith* Date: *11/22/10*

The Science Internship Assessment instrument is designed to provide evidence that the candidate's pedagogical and professional knowledge, skills, and dispositions are applied effectively in the field experience and student teaching. The criteria for the candidate's performance are derived from the National Science Teachers Associations (NSTA) standards for effective teaching. Specified criteria for student teacher performance are rated in the following categories: NSTA 5: General Skills of Teaching; NSTA 6: Curriculum Planning; NSTA 8: Assessment; NSTA 9: Safety and Welfare; and NSTA 10: Professional Growth.

In assessing the candidate's performance on each standard, please use the following rating scale and descriptors:

- 3 – **Distinguished:** Knowledge, skills, and dispositions are consistently observed and exceed expectations for a beginning teacher. Candidate demonstrates expert performance that requires the use of metacognitive and reflective thinking strategies in applying major pedagogical concepts or principals for effective science teaching in diverse situations.
- 2 – **Proficient:** Knowledge, skills, and dispositions are frequently observed and meet expectations for a beginning teacher. Candidate demonstrates highly competent performance that requires a comprehensive understanding of the standard and application of the tenets of the standard for effective classroom practice.
- 1 – **Basic:** Knowledge, skills, and dispositions are occasionally observed and minimally meet expectations for a beginning teacher. Candidate demonstrates acceptable performance that requires an awareness of and application of the basic concepts that define a standard for effective practice.
- 0 – **Unsatisfactory:** Knowledge, skills, and dispositions are not observed and do not meet expectations for a beginning teacher. Candidate demonstrates unacceptable performance in relation to the pedagogical and professional knowledge, skills, and dispositions required by the standard for effective practice.

NA – **Not Applicable:** No opportunity to observe.

NSTA 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

- 3 (a) vary their teaching actions, strategies, and methods to promote the development of multiple student skills and levels of understanding;
- 3 (b) successfully promote the learning of science by students with different abilities, needs, interests, and backgrounds;
- 3 (c) successfully organize and engage students in collaborative learning using different student group learning strategies;
- 3 (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;
- 3 (e) understand and build effectively upon the prior beliefs, knowledge, experiences, and interests of students; and
- 3 (f) create and maintain a psychologically and socially safe and supportive learning environment.

Comments/Indicators of Strengths or Weakness:

NSTA 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:

- 3 (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;
- 3 (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.

Comments/Indicators of Strengths or Weakness:

NSTA 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:

- 3 (a) use multiple assessment tools and strategies to achieve important goals for instruction that are aligned with methods of instruction and the needs of students;

- 3 (b) use the results of multiple assessments to guide and modify instruction, the classroom environment, or the assessment process;
- 3 (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.

Comments/Indicators of Strengths or Weakness:

NSTA 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:

- 3 (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;
- 3 (b) know and practice safe and proper techniques for the preparation, storage, dispensing, supervision, and disposal of all materials used in science instruction;
- 3 (c) know and follow emergency procedures, maintain safety equipment, and ensure safety procedures appropriate for the activities and the abilities of students;
- 3 (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.

Comments/Indicators of Strengths or Weakness:

NSTA 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:

- 3 (a) engage actively and continuously in opportunities for professional learning and leadership that reach beyond minimum job requirements;
- 3 (b) reflect constantly upon their teaching and identify ways and means through which they may grow professionally;
- 3 (c) use information from students, supervisors, colleagues and others to improve their teaching and facilitate their professional growth;
- 3 (d) interact effectively with colleagues, parents, and students; mentor new colleagues; and foster positive relationships with the community.

Comments/Indicators of Strengths or Weakness:

Ashley is an excellent teacher. I feel honored to have been able to work with her.