LESSON PLAN

Teacher Candidate: [Name Redacted]  Date: 05-06-10
Cooperating Teacher: [Name Redacted]  School/District: Holmes Elementary Spokane
Grade/Subject: 2nd  Supervisor: Kathy Osselio

Lesson Title: Expanded Form and Money

Classroom rules and routines that affect the lesson:
We have the make your day program at our school. The main rule is "no one has the right to interfere with the learning or safety of others". We have the steps that we use with the students along with taking points that reflect what the students have done in the classroom.

Physical arrangement and grouping patterns that affect the lesson:
The students are placed at tables that they share with another student. Also we have students that are at desks by themselves because that is what they need. During the instruction the students are asked to come to the carpet in order to receive the directions they need.
Total number of students: 24  Female: 9  Male: 15  Age Range: 8-9

Describe the range of abilities in the classroom:
The students range from those who are high leveled reading at least one grade level above where they need to be at the end of the year to those that are about a year and a half behind. Also we have a student that is an English language learner in the classroom.

Describe the range of socio-economic backgrounds of the students:
The students come from an low socio-economic status where 95% percent of the students qualify for free or reduced lunch.

Describe the racial/ethnic composition of the classroom and what is done to make the teaching and learning culturally responsive:
The classroom is made up of students that are Native American, hispanic, and caucasian. When we talk about things we tend to explain words that the students may not be familiar with and the students know that if they do not understand a word or directions then they are able to ask and have us explain it to them.
How many students are limited English proficient (LEP)? 1

Describe the range of native languages and what, if any, modifications are made for LEP students:
The student that is limited English proficient has aides that come in and help her with the vocabulary along with when conferences are happening they bring in a translator that talks to the parents in their native language. Also we make sure the student is explained the directions to make sure she understands the assignment.
How many special education students are in the class? 3  Gifted/ talented? 0

What accommodations, if any, are made for them?
For both the students in the classroom their IEP's say for test/assignments to give them extended time and give them oral/verbal instructions.
Student #1 also has accommodations for test which include visual/graphic organizers and a different settings when it comes time for those tests along with locctions in which she can be tested. Also the student is allowed to take the test at the time of day which is best for her as long as it falls in the testing window. Also when talking the special education teacher the student tends to need more wait time in order to think about the teacher is asking her. Finally the teacher tends to modify her assignments in order for her to complete the assignment at her instructional level.
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TRANSCRIPT NOT DEERED
Section 1
Teacher Candidate: [Redacted]  
Cooperating Teacher: [Redacted]  
School District: District 81  
University Supervisor: Kathy Ossello  
Unit/Subject: Review for Unit 6/ Math  
Lesson Title/Focus: Expanded Form and Money

Date: May 6, 2010  
Grade: 2nd  
School: Holmes Elementary

Learning Targets:
1. Given a three digit number, the students will write the number in expanded form.  
   a. (I can write a three digit number in expanded form)
2. Given a few coins or names of coins, the students will write the value of the coins.  
   a. (I can write the value of coins given a picture of the coins or the names of them)

EALRs:
1. 2.2.I- Determine the value of a collection of coins totaling less than $1.00.
2. 2.1.D- Write three digit numbers in expanded form.

Section II
Assessment Strategies (4A, 4B, 4C)

Pre-instruction section:
I will be informally assessing the students on what they know about money and expanded form. I will focus on the value of money making sure the students understand it. Also I will see if the students know what expanded form is and what it looks like.

Assisting-instruction section:
Students will be monitor as they are working on the assignment. They will be asked questions about how they got to a certain answers and asked to explain their thinking.

Reflective-instruction section:
The students will be turning in their independent practice which I will be looking over to see how they did on it. Students will have a chance to redo problems that they missed in order to make sure they understand it.

Grouping the Students for Instruction and Learning Experiences:
During the pre-instruction the students will be having a whole-group instruction reviewing what they know about money and expanded form. After we review the students will still be together as I guide them through some problems that deal with money and expanded form. Then the students will head to their desks and work independently on the assignment that will be given to them.

Section III (5A)
Before: (2E)
Lesson Plan Rationale

**Learning Targets**

1. **How do the learning targets relate to EALRs, state learning goals, district goals, or classroom goals?**
   a. The learning target for this lesson relates directly to the state’s performance expectations for math. Also this lesson is a review for the district’s assessment that the students will be taking on Friday. As a classroom we want to meet the performance expectations for the state in order for our students to be successful at the next level.

2. **How do the learning targets relate to previous and future lessons?**
   a. The lesson today hits on previous concepts that the students have covered before and practiced. The lesson today is reviewing these concepts so that the students are prepared to take the district assessment which will be on Friday.

3. **How do the learning targets incorporate a multicultural perspective?**
   a. Students are going to have different ways to explain their thinking which will be talked about in class. No student will be made fun of or laughed at for their thinking.

4. **Why are the learning targets appropriate for all students in the class?**
   a. Since this lesson does have a learning target that is based off the performance expectations for second grade which I am teaching I feel that this is appropriate for all the students in the class. To help the students I will be modeling some examples then doing some guided practice and finally the students will do some independent practice.

**Assessment Strategies**

1. **How does the strategy accommodate students at different developmental or achievement levels?**
   a. The whole lesson will be a combination of modeling, guided practice and independent practice so that the students will be ready to work independently.

2. **How does the strategy respond to differences in student’s cultural and linguistic background?**
   a. The problems that the students will be asked to complete will be read to the students so that I can see how they will solve the problems instead of assessing how they read the problems.

**Learning Experiences**

1. **How have you demonstrated your understanding of students’ cultural backgrounds, ethnicity, first language development, English acquisition, socioeconomic status, and gender?**
   a. Before I wrote my lesson out, I filled out my classroom characteristics sheet in order to understand the make-up of my classroom. For my one student that is an
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students will head to their desks and work independently on the assignment that will be given to
them.

Section III (5A)
Before: (2E)
I will be starting out this lesson by reviewing what the students know about money and expanded form. We will be talking about the value of money and what expanded form looks like. After the review the students and I will talk about the “I Can” statements that are written on the board.

**During:**

1. Students will be shown the three digit number 483. After the students see the number I will model how to put the number into expanded form by looking at the place value of each number and putting that number into groups.
   a. For example with 483 the digit in the ones place is 3 so we have 3 groups of 1’s which would be 3. The digit in the tens place is 8 so we have 8 groups of 10’s which would be 80. The digit in the hundreds place is 4 so we have 4 groups of 100’s which would be 400. So in expanded form the number would be 400+80+3.

2. After I model my thinking the students will be asked to do two problems on post-it-notes which are on clipboards. We will be going over them making sure students understand.

3. After we get done with this we will be looking at money. Students will be shown a group of coins and figuring out the value of those coins.

4. Also the students will be given different names of coins and asked how much did they spend. I will talk to the students about adding the value of coins just like they did yesterday when they added two-digit by two-digit.

5. Then the students will be given a few problems that they will write the answer to the questions on a post-it-notes. We will be talking about each problem making sure the students understand.

**After:**

1. The students will be completing an assignment that covers expanded form along with the concepts of money that we talked about today.

2. We will come back together at 2:00 and go over what we learned and students self-reflecting on whether they can do expanded form and money using the “I can” statements. Also we will be taking points followed by library.

**Section IV**

**Instructional Materials, Resources, and Technology (5F)**

1. Worksheet for Independent Practice
2. Pencil
3. Clipboards
4. Post-it-Notes
5. Markers
6. Chart Paper
Lesson Plan Rationale

**Learning Targets**

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**Learning Experiences**

1. **How have you demonstrated your understanding of students’ cultural backgrounds, ethnicity, first language development, English acquisition, socioeconomic status, and gender?**
   a. Before I wrote my lesson out, I filled out my classroom characteristics sheet in order to understand the make-up of my classroom. For my one student that is an
English Language Learners I will be reading the problem out so that she is able to do the math instead of having to read the problem. Also I will be modeling the lesson so that the students can see what is expected from them and then we will be doing some guided practice so the students will feel comfortable.

2. **How do the experiences accommodate the learning needs of students with disabilities or 504 students?**
   a. For my students with disabilities I have looked at my classroom characteristics especially at question #9. I have taken into consideration the students accommodations when planning my lesson. Also I will be modeling the lesson so that the students can see what is expected from them and then we will be doing some guided practice so the students will feel comfortable.

3. **How do the experiences incorporate multicultural perspectives?**
   a. The students will be allowed to solve the problem in a way that makes them comfortable. We have covered different strategies that students can use to solve the problems and each students has a particular strategy that they use that they understand.

4. **How do the experiences stimulate student problem solving and critical thinking?**
   a. The lesson is a math lesson and has problems that the students need to solve which deal with expanded form and money. Students need to show their thinking when solving the problems.

5. **How do the experiences create an inclusive and supportive learning community?**
   a. The students have been taught since the first day of school that it is okay to make mistakes because we can learn from the mistakes we make. They are going to listen to each other during whole-group discussion because the students are told that our job when someone else is talking is to learn from that person.

6. **Describe the research base or principles of effective practice that form the basis of the learning experiences.**
   a. I have been taught at Eastern Washington University that modeling, guided practice and independent practice are a good practice to use when introducing a concept to students. So this is what I am using in my lesson.

   **Best practices**
   - manipulatives
   - hands on (coins)
   - group work (cooperative learning)
   - integration - writing, reading, math, technology
DEPARTMENT OF EDUCATION
OBSERVATION FORM

Candidate: [Signature]
School: Holme
Cooperating Teacher: [Signature]
Date: 5-6-10
Time: 1:00
Lesson/Subject: Math
Supervisor: Kathy Tessell

Preparation/Instruction
1) [ ] Lessons (outcomes, EALRs, procedures, assessment)
2) [ ] Communication skills-written, oral, voice
3) [ ] Gets student attention
4) [ ] Clear directions
5) [ ] States purpose/preview/review
6) [ ] Array of instructional strategies (discussion groups, inquiry, direct, demonstration)
7) [ ] Innovative/creative
8) [ ] Active student involvement (adapts to individual differences)
9) [ ] Encourages critical thinking/problem solving
10) [ ] Timing/pacing—CAI/IT/SMART BOARD
11) [ ] Monitors and adjusts
12) [ ] Supervision of work/study/transition/time on task
13) [ ] Closure/summarize
14) [X] Higher level questioning
15) [X] Knowledge of subject/accuracy
16) [X] Utilizes technology—microphone, document camera
17) [ ] Appropriate assignments
18) [ ] Instructional methods, curriculum, assessment which evidence multicultural perspective

Professionalism
19) [ ] Poise/Assured
20) [ ] Positive professional attitude
21) [ ] Well groomed
22) [ ] Enthusiastic

Management/Discipline
23) [ ] Developed appropriate strategies for prevention of discipline problems
24) [ ] Established and stated expectations for student conduct
25) [ ] Personalized approval responses
26) [ ] Prompt/constructive discipline
27) [ ] Encouraged student self-discipline
28) [ ] Used classroom time, materials, and equipment effectively
29) [ ] Established a safe/pleasant environment

Evaluation/Assessment
30) [ ] Based assessment on goals/student outcomes
31) [ ] Re-taught as necessary
32) [ ] Involved students in criteria for assessment
33) [ ] Recorded/provided evidence of student learning

Relationships
34) [ ] Caring and flexible approaches working with all students (diverse backgrounds/wide range of all abilities)
35) [ ] Relates well to pupils and staff
36) [ ] Believes all students can learn

Reviewed: "expanded form"
Before review you had 72 cards on chart filled with example for all to see vs. student input
Using doc camera for 75 cards in expanded form then using chart + student input
To answer thoroughly place value, expanded notation
"It's not easy for everyone"
Using different color to underline the place of each number
Comments, Questions, Suggestions:

• Write 12 learning target on chart too! Worked well for L.1.5 #1
• Cozy seat seemed good. Could try reading, student faces to
desk, then write all ideas, possible solutions or copy what
students suggest - you write & show on doc camera - all
students are engaged too. 1.24 p.m. I think students
are not attending to the lesson.

• Could have students solving & sharing ensure strategy
using doc camera, OR USE white board as sitting on carpet
desk. Write have them writing down solutions.

• Why is student on front of me at (his) desk rather than on the
carpet?

• Remind @ carpet behavior

• Go back to learning target before ending lesson. Do students
know the learning target?

• Do more than pointing at work time expectation. Draw
attention to then at transition. Repeat as needed.

• How about 89 - [ ] = 20 1st they show that 89-20 = [ ]

• Tell me @

• Need to remind @ work time expectations. Too many student
are off task after second time at carpet. Are they supposed
work on problems or finish the 1st worksheet?

• Try grouping students like [ ] + a few others who need help
they sit on table - work w/ them as you can (proximity) then
make sure everyone else is engaged in worksheet or if finished
KNOW WHAT TO DO NEXT!

• [ ] is reading. Compliment him on reading quietly since he must be done.

• Shake the wiggles out before library.

• [ ] Spe ed.
LESSON PLAN

Teacher Candidate:  
Cooperating Teacher:  
Grade/ Subject: 2nd  
Date 04-23-10  
School/District Holmes Elementary Spokane  
Supervisor: Kathy Ossello

Lesson Title: Balancing Crayfish

Classroom rules and routines that affect the lesson:
We have the make your day program at our school. The main rule is "no one has the right to interfere with the learning or safety of others". We have the steps that we use with the students along with taking what the students have done in the classroom.

Physical arrangement and grouping patterns that affect the lesson:
The students are placed at tables that they share with another student. Also we have students that are at desks by themselves because that is what they need. During the instruction the students are asked to come to the carpet in order to receive the directions they need.
Total number of students: 24  Female: 9  Male: 15  Age Range: 8-9

Describe the range of abilities in the classroom:
The students range from those who are high leveled reading at least one grade level above where they need to be at the end of the year to those that are about a year and a half behind. Also we have a student that is an English language learner in the classroom.

Describe the range of socio-economic backgrounds of the students:
The students come from an low socio-economic status where 95% percent of the students qualify for free or reduced lunch.

Describe the racial/ethnic composition of the classroom and what is done to make the teaching and learning culturally responsive:
The classroom is made up of students that are Native American, hispanic, and caucasian. When we talk about things we tend to explain words that the students may not be familiar with and the students know that if they do not understand a word or directions then they are able to ask and have us explain it to them.
How many students are limited English proficient (LEP)? 1

Describe the range of native languages and what, if any, modifications are made for LEP students:
The student that is limited English proficient has aides that come in and help her with the vocabulary along with when conferences are happening they bring in a translator that talks to the parents in their native language. Also we make sure the student is explained the directions to make sure she understands the assignment.
How many special education students are in the class? 3  Gifted/ talented? 0

What accommodations, if any, are made for them?
For both the students in the classroom their IEP's say for test/assignments to give them extended time and give them oral/verbal instructions.
Student #1 also has accommodations for test which include visual/graphic organizers and a different settings when it comes time for those tests along with loctions in which she can be tested. Also the student is allowed to take the test at the time of day which is best for her as long as it falls in the testing window. Also when talking the special education teacher the student tends to need more wait time in order to think about the teacher is asking her. Finally the teacher tends to modify her assignments in order for her to complete the assignment at her instructional level.
Student #2 the special education teacher told me needed to be reminded to stay on task because focusing is an issue with this student.
Student #3 we have not received the IEP from the previous school so we do not know the accommodations needed for the students.

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\[\text{Handwritten notes:}\]

- What do you think?
- In what way?
How many 504 students are there? N/A

What accommodations are made for these students?

Are there additional considerations about the classroom/students for which you need to adapt your teaching (e.g., religious beliefs, family situations, sexual orientation)?

CLASSROOM AND STUDENT CHARACTERISTICS
STANDARD V  PEDAGOGY PERFORMANCE ASSESSMENT

LESSON PLAN

Teacher Candidate: ____________________________ Date: 04-23-10
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How many 504 students are there? N/A

What accommodations are made for these students?

Are there additional considerations about the classroom/students for which you need to adapt your teaching (e.g., religious beliefs, family situations, sexual orientation)? N/A

CLASSROOM AND STUDENT CHARACTERISTICS
Went to bed with a scratchy throat so apologize for not getting back to you last night with this e-mail.
Let me know what you think of these learning targets.

1. Student will be able to tell when something is balanced and when it is not (or work toward this concept).
2. Student will learn how counterweights help to balance an object.
   I believe the above states the "what" of your learning targets. Then, you can include the how in this way: Students will investigate the targets by balancing a crayfish with and without counterweights and explain in their journal with drawing and/or writing. Check this out with [mask] to make sure this sounds right to her.
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CLASSROOM AND STUDENT CHARACTERISTICS
Lesson Plan Rationale

**Learning Targets**

1. **How do the learning targets relate to EALRs, state learning goals, district goals, or classroom goals?**
   
a. The learning target for this lesson relates directly to the state’s GLE for science. The student’s observations during the lesson with help them to explain how they balanced the crayfish. The lesson and learning targets came from the district curriculum that was handed to the teacher and told to cover. So it would meet the district goals. The expectations and goal of the lesson will also apply during the lesson which will help the students meet the learning target. (1A, 1D)

2. **How do the learning targets relate to previous and future lessons?**
   
a. The lesson is the second lesson in the unit about Balance and Motion. The lesson that was previously was talking about force and magnets making paperclips move without touching them or blowing on them. This helps because when an object is balanced then it is in a stable position and force cannot move it. Students need to understand the concept of force before they are able to move on. The next lesson deals with balancing and counterweights so they will take what they learned from this lesson and go deeper in the next lesson.

3. **How do the learning targets incorporate a multicultural perspective?**
   
a. Students are going to have different ways to explain their observations which the students and I will take into considerations. I will allow those that need to write their explanation to write it and those that need to draw they will be able to draw. (1E)

4. **Why are the learning targets appropriate for all students in the class?**
   
a. Since this lesson does have a learning target that is for second grade which I am teaching I feel that this is appropriate for all the students in the class. To help the students I will have them in small groups during the experiment which will help them go over explanations with other students. Also we will be discussing things as a group so the students will have lots of support in order to be successful. (1B, 1C, 5A)

**Assessment Strategies**

1. **How does the strategy accommodate students at different developmental or achievement levels?**
   
a. The whole lesson will be a combination of whole group discussion, small group work, and individual work. This will help those who are lower achievement levels by listening to the discussion and working with those who are higher because they will be learning from them. During the individual portion I will be focusing on the content instead of the mechanics knowing that what they have to say is more important than how they write it. (2D)
2. How does the strategy respond to differences in student's cultural and linguistic background?
   a. When I assess the students I am looking more at the process the students use and how they solve the problem compared to what they write down. Also I have given the students an option of drawing the different ways they balanced the crayfish instead of having to write them.

Learning Experiences
1. How have you demonstrated your understanding of students' cultural backgrounds, ethnicity, first language development, English acquisition, socioeconomic status, and gender?
   a. Before I wrote my lesson out, I filled out my classroom characteristics sheet in order to understand the make-up of my classroom. For my one student that is an English Language Learners I will be defining the word crayfish, balance, and crayfish so she understands what these words means while we are working on this lesson. Also I have provided the materials for the students so that they do not have to provide any materials. During the discussion the students will all be listened to and encouraged to participate. Finally when I write my letter home the activities that are suggested are things that the student and parent/guardian/sibling will be able to do without no money. (2A,2C)

2. How do the experiences accommodate the learning needs of students with disabilities or 504 students?
   a. For my students with disabilities I have looked at my classroom characteristics especially at question #9. I have taken into consideration the students accommodations when planning my assessment. I have allowed the students to draw instead of write the ways in which they balanced the crayfish. Also I have paired these students with higher students in order to help them balance the crayfish. Also we will be discussing the concepts so that the students can understand what we are talking about. (2B)

3. How do the experiences incorporate multicultural perspectives?
4. How do the experiences stimulate student problem solving and critical thinking?
   a. The students will be given a challenge to balance their crayfish in more than one way. Then they will be put into groups to problem solve other ways to balance their crayfish. Also they will have to use counterweights in order to help them balance and figure out how to do this.

5. How do the experiences create an inclusive and supportive learning community?
   a. The students have been taught since the first day of school that it is okay to make mistakes because we can learn from the mistakes we make. They are going to listen to each other during whole-group discussion because the students are told that our job when someone else is talking is to learn from that person. Also they
are working in small groups in order to figure out how to balance the crayfish. The students will be reminded of how to work together so that everyone participates and does not feel left out.

6. **Describe the research base or principles of effective practice that form the basis of the learning experiences.**

   a. Based on the science class that I have taken from Eastern Washington University we have talked about inquiry-based projects are ones where the students will gain more learning from. This lesson takes the concepts of balance and lets the student explore and try to figure out different ways they can balance the crayfish by having them explore this concepts with hands-on activities that they can explore. I thought about this as I was writing my lesson making sure the students maximize their learning making sure they understand this concept. (5C, 5D)

**Family Interaction**

For this lesson the students will be given a letter that will be sent home explaining what we covered today along with some activities that will help the student to understand the concept of balance. Please see the handout that will be given to the parents to get a better idea of what the students will be receiving. (3A, 3B, 3C, 3D)
Section 1
Teacher Candidate: [Redacted]
Cooperating Teacher: [Redacted]
School District: District 81
University Supervisor: Kathy Ossello
Unit/Subject: Balance and Motion (Science)
Lesson Title/Focus: Trick Crayfish

Learning Targets:

TSWBAT
1. Student will be able to tell when something is balanced and when it is not.
2. Student will learn how counterweights help to balance an object.
3. I believe the above states the "what" of your learning targets. Then, you can include the how in this way: Students will investigate the targets by balancing a crayfish with and without counterweights and explain in their journal with drawing and/or writing.

EALRs:
4. Science 2.1.3- Understand how to construct a reasonable explanation using evidence.

Section II
Assessment Strategies (4D- whole section on assessment)

Pre-instruction section:
I will be informally assessing the students on the information that was covered last week such as force and magnets. The students will be using their thumbs on their knees in order to see if they know the answer or not. (4C)

Assisting-instruction section:
During the discussion I will be asking questions more to check for understanding of concepts of balance and using counterweights. So far
1. What did you do to get the crayfish to balance?
2. Does it matter where we put the clothespin?
3. Where should we put the clothespin on a balance?
Also I will be walking around the room and collecting the students who have balanced the crayfish and if they balanced the crayfish correctly. Then I will check for an object. (4A, 4B, 4C)

Reflective-instruction:
The students will be reflecting over their experiences:
1. How did you balance the crayfish?
2. The crayfish balances when it is ____________. (Redacted)

Grouping the crayfish:
Experiences:

Suggestion:
sit in rows at carpet
use tape for rows
designate desks
During the pre-instruction the students will be having a whole-group instruction reviewing what we know from last week’s lesson. After we review the students are working in small groups balancing the crayfish more than one way. Then the students will come back for whole group discussion which we will be discussing the ways the students balanced the crayfish and given more information. Then the students will be sent back to small group instruction to experiment with counterweights. The students will then come back to whole group instruction to discuss the day’s activity using the think-pair-share. Finally the students will take those ideas and write individually in their science journals. (5H)

Section III (5B)

Before: (2E)
I will be starting out this lesson by reviewing what we did last week in science. We will be talking about force and how it makes things move. Also we will be talking about magnets and how they help us move objects so we do not have to touch them or blow on them. After the review the students and I will talk about the “I Can” statements that are written on the board.

During: (5E)

1. First I will introduce the crayfish by asking them “What is a crayfish?” I will tell the students that you have a special crayfish that can do tricks. Its best trick is balancing on one of my fingertips. I will then bring out one of the tagboard crayfish and balance it flat on my finger. Then I will ask the students if they think they could try the same trick if they had a trick crayfish.

2. Then I will put the students into groups and assign a GETTER for each group. The GETTER is responsible for getting the materials for their group. Once the materials are gotten then the students will be challenged to copy my trick. (2 minutes)

3. After the students are successful in balancing, I will have the students find out if they can do other balancing tricks with their crayfish and if they can they need to draw those on the back page of their journal. (10 minutes)

4. Then I will get the students attention by saying “give me ten” and telling them that they may find clothespins are useful for getting their crayfish to balance in different positions. Then I will have the GETTER get two clothespins for each student in their group. While they are using the clothespins I will be walking around the room visiting students as they work. If students are not succeeding in finding new ways to balance their crayfish I will suggest that they try to balance their crayfish on its side or its nose. (10 minutes)

5. After ten minutes the students will be asked to come to the carpet for discussion on balance. I will ask them:
   a. What did you do to get the crayfish to balance on its nose?
   b. Does it matter where you put the clothespin?

6. Then I will show the class some examples of students work using the drawings that the students have on the back of their science journals using the document camera.
7. Then I will introduce the concept of counterweight by telling the students when you put a weight like a clothespin on the crayfish to make it balance on its nose, it is called a counterweight. You can use the counterweight to make things balance in new ways.

8. Then I will challenge the students to use counterweights to find new ways to balance their crayfish. (10 minutes)

9. After the ten minutes is up then the students will be called to attention and be told that they need to put their materials in the bag and give them to the GETTER who will turn them back in. The rest of the students will need to gather on the carpet for discussion by having some of the students demonstrate the different positions they put their crayfish by putting their science notebooks under the document camera. (5G)

After:

1. Also we will discuss how we know when something is balanced and anything we noticed that is always the same. They will think about it for a minute and then pair up and talk about it. Then we will share it with the class.

2. Finally the students will be asked to write in their journals what they have learned from this lesson. I will give them about 10 minutes for this. When students are completed they will be asked to read from their just right book bag until the time is up and we can take points for the day’s activity.

Section IV

Instructional Materials, Resources, and Technology (5F)

1. For the students:
   a. 1 Tagboard Crayfish
   b. 2 Clothespins
   c. Science Journals
   d. Pencil
   e. Letter to parents

2. For the Class
   a. Chart paper
   b. Markers
   c. Document Camera

3. For Assessment
   a. Anecdotal Notes for the students
Dear Families,

Hello my name is [Redacted] and I am the student teacher in [Redacted]'s room. I am looking forward to working with your students in the classroom for the rest of the year. I met many of you during conference time. In class today we have been exploring balance. We’ve learned how to balance crayfish by adding clothespins which act as counterweights. Here are some fun movements to explore together and some questions to ask your child that might lead to interesting discussions about balance, weight and counterweight. If possible could you record the results down with your child and send this letter back with them to school this next week.

Try this!

1. Compare standing on one foot with your eyes closed and with your eyes open. Which is easier? Why do you think that might be?

2. Compare standing on one foot, standing on two feet, and sitting on the floor. Which do you think is the most stable - easiest to maintain balance without falling over? Why do you think that might be so?

Check which one you did

[Checkboxes]

1. 
2. 

Sincerely,

[Redacted]

[Signature]
Preparation/Instruction

1) ☑ Lessons (outcomes, EALRs, procedures, assessment)
2) ☑ Communication skills-written, oral, voice
3) ☑ Gets student attention BIG BOOK, PRACTICE FACT
4) ☑ Clear directions
5) ☐ States purpose/preview/review
6) ☐ Array of instructional strategies (discussion groups, inquiry, direct, demonstration)
7) ☐ Innovative/creative
8) ☐ Active student involvement (adapts to individual differences)
9) ☐ Encourages critical thinking/problem solving
10) ☐ Timing/pace
11) ☐ Monitors and adjusts
12) ☐ Supervision of work/study/transitions/time on task
13) ☐ Closure/summarize
14) ☐ Higher level questioning
15) ☐ Knowledge of subject/accuracy
16) ☐ Utilizes technology
17) ☐ Appropriate assignments
18) ☐ Instructional methods, curriculum, assessment which evidence multicultural perspective

Professionalism

19) ☑ Poise/Assured
20) ☑ Positive professional attitude
21) ☑ Well groomed
22) ☑ Enthusiastic

Management/Discipline

23) ☐ Developed appropriate strategies for prevention of discipline problems
24) ☐ Established and stated expectations for student conduct
25) ☐ Personalized approval responses
26) ☐ Prompt/constructive discipline
27) ☐ Encouraged student self-discipline
28) ☐ Used classroom time, materials, and equipment effectively
29) ☐ Established a safe/pleasant environment

Evaluation/Assessment

30) ☑ Based assessment on goals/student outcomes
31) ☐ Re-taught as necessary
32) ☐ Involved students in criteria for assessment
33) ☐ Recorded/provided evidence of student learning

Relationships

34) ☐ Caring and flexible approaches working with all students (diverse backgrounds/wide range of all abilities)
35) ☐ Relates well to pupils and staff
36) ☐ Believes all students can learn
Questions, Comments, Suggestions:

- Behavior Expectations: Do earlier before period.
- How long sitting at front before lesson started (106)
- Microphone FM system for hearing impaired students
- Need group instruction, figure out groups ahead of time too long. Some students in groups early had too much time or less time. Need not much of material bin.
- After principal announcement of practice long down removal (not sure if only a practice)
- Did you forget to mention this?
- One student balancing crayon on desk, one on his arm
- Some of students are not in their groups and are wandering around. Perhaps need them back to their own desks to do the drawing/writing on personal
- When telling students to try using clothespins, only 2 of students still writing.
- Emphasize that this is science, highlight any scientific words.
- When told to bring pencils to carpet, student went back what does w/ supplies in plastic bin?
- Make sure you have everyone's attention when you give directions
- At carpet, one student is still working w/ friend?
- Clothsing word - What about counter weight? You then mentioned this like I wrote up.
- And students back to work in groups - make sure student understand what to do. Don't surge, clear to me. Student I talked to said they could work again but didn't seem concerned about working in group.
- Letter home of activity - Write in personal. Write about balance in personal. Other group were still talking about letter home to activities.
- Letter home needs place to have parents sign - give you feedback.
- Wondering - told me he was trying. Never would say thing
Lesson Title: Simplifying Radical Expressions

Classroom rules and routines that affect the lesson:

Students enter the classroom and sit in their assigned seats. They are to immediately begin working on the Bell-Work Assignment for the day. After the class goes over the Bell-Work Assignment together, they will get out their homework and grade it themselves. When students are grading their own homework, they must use red pens. During the lesson students are to be paying attention and/or taking notes. Students are to remain in their assigned seats at all times unless they are getting supplies. Students will receive their homework at the end of the class period and can use the last few minutes to work on their homework.

Physical arrangement and grouping patterns that affect the lesson:
The desks are arranged into nine pods of three student desks at each pod. The students are encouraged to collaborate with one another and ask each other questions before asking the teacher.

Total number of students: 24 Female: 14 Male 10 Age Range: 15-18

Describe the range of abilities in the classroom:

There is a range of abilities amongst the students. Several students are currently receiving A's for the trimester and most of these students have natural ability in relation to mathematics. However, some of these students are extremely hard workers and can compensate for the lack of natural ability. There are three students currently receiving C's in the class. These are the lowest scores in the class. The abilities of these students are adequate for this course, their grades reflect their lack submitting assignments more than a lack of understanding.

Describe the range of socio-economic backgrounds of the students:

Several students are considered low SES in mainly single parent homes. There are several high SES students in the classroom as well. The majority of the class has a middle-class socio-economic background.

Describe the racial/ethnic composition of the classroom and what is done to make the teaching and learning culturally responsive:

This class is about 75% Caucasian, with three Latino students, two Ukrainian students, a Chinese foreign exchange student, and a Japanese-American student. To help accommodate a culturally diverse class, multiple modes of instruction and assessment are implemented to allow all students an opportunity to succeed in this class and meet the objectives outlined for each lesson. Group work is used on a regular basis to allow students opportunities to learn about different cultures and engage in cross cultural learning experiences.

How many students are limited English proficient (LEP)? 0

Describe the range of native languages and what, if any, modifications are made for LEP students:

There is one foreign exchange student from China, but he is fluent in English and needs no modifications.

How many special education students are in the class? 0 Gifted/ talented? 0

What accommodations, if any, are made for them?

No accommodations are necessary for these students.

<table>
<thead>
<tr>
<th>Special Education Category</th>
<th>Number of Students</th>
<th>Accommodations/ IEP Objectives</th>
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How many 504 students are there? 0

What accommodations are made for these students?
No accommodations are necessary due to the fact that there are no 504 students.

Are there additional considerations about the classroom/students for which you need to adapt your teaching (e.g., religious beliefs, family situations, sexual orientation)?

CLASSROOM AND STUDENT CHARACTERISTICS
Instructional Plan

Teacher Candidate: [Name]  Date: May 4, 2010

Cooperating Teacher: [Name]  Grade: 9th thru 12th

School District: Cheney School District  School: Cheney High School

University Supervisor: Mary Ellen Mays

Unit/Subject: Radical Expressions; Algebra 1

Lesson Title/ Focus: Simplifying Radical Expressions Introduction

Background:
- Students have been exposed to solving by square roots in the previous section. They will have seen square roots used to determine the number of solutions of an equation. They will understand that you cannot take the square root of a negative number.
- Students will know the rules of exponents and how to use them to expand and condense expressions containing exponents. The students will be able to use these rules with numbers as well as variables.
- The students will also know about factoring and how that can be used to simplify expressions. Students will have been exposed to taking the square root of perfect square trinomials.

Learning Targets:
1. SWBAT simplify radical expressions
2. SWBAT use the product property of square roots to simplify radical expressions
3. SWBAT use the quotient property of square roots to simplify radical expressions

Standards:

State Math Standards:
- **A1.2. Core Content: Numbers, Expressions, and Operations**
  - A1.2.C Interpret and use integer exponents and square and cube roots, and apply the laws and properties of exponents to simplify and evaluate exponential expressions.
- **A1.8. Core Processes: Reasoning, problem solving, and communication**
  - A1.8.E Read and interpret diagrams, graphs, and text containing the symbols, language, and conventions of mathematics.
  - A1.8.G Synthesize information to draw conclusions, and evaluate the arguments and conclusions of others.
**Assessment Strategies:** (4A) (4B) (4C) (4D) (4E)

- The homework from the day before was a formative assessment piece from the previous lesson. It was measuring the students’ abilities to identify square root functions, determine their domain, and graph radical functions.
- The entry task, Bell-Work activity, was a formative assessment of one of the previous lesson’s learning targets. Identifying the domain of a function is an important concept in algebra.
- The exploration activity was an assessment over several different concepts. First of all it was an assessment over the students’ abilities to use technology in relation to math via calculators. It was also an assessment over the students’ abilities to discover important rules about radical expressions. These rules will be used for the remainder of this unit and are vital to developing solid foundations when working with radical expressions.
- The exit task for this day was a formative assessment piece that allows the teacher to identify areas of concern and common misconceptions amongst the students. The exit task also allows the students to assess themselves on the learning targets for the day. This piece also has the students reflect on where their difficulties are so that the teacher can address common misconceptions for the following lesson.
- The homework for this lesson will be used as a formative assessment piece as well. The students will practice the learning targets overnight and come back the next day with their questions ready. The students will grade their own homework so that they can self-assess as to what they need help with.
- There will be a quiz at the end of the week to assess the students’ abilities to meet the learning targets from the first two sections of this unit. The students will be required to answer several different questions related to the learning targets from the first four lessons. This assessment will inform the teacher to common misconceptions and whether or not the students are up to standard.
- There will be a test at the end of this unit assessing the students’ abilities to meet all learning targets from this unit. Among those learning targets are the targets from this lesson. This summative assessment piece will be the culmination of this unit.
<table>
<thead>
<tr>
<th>Objective 1</th>
<th>Standard</th>
<th>Assessment Tool</th>
<th>Activity</th>
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<tr>
<td></td>
<td>• Algebra 1: 2C, 8E, 8G</td>
<td>Formative: • Exit Task • Homework Summative: • Quiz • Test</td>
<td>Exploration Activity Direct Instruction</td>
</tr>
<tr>
<td>Objective 2</td>
<td>• Algebra 1: 2C, 8E, 8G</td>
<td>Formative: • Exploration • Exit Task • Homework Summative: • Quiz • Test</td>
<td>Exploration Activity Direct Instruction</td>
</tr>
<tr>
<td>Objective 3</td>
<td>• Algebra 1: 2C, 8E, 8G</td>
<td>Formative: • Exploration • Exit Task • Homework Summative: • Quiz • Test</td>
<td>Exploration Activity Direct Instruction</td>
</tr>
</tbody>
</table>

**Grouping of Students for Instruction:**

- The arrangement of the classroom will be arranged in pods. Each pod will have three student desks in it. This arrangement allows students to collaborate with one another if someone is struggling with some concepts.

- During the exploration piece of the lesson, students are encouraged to work alone. However, should a student have a question, they are to ask their group members first before asking the teacher. This promotes group collaboration and cohesion.

- During the direct instruction portion of the lesson, students are still sitting in their pods of three, but are required to pay attention to the teacher at the board. During example problems, students may work with one another to achieve mastery of the learning targets.

**Learning Experience:**

**Introduction:**

- As students enter the classroom they are to go to their assigned seats and begin working on the Bell-Work activity. Students know that they are required to begin working on this activity as the bell rings every day. There are two questions that the students are required to answer. One question will be a review of the previous lesson’s learning target and the other question will be for the students to develop classroom rules for their grouping strategy for the remainder of the school year. The idea behind this question is to get students to think about what they expect from group members. It will help them to identify positive impacts in their life outside of the classroom. (5D)
• After sufficient time, the teacher will go over the Bell-Work assignment with the class as a whole group discussion. The teacher will write down the norms from individual students on the board and then the class will determine which ones will be acceptable.

• When this process is done, the teacher will have the students get out their homework from the previous day and grade it together. The students are only allowed to use red pens during the grading process. When the grading process is completed, the teacher will begin the lesson. The teacher will record the scores during the exploratory portion of the lesson.

Main Lesson:

• The teacher will give instructions to the class about the next portion of the day’s lesson. The students are to use a calculator to discover some properties about square roots. So the students are required to either get their own out, or use a calculator from the classroom set that the teacher possesses. The teacher will also explain that the students are to only work on the front side of the paper because the backside of the paper will be their exit task for the day. Then the teacher will distribute an exploratory worksheet to all students in the class which they are to work on individually, but may ask questions from their group members. (5F) (5G)

• As the students are working on this exploratory assignment, the teacher will circulate throughout the classroom recording homework scores from the previous day. During this process, the teacher will also be performing an informal assessment of how the students are performing on this activity.

• After sufficient time, the teacher will go over the exploratory activity with the students. The teacher will generate a class discussion about the results of this activity. This activity is designed to expose students to the Product and Quotient Properties if Square Roots so that they might have a better understanding of those rules.

• When the discussion is completed, the teacher will move onto the teacher directed portion of the lesson. This portion of the lesson will be done at the front whiteboard. Students are encouraged to write down notes on a separate piece of paper as the teacher leads them through the lesson.

• This portion of the lesson will focus on how to use the Product and Quotient Properties of Square Roots to simplify radical expressions. Mainly, how to use those properties to simplify radical expressions containing variables underneath the square root sign.

• The teacher will have several example problems prepared, more than they will be able to get through but that is to ensure that no time is lost searching for additional problems. The teacher will work example problems on the board for the class at first. Then the teacher will release responsibility to the students and have them work the problems on their own. After the students have worked the problems, then the teacher will go over them with the students. The teacher also may have the students come to the board and work the example problems for the class.

• The teacher will continue this process until about ten minutes left in class. Then the teacher will direct the students to turn over their exploratory work sheet and complete the back portion of the work sheet as their exit task.
Closure:

- The exit task will have the students complete several different items. The first part of the exit slip will be some problems that the students are to work. There will be three problems, each problem is related to one of the learning targets. The students are to simplify each problem and circle their final answer.
- In addition to the problems, there will be a self assessment chart on the back that the students need to use to assess their own learning. There are four different choices that they can choose from to rate themselves. After the students have completed the assessment chart, they will be required to reflect on their answers.
- When the students have completed the exit task, they are to turn it into the box and may begin working on their homework assignment for the night. The teacher will have this assignment posted on the front whiteboard.
- The students will have the remainder of the class period for working on their homework.

Instructional Materials, Resources, and Technology:

- Document camera
- Computer
- Projector
- Calculators
- Exploration activity/ exit task worksheet
- Whiteboards
- Dry erase markers and erasers
- Red pens (grading)
- Textbook
- Skyward

Accommodations:

- Students can and are encouraged to ask questions during all phases of the lesson.
- Students can come in for additional assistance before school, at lunch, and/or after school.
- There is an afterschool tutor center that can provide assistance to students.
- Absent students will not be required to make-up the activity, but will be required to obtain the homework assignments that they missed during their absence.
- The textbook for this class has online resources available to all students.
- Students with disabilities will be accommodated according to their needs.
- Students with 504 plans or IEP’s will be accommodated according to their instructional plans.
Lesson Plan Rationale

Learning Targets:

a) How do learning targets relate to EALR’s, state learning goals, district goals, school goals, or classroom goals?

The learning targets align with the state mathematics standards. The standards require students to be able to use square roots and understand the rules of exponents. Since square root functions can be represented as functions with exponents, the rules of square roots follow the same criteria that rules of exponents give. The standards require students to be able to simplify expressions using the rules of exponents and that is exactly what the learning targets for this lesson are. The standards also require students to be able to read text containing the language and symbols of mathematics. To simplify expressions, students need to be able to identify what those symbols represent and what the problems are asking for. The state math standards also require students to formulate information in order to draw conclusions. The students are discovering ideas and rules about the learning targets. (1A) (1D)

b) How do the learning targets relate to previous and future lessons?

The learning targets have taken the previous lessons and built upon them. Students first learned about square root functions and characteristics of them. Now students will learn how to manipulate those functions in order to solve them and find their solutions. Future lessons will require students to have mastered these learning targets. The following lessons will build on the skills mastered from this lesson. As students begin to add, subtract, multiply, and divide radical expressions, they will need to use the learning targets from this lesson on a continual basis. (2E)

c) How do the learning targets incorporate a multicultural perspective?

The learning targets incorporate a multicultural perspective because they are featured by the language of mathematics which is used all around the world as a common language. Simplifying radical expressions means the same thing in every nation of the world. These learning targets appreciate the differences amongst the students but allows them all the same amount of success. (1E)

d) Why are the learning targets appropriate for all students in the class?

The learning targets are appropriate for all students in the class because all of these students speak the common language of mathematics, and simplifying radical expressions is a necessary skill for algebra students to possess. The lesson allows students to discover important qualities about the rules of radical expressions on their own, which enables students to succeed at their own pace. Students are given multiple modes of instruction which can further increase their ability to master the learning targets presented in this lesson. (1B)
Assessment Strategies:

a) How does the strategy accommodate students at different developmental or achievement levels?

The assessment strategies presented in this lesson allow students multiple opportunities to show their mastery of the learning targets. Multiple modes of instruction enable students to learn at their own pace and in their own way, and having multiple assessment strategies provides multiple avenues for the teacher to assess each and every student in such a manner that allows them to show their success. Assessments in class provide the teacher will valuable information in regards to how to modify instruction in order to allow all students to master the learning targets. Informal formative assessment is used during all phases of instruction to assess students on a level that is not expressed on paper assessments. These multiple modes allow students from different developmental or achievement levels to succeed. (4D)

b) How does the strategy respond to differences in students’ cultural and linguistic backgrounds?

By using multiple assessment strategies, differences in students’ cultural and linguistic backgrounds are recognized and appreciated. Allowing students multiple assessments to show their abilities can show the teacher exactly where students are in regards to mastering the learning targets. Some students do not do well with paper assessments but can show their mastery through different phases of the assessment process. Informal assessments where the students are explaining their process to the teacher can sometimes be more beneficial than just seeing their end result. If students struggle with communicating verbally, their written work can show their mastery of the learning targets. (2C)

Learning Experiences:

a) How have you demonstrated your understanding of students’ cultural backgrounds, ethnicity, first language development, English acquisition, socioeconomic status (SES), and gender?

Students are all different from one another. Very rarely do two students think and learn the same way. Because of this reason, multiple modes of instruction and assessment are used in this lesson. Students are allowed to work with the other students in their pod to help supplement the instruction from the teacher. These heterogeneous groups allow students from different cultural backgrounds to learn and communicate one another through social interaction. In addition, the teacher encourages students to voice their opinions and feel free to take risks without unfair consequences. (2C) (2D)
b) How do the experiences accommodate the learning needs of students with disabilities or 504 students?

There are no students in the class with disabilities or 504 plans. However, since students work and learn at different rates, accommodations can be made to help each and every student succeed. Students can come in for extra help before school, at lunch, and after school. There is an after school homework center that can also accommodate students who need additional help. (2B)

c) How do the experiences incorporate multicultural perspectives?

The learning experiences incorporate multicultural perspectives by allowing students multiple modes of instruction. By allowing students to learn from several different methods, it enables them to learn in the manner most appropriate for each student’s cultural needs. The exploration activity allows students to discover rules of square roots at their own pace using technology. The direct instruction piece allows students to see exactly what is required of them. And the homework allows students time to practice these skills. The seating arrangement of the classroom promotes social cohesion. In addition, it allows students to ask questions to a small number of peers instead of the whole classroom which makes students feel more comfortable. The group seating arrangement allows students to sit with students from different cultures and learn to be respectful of their different cultures. (5E) (5H)

d) How do the experiences stimulate student problem solving and critical thinking?

The exploratory portion of the lesson requires students to problem solve and use critical thinking when discovering the rules about square roots. As students are using the technology to answer some questions, they need to use critical thinking skills to determine what the results imply about square root functions. At the end of the exploration, students need to use problem solving skills to develop conjectures and then support their claim. (1C) (5A)

e) How do the experiences create an inclusive and supportive learning community?

The students will have opportunities to participate and work example problems at the board for the rest of the class. Students will also be able to get and receive help from one another during the entire lesson. Students are encouraged to ask questions and volunteer without fear of being ridiculed. Students are told that wrong answers provide learning opportunities for the entire class, not just the individual who had the incorrect answer. Classroom norms enable students to take risks in the experience knowing that no unfair consequences will follow. (2F)

f) Describe the research base or principles of effective practice that form the basis of the learning experiences.
Research has shown that discovery learning can help students understand on a more conceptual level than just memorizing procedures. During the exploratory portion of the lesson students are allowed to collaborate with their group members which promotes a higher level of understanding. Studies have shown that students can sometimes learn more from a peer than from the teacher. Accepting this and understanding how it can be implemented benefits some students more than traditional instruction. But for those students who do learn best from traditional instruction, direct instruction is also present in the learning experiences. The learning experiences provide several different modes of instruction and assessment which allows more students opportunities to succeed than just one method of instruction and assessment would provide. (2D) (5I)

Family Interactions:

- The plan for collaborating with families on supporting student learning starts with monitoring student grades. Families have access to the online grading system, Skyward, that is used in this school district. At any point, parents can go online to see how their students are doing and view any late assignments that they might have. If families do not have internet access, then progress reports are mailed home on a regular basis. In addition to Skyward, the teacher will be sending a progress report home following the summative assessment piece the following day. (3A) (3C)

- The teacher also uses email and/or telephone to personally communicate to families. These instances may be because of misbehavior in class, but also to inform parents of student success in the classroom. Parents need to be informed of when their student is doing something good as well as when their child may be misbehaving. Families are encouraged to attend any classes they would like. Outside observers are appreciated in the classroom, especially if they are family members. (3B) (3D)
Radical Expressions

Entry:
Bellwork assignment projected - due annual (next)
Students enter room sit at assigned desk clusters.
(all hetero)
Student rules shared:
1. 10 min or more HM time - have to out at least 5 problems
2. Don't get too loud
3. Stay on task
4. Only math talk (not talking about other stuff)
(a little chatter here - to another students)
5. Periods - another suggested
6. May move if someone is distracting you.
6. When lesson is being taught - interact with teacher
  + not have side conversations
7. Everyone should give answers, not just the
  same people
8. Consequences of talking during lesson:
   pushups - sing "Little Tea Cup" or "Quad Farm Song.
9. People who generally speak out right away "wait till"
   rule (for others to think/show) (No counting to 7 out loud)
10. No yelling
11. Be respectful
   Students respectful - engaged during this
   process - actually had fun. Everyone respectful
   when in conversation.
Setting Lessons Foundation

Procedure + Graphing

1. Homework - Students presented output screen
   Students self-correct whendone.

Tim verbalizes the problem-solving process.

Lesson (Alg)

Calculators used today. Student teacher selects one
from the calculator menu.

Activity - Exploration of Radical Expressions - distributed.
Tim explained procedure (which includes 3
written responses - critical thinking connections)
"What do you notice...?" Discussion/Description

Any conjectures the student makes based
for their findings. Tim gives additional information
to assist students to complete this activity.

Students groups are basically working
individually, but may collaborate if necessary.

2. Assisted students in meaning by "Conjectures"
in the Think-Discuss-Portions - respond. -

This activity was a "lead into today's lesson".

Reviewed all student input - "What did you notice"?

Sections - Explained, modeled, then began explaining,

Simplifying expressions of 1. TIm explained

Challenged questioning - demonstrating.

A student suggested:

Respectful collaboration - atmosphere.
**DEPARTMENT OF EDUCATION OBSERVATION FORM**

<table>
<thead>
<tr>
<th>Candidate:</th>
<th>School:</th>
<th>Cooperating Teacher:</th>
<th>Supervisor:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Preparation/Instruction</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Lessons (outcomes, EALRs, procedures, assessment)</td>
<td></td>
</tr>
<tr>
<td>2) Communication skills-written, oral, voice</td>
<td></td>
</tr>
<tr>
<td>3) Gets student attention</td>
<td></td>
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<tr>
<td>4) Clear directions</td>
<td></td>
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<tr>
<td>5) States purpose/preview/preview</td>
<td></td>
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<tr>
<td>6) Array of instructional strategies (discussion groups, inquiry, direct, demonstration)</td>
<td></td>
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<tr>
<td>7) Innovative/creative</td>
<td></td>
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<tr>
<td>8) Active student involvement (adapts to individual differences)</td>
<td></td>
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<tr>
<td>9) Encourages critical thinking/problem solving</td>
<td></td>
</tr>
<tr>
<td>10) Timing/pace</td>
<td></td>
</tr>
<tr>
<td>11) Monitors and adjusts</td>
<td></td>
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<tr>
<td>12) Supervision of work/study/transitions/time on task</td>
<td></td>
</tr>
<tr>
<td>13) Closure/summarize</td>
<td></td>
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<tr>
<td>14) Higher level questioning</td>
<td></td>
</tr>
<tr>
<td>15) Knowledge of subject/accuracy</td>
<td></td>
</tr>
<tr>
<td>16) Utilizes technology</td>
<td></td>
</tr>
<tr>
<td>17) Appropriate assignments</td>
<td></td>
</tr>
<tr>
<td>18) Instructional methods, curriculum, assessment which evidence multicultural perspective</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Professionalism</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>19) Poise/Assured</td>
<td></td>
</tr>
<tr>
<td>20) Positive professional attitude</td>
<td></td>
</tr>
<tr>
<td>21) Well groomed</td>
<td></td>
</tr>
<tr>
<td>22) Enthusiastic</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Management/Discipline</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>23) Developed appropriate strategies for prevention of discipline problems</td>
<td></td>
</tr>
<tr>
<td>24) Established and stated expectations for student conduct</td>
<td></td>
</tr>
<tr>
<td>25) Personalized approval responses</td>
<td></td>
</tr>
<tr>
<td>26) Prompt/constructive discipline</td>
<td></td>
</tr>
<tr>
<td>27) Encouraged student self-discipline</td>
<td></td>
</tr>
<tr>
<td>28) Used classroom time, materials, and equipment effectively</td>
<td></td>
</tr>
<tr>
<td>29) Established a safe/pleasant environment</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Evaluation/Assessment</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>30) Based assessment on goals/student outcomes</td>
<td></td>
</tr>
<tr>
<td>31) Re-taught as necessary</td>
<td></td>
</tr>
<tr>
<td>32) Involved students in criteria for assessment</td>
<td></td>
</tr>
<tr>
<td>33) Recorded/provided evidence of student learning</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relationships</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>34) Caring and flexible approaches working with all students (diverse backgrounds/wide range of all abilities)</td>
<td></td>
</tr>
<tr>
<td>35) Relates well to pupils and staff</td>
<td></td>
</tr>
<tr>
<td>36) Believes all students can learn</td>
<td></td>
</tr>
</tbody>
</table>

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**Continued**

Student assistance was needed for understanding. Students may need more time on this concept. Feedback was frequent. As a demonstration, explanation was given: 

**Closure**

1. What did we learn today?
2. How do we apply this new concept?
3. What did we need to take notes of?

**Assessment and reflection part of today's lesson. If work is finished, all work is turned in.**

May now work on homework - collaboration is a choice.
Classroom Rules

Read over the following rules and pick your top five choices. Rank them from 1 to 5 with 1 being your top pick.

1. If given ten minutes or more of homework time, students have to get at least five problems done.
2. Stay on task
3. Don’t get too loud
4. Only math talk, no talking about other stuff
5. If someone is distracting you or you are distracting them, move yourself
6. When lesson is being taught, interact with the teacher and not have side conversations
7. Everyone should give answers, not just the same people
8. If talking during lesson, must stand up and sing “I’m a little teapot” or the quadratic formula song
9. Don’t blurt out answers right away, wait for a few seconds
10. Be respectful to one another
11. You get two warnings for talking, then ISI
12. In your seat when the bell rings
13. If talking too much stand in corner
14. During lessons, keep side conversations to a minimum
15. No talking while other people are talking
16. Silence when directions are being given
17. No negative comments
For the week of 5/3 thru 5/7

- Record responses in the tables provided for the appropriate day.
- If you are absent, it is your responsibility to obtain the questions for the days you missed and record your responses.
- If you are missing responses, you will not receive full points for that day.

### Monday: 5/3:

1) **Being able to go down to Mexico and help build houses for families who don't have much.**

2) \( f(x) = 5 - \sqrt{9 - 3x} \)

\[
\begin{align*}
9 - 3x & \geq 0 \\
-3x & \leq -9 \\
x & \leq 3
\end{align*}
\]

---

### Tuesday: 5/4:

1) **No talking when the lesson is being taught, but we can talk about the assignment afterwards.**

**ONLY math talk!**

2) \( f(x) = \sqrt{a(5-x)} - 8 \)

\[
\begin{align*}
10 - 2x & \geq 0 \\
-2x & \leq -10 \\
x & \leq 5
\end{align*}
\]
10. \( f(x) = -\sqrt{2x} \)
- \( y = 4 - \sqrt{3x} \)

<table>
<thead>
<tr>
<th>( x )</th>
<th>( y )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>-2</td>
</tr>
<tr>
<td>8</td>
<td>-4</td>
</tr>
</tbody>
</table>

12. \( f(x) = \sqrt{x-12} \)
- \( y = \sqrt{x+1} - 3 \)

<table>
<thead>
<tr>
<th>( x )</th>
<th>( y )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-12</td>
</tr>
<tr>
<td>1</td>
<td>-10</td>
</tr>
<tr>
<td>9</td>
<td>-9</td>
</tr>
<tr>
<td>16</td>
<td>-8</td>
</tr>
</tbody>
</table>

14. \( f(x) = \sqrt{x+4} \)
- \( y = \sqrt{2(x+7)} \)

<table>
<thead>
<tr>
<th>( x )</th>
<th>( y )</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>4</td>
</tr>
</tbody>
</table>

16. \( y = \sqrt{x+2} - 3 \)
- \( y = \sqrt{x+3} - 3 \)

18. \( y = \sqrt{3x} + 2 \)
- \( y = \sqrt{3x-2} - 2 \)

20. \( y = 2\sqrt{x+1} - 3 \)

22. \( y = \sqrt{2(x+4)} \)

24. \( y = \sqrt{2(x+6)} \)

26. \( y = \sqrt{2(x+7)} \)
- \( y = \sqrt{2(x+7)} \)

28. \( y = \sqrt{x+2} - 3 \)
- \( y = \sqrt{x+3} - 3 \)
11-6 Radical Expressions

You will need a calculator for this Exploration.

1. Use your calculator to find a decimal approximation for each expression in the table. Round to the nearest thousandth.

<table>
<thead>
<tr>
<th>Expression</th>
<th>Decimal Approximation</th>
<th>Expression</th>
<th>Decimal Approximation</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\sqrt{3}\sqrt{6}$</td>
<td>4.243</td>
<td>$\sqrt{18}$</td>
<td>4.243</td>
</tr>
<tr>
<td>$\sqrt{2}\sqrt{17}$</td>
<td>5.831</td>
<td>$\sqrt{34}$</td>
<td>5.831</td>
</tr>
<tr>
<td>$\sqrt{50}\sqrt{3}$</td>
<td>12.247</td>
<td>$\sqrt{150}$</td>
<td>12.247</td>
</tr>
<tr>
<td>$\sqrt{5}\sqrt{2}\sqrt{3}$</td>
<td>5.477</td>
<td>$\sqrt{30}$</td>
<td>5.477</td>
</tr>
</tbody>
</table>

2. What do you notice in the table? Both sides match up, even though they are different expressions.

3. Use your calculator to find a decimal approximation for each expression in the table. Round to the nearest thousandth.

<table>
<thead>
<tr>
<th>Expression</th>
<th>Decimal Approximation</th>
<th>Expression</th>
<th>Decimal Approximation</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\frac{\sqrt{10}}{\sqrt{2}}$</td>
<td>2.236</td>
<td>$\sqrt{5}$</td>
<td>2.236</td>
</tr>
<tr>
<td>$\frac{\sqrt{38}}{\sqrt{19}}$</td>
<td>1.414</td>
<td>$\sqrt{2}$</td>
<td>1.414</td>
</tr>
<tr>
<td>$\frac{\sqrt{30}}{\sqrt{5}}$</td>
<td>2.449</td>
<td>$\sqrt{6}$</td>
<td>2.449</td>
</tr>
</tbody>
</table>

4. What do you notice in the table? Both sides match up, even though they are different expressions.

THINK AND DISCUSS

5. Describe any conjectures that you can make based on your findings. Solve the equation first, then square root the problem.

EX: $\frac{10}{2} = 5 \quad \sqrt{5} = 2.236 \quad \text{or} \quad \frac{\sqrt{10}}{\sqrt{2}} = 2.236$
11.6 Exit Task

Simplify the following expressions:

1) \( \sqrt{2(15)} + 6 \)
   \[ \sqrt{30} + 6 = \sqrt{30} = 6 \]

2) \( \sqrt{28x^2y^3} \)
   \[ = 2\sqrt{7} \cdot xy \sqrt{y} \]
   \[ = 2xy \sqrt{7y} \]

3) \( \sqrt{x^4} \)
   \[ = x^2 \]

<table>
<thead>
<tr>
<th>Grade</th>
<th>What that means</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>I have no confidence in my answer</td>
</tr>
<tr>
<td>1</td>
<td>I have very little confidence in my answer</td>
</tr>
<tr>
<td>2</td>
<td>I am fairly confident with my answer</td>
</tr>
<tr>
<td>3</td>
<td>I know that I am correct</td>
</tr>
</tbody>
</table>

Use the above criteria to grade yourself on the three questions and then explain why you gave yourself those grades.

\( \checkmark \) I gave myself a 2 because I feel pretty confident but since it is still the first day of doing this, I am not sure if they are all right or not. 2 is a good grade for me at this point! ☺️
2. \( \sqrt{a^2 + 17} \)
4. \( \sqrt{a^2 + 17} \)
6. \( \sqrt{\frac{1}{10} \cdot 14} \)
8. \( \sqrt{m^2 + m \cdot \sqrt{n^2 + n^2}} \)
10. \( \sqrt{1000} \cdot \frac{2}{a^2 + 17} \)
12. \( \sqrt{4} \)
14. \( \frac{\sqrt{b}}{c} \)
16. \( \frac{\sqrt{7 \cdot a^2}}{3 \cdot \sqrt{a^2 + 17}} \)
18. \( \sqrt{20} \)
20. \( \frac{1}{2x} \)
22. \( 3 \sqrt{x^2} \)