

Rationale for INTASC Standard #1

Co-Teaching Math Lesson (5th Grade)

It is fitting that my first piece of evidence is also the first lesson that I had taught while in ED 201. I was placed in a 5th grade classroom at Zablocki Elementary School an MPS affiliated school. It is also the only placement in which I had the opportunity to co-teach with a fellow Alverno student. I've included this piece in my portfolio to give the reviewer a sense of what my starting point was in my professional journey. This piece also shows my knowledge of how fractions work and how to teach the concepts related to fractions. (INTASC Standard #1) I also utilized the skills of *Diagnosis* when creating this lesson plan. Heather Saffran and I prepared and taught the lesson together and our goal was to give the students a new way to think about fractions as well as kinesthetic and visual way of working with them. We used *Conceptualization* to plan to meet the students' current needs with fractions as well as help them improve their skills so that they could solve more difficult fraction problems in the future.

While in this field Heather and I had observed many days in which the students were working with fractions. The concepts of fractions were presented by the instructor on the board as well as through worksheets. Though many days had been spent on the subject the students were still struggling when it came to applying what they were taught to problems related to fractions. Heather and I felt that they need a stronger conceptual understanding of what fractions were and our goal was to create a lesson in which these skills were addressed. (INTASC Standard #7, *Diagnosis, Coordination and Conceptualization*)

As is evident in my Supervisor Feedback the students were actively engaged in the lesson and were provided with multiple methods of sharing their understanding and development. This provided Heather and I many ways in which we could assess the students' conceptualization of fractions and their functions. I also provided alternative strategies with regards to reducing fractions. Without a clear understanding of mathematical content knowledge of fractions and their functions I could not have been possible for me to present the students with such opportunities.

Math Lesson Plan for Room 207 Zablocki 5th grade

Date of lesson 4/17/07

Prepared by Carrie Reno & Heather Saffran

Goal

WI Model Academic Standards: Mathematics-B.8.3 Generate and explain equivalencies among fractions, decimals, and percents.

Objective

A review of fractions, to be able to tell what the different parts of a fraction is and how fractions relate to other math concepts.

Materials Needed

Jelly beans previously bagged into sets of 10, 20, 30 and 50 beans (It is important that the beans be divided into predetermined sets so that assessment is easier to conduct.), large paper (with a circle shape centered on it as well as marks to indicate slices of a pies chart set up for various numbers of beans: 10, 20, 30 & 50), pencils, markers or crayons.

Time Needed: about 45 minutes

Procedures

C = Carrie teaches Heather assists H = Heather teaches Carrie assists

C Because this is the first time we will be giving this lesson and a camera will be present we will explain to the students what we are doing and why. We will also divide the students into small groups of 5? **5 MIN.**

H Once we have explained our purpose for teaching as Alverno students we will introduce the lesson. What math concept have you guys been working on? When in real life do we use fractions? (Make a list of the different ways on the board) There are many different ways that we use fractions in real life we have only listed a few ways **5 MIN.**

H After introducing the lesson we will review the parts of a fraction and the functions of each part. The *numerator* is the top number in a fraction and represents a specific part of a whole group or set of a whole. The *denominator* is the bottom number and represents the total number of things in the set or group. **2.5 MIN**

H The devising line is a 'per' sign, when dividing the top number into the bottom number you get a *percentage*. We will then ask the students in what real life situation is it important to know this. **2.5 MIN**

H The students will be given a worksheet to determine if they are ready to move on. **5 MIN**

C Once it has been determined we are ready to move on we will discuss how graphs can help us represent information. Students will be asked what kind of graphs they know of. They will also be asked what kind of a graph can best represent a whole number. **2.5 MIN**

C After students give input and have answered a pie graph, or have been lead to that answer, we will then show them an example of a pie graph on the board. Give an example of cutting a pizza for your friends if you have 9 friends total how many slices of pizza will you need for everyone to have one slice? At this point we will bring out the jelly beans and explain the steps for the project. **5 MIN**

C & H At this point we will be team teaching to insure that all steps are given and clarify any questions. **17.5 MIN, 10 MIN will be used to complete the graph (they will be informed of this tie and be expected to work as a team to complete it. If the majority of the students are not finished we will give them 5 minutes or so more to complete the lesson.)**

The steps will be for each group to (These can be written on the board as we go or on a poster board.)

Put their names on the top right hand corner of the paper with the circle.

Count the total number of jelly beans and write the number in the top left corner.

Then write the colors down and how many of each color there are in the lower right corner where the box and lines will be. Create a fraction to help you with the next step.

Divide the circle and fill in the parts to represent each of the different colors using the same color of marker. (It is like cutting a pizza.)

Label your graph with a title, and the value for each part. The value needs to be represented as a fraction as it relates to the total number in the group and a reduced fraction.

In close, each group will present their graphs to the class and tell about what they learned.

We will also ask the students to assess our performances as teachers and see if they think that this is a project the other students who are away at camp will want to participate in when they get back?

Assessment

Students will complete a short worksheet with fractions to reduce before conducting the project portion of the lesson. Students will also complete at least one pie graph representing the relationship of various colors of jellybeans to a whole set in a small group setting. The students will mark each section of the graph with a fraction in equivalent (the fraction before reducing) and reduced form. They will then, as a group, present to the class what the graphs represent and how the fractions are related to the whole.

Students will also orally assess our performance as teachers and give input on how they think the other students away at camp will like this lesson.



ED 201 – Supervisor Feedback

Observation #

Name: Carrie Reno
School: Zablocki Elementary
Coop. Teacher: Mr. Tyler
Grade/Subject: Grade 5/ Math
Date: 4/17/07
Supervisor: Scott Lawrence

Standard 1: The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

ED 201	Possible Sources of Evidence	Evidence
Performances		Coordination/Conceptualization
<ul style="list-style-type: none"> The candidate uses teaching resources and curriculum materials and makes some evaluations about their usefulness. The candidate engages students in learning as they teach lessons in a field experience. 	Lesson Plan Introduction to lesson	The strength of your lesson was the motivating resources that you provided your students. (Bags of jelly beans, pie graphs, and art aspects to the lesson) Creative introduction! Grading your performance and relating fractions to real life experiences.

Standard 2: The teacher understands how children learn and develop, and can provide learning opportunities that support their intellectual, social, and personal development.

ED 201	Possible Sources of Evidence	Evidence
Performances		Communication/Integrative Interaction
<ul style="list-style-type: none"> The candidate encourages discussion, listens and responds to group interaction, and elicits samples of student thinking orally and in writing when teaching field lessons. 	Questioning skills Planned discussion Student responses	Students had opportunities to respond orally and in writing. (math problems, graphs, discussion regarding fraction problems) The small group work was especially engaging for students.

Standard 3: The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

ED 201	Possible Sources of Evidence	Evidence
Dispositions		Diagnosis/Integrative Interaction/Conceptualization
<ul style="list-style-type: none"> The candidate respects students as diverse individuals The candidate is sensitive to community and cultural norms. 	Interaction between student and pre-service teacher. Lesson Plan (section on meeting student needs). Interactions Lesson Plans	You are very sensitive to the individual needs of your students. Your lesson provided opportunities for the students to hear, see and do various things with fractions. Did you plan for accommodations to meet various student learning levels in your groups?

Standard 4: The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.

Performances	Possible Sources of Evidence	Coordination/Conceptualization
<ul style="list-style-type: none"> The candidate evaluates learning goals and considers alternative strategies and materials to meet student needs. The candidate uses some teaching and learning strategies to engage students in active learning opportunities. The candidate teaches lessons in which concepts are clearly and accurately presented. 	Lesson plans Discussions with cooperating teachers Lesson plan Observation Observation	You provided students with alternative strategies with the problems on reducing fractions that you did on the board. (Teaching them how to use division to reduce the fractions to lowest terms) The small group work with the jelly beans was very engaging and interactive for the students. You modeled the reducing fractions well. The small groups interacted cooperatively but were a little unclear at times regarding their focus.

Standard 5: The 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.

Performances	Possible Sources of Evidence	Integrative Interaction/Communication
<ul style="list-style-type: none"> Recognizes opportunities to demonstrate multiple perspectives. The candidate monitors independent and group work in field settings. 	Lesson plan Observation Lesson plan Observation	The students were motivated and interested. You did a fine job of circulating among the groups and clarifying issues. They worked cooperatively in their small groups. You encouraged sharing, but I wasn't sure that multiple perspectives were being demonstrated in the groups.

Standard 6: The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

Dispositions	Possible Sources of Evidence	Communication/Conceptualization/ Integrative Interaction
<ul style="list-style-type: none"> The candidate is a thoughtful and responsive listener. 	Observation of responses to students	You demonstrated that you were thoughtful and sensitive to student responses. You model appropriate communication strategies in discussions and small group interactions. You made modifications and suggestions when needed to clarify problems. You were assertive and used a "teacher voice" At times, your directions were a bit unclear such as when you introduced the small group activity. Perhaps you could have asked a few leading questions to get the groups started and then asked more specific questions as you circulated among the groups.
Performances <ul style="list-style-type: none"> The candidate models appropriate communication strategies in conveying ideas and information and in asking questions. The candidate communicates in ways that demonstrate sensitivity to cultural and gender differences. 	Observation of questioning strategies. Interactions with students.	

Standard 7: The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

Knowledge	Possible Sources of Evidence	Diagnosis/Integrative Interaction
<ul style="list-style-type: none"> The candidate understands the importance of connecting instruction to students' experiences. 	Lesson plan	Your lesson plan was relevant and engaging for your learners. Your materials and examples were very geared to your students experiences.
Dispositions <ul style="list-style-type: none"> The candidate believes that plans must always be open to adjustment and revision based on student needs. The candidate values the importance of planning as an integral part of teaching. 	Interactions in the classroom Lesson plan	Your lesson plans were very thorough and well conceived. You demonstrated that you understand the important elements of a good lesson plan. You included activities that provide opportunities for a wide variety of learning modalities.
Performances <ul style="list-style-type: none"> The candidate selects and creates learning experiences that are appropriate and relevant to learners. 	Lesson plan Observation Lesson plan	As stated earlier, your plans created connections with fractions to real life experiences. The small group activity provided students with a hands on experience that engaged and involved them in understanding fractional parts of a whole.

Standard 8: The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.

Performances	Possible Sources of Evidence	Diagnosis/Conceptualization
<ul style="list-style-type: none"> The candidate appropriately uses some assessment techniques to enhance her or his knowledge of learners and modify teaching and learning strategies. The candidate evaluates the effect of class activities, collecting information through observation of classroom interactions and questioning. 	Lesson Plan Self assessment	Your plans included several different types of assessments. Students completed a worksheet of problems on reducing fractions. In small groups, they completed a performance task in which they colored in fractional portions of a pie graph and presented their results to the class. Finally, they also had the chance to provide feedback to the teachers about the lesson. It might have been more useful and involving for each student to have had his/her own graph to complete. It would have given you more data about individual student needs.

Standard 9: The teacher is a reflective practitioner who continually evaluates the effects of her/his choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow.

Dispositions	Possible Sources of Evidence	Conceptualization/Communication/ Diagnosis/Integrative Interaction
<ul style="list-style-type: none"> The candidate is committed to reflection, assessment, and learning as an ongoing process. The candidate is willing to give and receive help. 	Self assessment Lesson plan Cooperating teacher/instructor	I was impressed by your openness to my suggestions in analyzing this lesson. It demonstrated your willingness to use classroom observation to revise your practice. You are very self-reflective which will serve you well as you continue to grow and develop as an educator.
Performances		
<ul style="list-style-type: none"> The candidate uses classroom observation from the field to reflect on and revise practice. 	Self assessment Lesson plan Discussion	

Summary: Carrie, I was very impressed by this initial lesson. Most beginning field students are afraid to risk teaching a lesson to the whole class! Your lesson was well planned and organized. You utilized many motivating resources and activities. You incorporated real life connections to make the learning relevant and your small group activity created active engagement for the students. At various points in the lesson, students had the opportunity to visualize important ideas (reducing fractions on the chalkboard), practice a “hands on” approach to learning (jelly bean activity) and discuss important terms and concepts. You maintained a positive climate for learning and had your students engaged meaningfully in the various learning activities. The children enjoyed and were interested in what they were learning. As we discussed, future goals would be to look for ways to make more efficient use of your time (ex., providing students with their own graphs so they don’t have to wait for others to finish) , make sure directions are clear before preceding to the next step in the lesson (ex., directions for small group activity) and using your questions to establish purpose and direction for learning activities such as the jelly bean graphs. Overall, I thought this was a very fine first lesson! Well done!

Alverno
C O L L E G E
ED 201 – Self-assessment
Observation #

Name: Carrie Reno
School: Zablocki
Coop. Teacher: Mr. Tyler
Grade/Subject: 5th grade Math
Date: SP 2007

Standard 1: The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and can create learning experiences that make these aspects of subject matter meaningful for students.

ED 201	Possible Sources of Evidence	Evidence
Performances		Coordination/Conceptualization
<ul style="list-style-type: none"> The candidate uses teaching resources and curriculum materials and makes some evaluations about their usefulness. The candidate engages students in learning as they teach lessons in a field experience. 	Lesson Plan Introduction to lesson	*We gave the students multiple opportunities to practice fractions in the form of worksheets and pie charts. *We also changed our lesson to fit a higher number of students than was expected and did board work to address common problems.

Standard 2: The teacher understands how children learn and develop, and can provide learning opportunities that support their intellectual, social, and personal development.

Performances	Possible Sources of Evidence	Communication/Integrative Interaction
<ul style="list-style-type: none"> The candidate encourages discussion, listens and responds to group interaction, and elicits samples of student thinking orally and in writing when teaching field lessons. 	Questioning skills Planned discussion Student responses	*I swayed from the original lesson plan a bit to clarify some key concepts regarding fractions. Heather and I worked out some problems on the board in front of the class so that all students could see how we solved the fraction problems.

Standard 3: The teacher understands how students differ in their approaches to learning and creates instructional opportunities that are adapted to diverse learners.

Dispositions	Possible Sources of Evidence	Diagnosis/Integrative Interaction/ Conceptualization
<ul style="list-style-type: none"> The candidate respects students as diverse individuals The candidate is sensitive to community and cultural norms. 	<p>Interaction between student and pre-service teacher.</p> <p>Lesson Plan (section on meeting student needs).</p> <p>Interactions</p> <p>Lesson Plans</p>	<p>*Our goal with this lesson was to use multiple ways to teach the same concepts and allow the students to have a clear visual that represented fractions as part of a whole.</p> <p>*I tried to spread the pie charts so that no groups near each other were working on a similar number. By changing the order of the pie charts one group felt that I had not thought that they were capable of solving a pie chart representing a higher number. Fortunately I was able to smooth over this offense by clarifying my intentions. I will have to be more considerate in the future of how my actions can be interpreted.</p>

Standard 4: The teacher understands and uses a variety of instructional strategies to encourage students' development of critical thinking, problem solving, and performance skills.

Performances	Possible Sources of Evidence	Coordination/Conceptualization
<ul style="list-style-type: none"> The candidate evaluates learning goals and considers alternative strategies and materials to meet student needs. The candidate uses some teaching and learning strategies to engage students in active learning opportunities. 	<p>Lesson plans</p> <p>Discussions with cooperating teachers</p> <p>Lesson plan</p> <p>Observation</p>	<p>* Although we used a variety of means to teach the students fractions the lesson could have been clarified by writing an agenda on the board.</p> <p>* I could have also allowed more time for the pie chart work for some groups and less for others. We could have also had the students work on them individually and then find a group that had the same number to represent and explain how they</p>

<ul style="list-style-type: none"> The candidate teaches lessons in which concepts are clearly and accurately presented. 	Observation	solved the problem.
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Standard 5: The 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.

Performances	Possible Sources of Evidence	Integrative Interaction/Communication
<ul style="list-style-type: none"> Recognizes opportunities to demonstrate multiple perspectives. The candidate monitors independent and group work in field settings. 	Lesson plan Observation Lesson plan Observation	*We allowed the students to attempt to solve fractions on their own and then worked together as a whole class to solve problems on the board. We also had the students work in small groups to create the pie charts. This may have been too many transitions to keep everyone interested and engaged. Next time it may be more effective to try only one or at most two ways of teaching. I could do class work with small group work, or individual work with small group work.

Standard 6: The teacher uses knowledge of effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

Dispositions	Possible Sources of Evidence	Communication/Conceptualization/Integrative Interaction
<ul style="list-style-type: none"> The candidate is a thoughtful and responsive listener. 	Observation of responses to students	* Again by trying to keep the students view in perspective I think I was better able to hear their concerns. * I tried to think of questions or scenarios that I thought would engage the students.
Performances <ul style="list-style-type: none"> The candidate models appropriate communication strategies in conveying ideas and information and in asking questions. The candidate communicates in ways that demonstrate sensitivity to cultural and gender differences. 	Observation of questioning strategies. Interactions with students.	* Again I may have offended some students inadvertently with my actions.

Standard 7: The teacher plans instruction based upon knowledge of subject matter, students, the community, and curriculum goals.

Knowledge	Possible Sources of Evidence	Diagnosis/Integrative Interaction
<ul style="list-style-type: none"> The candidate understands the importance of connecting instruction to students' experiences. 	Lesson plan	<ul style="list-style-type: none"> * I could have given more examples of how the students can use the knowledge in this lesson in real life situations. * Although I think I created a fair lesson plan I know that I cannot account for all the situations that may alter the way I will need to teach. There were twice the number of students than Heather and I had expected and this alone made it very clear that our original lesson would need some adjustments. * I know that I would have been unable to adjust to the higher number of students had I not made some sort of lesson plan to begin with. Because there was a plan in place I was able to see where we needed to make adjustments. * We tried to make the lesson as engaging and effective for all the students and address common concerns each student had.
Dispositions		
<ul style="list-style-type: none"> The candidate believes that plans must always be open to adjustment and revision based on student needs. The candidate values the importance of planning as an integral part of teaching. 	Interactions in the classroom Lesson plan	
Performances		
<ul style="list-style-type: none"> The candidate selects and creates learning experiences that are appropriate and relevant to learners. 	Lesson plan Observation Lesson plan	

Standard 8: The teacher understands and uses formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner.

Performances	Possible Sources of Evidence	Diagnosis/Conceptualization
<ul style="list-style-type: none"> The candidate appropriately uses some assessment techniques to enhance her or his knowledge of learners and modify teaching and learning strategies. The candidate evaluates the effect of class activities, collecting information through observation of classroom interactions and 	Lesson Plan Self assessment	<ul style="list-style-type: none"> * The worksheet allowed us to see if the students were ready to move on to the pie graph. Because a number of students were unable to solve the problems on the worksheet we addressed this need before moving on. *I walked around the room to see how each group was progressing on the pie chart and asked them how they would solve the problems and tired to walk them through the

questioning.		solutions rather than give them the answer.
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Standard 9: The teacher is a reflective practitioner who continually evaluates the effects of her/his choices and actions on others (students, parents, and other professionals in the learning community) and who actively seeks out opportunities to grow.

Dispositions	Possible Sources of Evidence	Conceptualization/Communication/ Diagnosis/Integrative Interaction
<ul style="list-style-type: none"> The candidate is committed to reflection, assessment, and learning as an ongoing process. The candidate is willing to give and receive help. 	Self assessment Lesson plan Cooperating teacher/instructor	* I was really interested in what the students, Mr. Tyler, Scott and others had to say about the lesson. I am glad that we chose to video tape this lesson as I can continue to look back to it and see how I performed and make improvements. * I was willing to work as a team on this lesson both to give help to Heather who was unsure of what was expected of this project and to get her input on ideas I had. * Again because this was videotaped I can look back on it to see where I can improve further.
Performances	<ul style="list-style-type: none"> The candidate uses classroom observation from the field to reflect on and revise practice. 	

Two Goals for Future Development:

The two areas that I felt strong on were standards one and standards two. I really tried to look at the lesson from the students perspectives. I used the observations from other fraction lessons taught in class to address the areas that I felt the students needed help on. My biggest concern was that students did not see how fractions were parts of a whole. I felt that the use of the pie chart could clearly visually represent this and that the worksheets could hone in on the issues they may be having with their calculations.

The areas that I felt weak in were standards four and five. I failed to realize just how personal kids can take what an adult says or does. By trying to keep the groups from working on problems too similar to a group next to them I offended some students. They made the comment “What you don’t think we can do a pie chart like that?” I will need to be more considerate of how my actions and words can be interpenetrated by others. In science it is best to keep variables to a minimum. I think I would have benefited from this philosophy by keeping the means by which I teach to a minimum. I need to remember that group work, individual work, and class work are all great ways to teach but they may not always be effective when used all in the same lesson.