I Declare Math

Introduction:
In this activity students will compare one digit numbers and two digit numbers.

Learning Outcomes:

Students will be able to define greater than, less than, or equal to another number. Students will be able to define numbers using symbols.

Curriculum Alignment:
1.NBT.3. Compare two two-digit numbers based on meanings of the tens and ones

digits, recording the results of comparisons with the symbols >, =, and < .

Classroom Time Required:
10 minutes to explain the concept in a guided math mini-lesson and demonstration; It's

at the teacher's discretion as to how long they will allow students to play. Suggested

time: 10 minutes or during a math station rotation.

Teacher Preparation:
None unless you don't have miniature ten frames (these should be made in advance.)

Materials Needed:
- Deck of cards with the face cards removed or miniature ten-frames
- More/Less Spinner (optional)
- Math journal task cards (optional)

Pre-Activities/Before
Prior to this activity, students should know how to compare numbers and state critical

vocabulary such as: greater than, less than, or equal to.

On the board draw a group of 9 triangles and a group of 3 triangles.
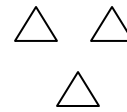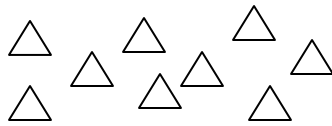
Ask students, "Which group has more triangles and which group has less?" Allow wait time. Encourage students to notice which group has more or less without counting. Ask them, "What word we would use if both groups had nine triangles each?" They should respond *equal*. Write **more**, **less**, **greater than**, **less than**, **equal to** on the board or you could create an anchor chart with visuals for students to refer to later. On the board and on your anchor chart incorporate the symbols <, >, and = as you review greater than an equal to, for example, $5 < 7$, $7 > 5$, $3+2 = 5$

Ask students "Have you ever played the game *I Declare War*?" Inform students that they will play a similar game today called *I Declare Math*. Point to the math words on the board (more, less, and etc.) and explain they will use these words as they play the game today.

With a helper demonstrate how to play the game. Again place emphasis on using the vocabulary.

Activities/I Declare Math Directions:
- Divide your cards or ten-frames equally to each player. (Please note you might have to demonstrate "one for you, one for me" or "two for me, two for you" and other various ways to pass out cards if this is students first time passing out cards.)
- Students will place their cards face down in a stack.

- Students will turn over one card each at the same time. Students will look to see who has the greater number; the person with the greatest number collects the cards, and places them on the bottom of their stack.

- Place emphasis on using the math vocabulary: **greater than**, **less than**, **more**, **less**, and/or **equal** as they play the game.

  - For example, Sally drew 5 and Ashley drew 9. A typical conversation could be *5 is less than 9 or 9 is greater than 5 so Ashley wins*. Get students to use the numbers and the vocabulary to enhance their mathematical thinking.

- Students will continue playing in this manner until they get the same number. If a number is equal...students should draw three cards. As they draw the first two cards they should place them face down and say, "I declare." As they turn over the card (with the value showing) they should say "Math." The person with the highest number collects all the cards.

- Students continue playing for the length of time designated by the teacher. If the game is played until one student collects all the cards this game would take a really long time. Emphasis should be placed on mathematical thinking: greater; less; and equal to, and not on an actual winner.

Guided Practice/ "During" as students play the game
Allow students to play *I Declare Math* with a partner. If you have an odd number of students they can work in a group of three. As students play remind them to use the vocabulary. Monitor students as they play and if needed please see extensions for differentiated activities.

Assessment/To be completed after students play the game

Bring the class back together and discuss the game. Have students answer the following question in their math journals: *How do I know that seven is greater than four?* (Depending on a child's level you might want to use some of the extension activities to further their understanding or give students larger numbers or equations to compare.)

Modifications/Extensions Activities:

- Use a more/less spinner. By using a spinner the person that has the greatest number will not always collect the cards. The spinner adds a twist to the game, encourages math talk, and makes students really focus on who has more or less each time.

- In their math journals have students write **more**, **less**, **greater than**, **less than**, and **equal to**. Have students write about each word or draw an example.

- Create task cards and have students write a response in their journal.

- Have students draw two cards at a time. They can add the two cards together then compare whose number is greater than or less than.

- Have students draw two cards at a time. They can subtract their two cards and determine whose number is more or less.

- Have students draw two cards at a time. Spin the more/less spinner have them create the largest or smallest number possible using the two cards. i.e. You can make 35 or 53. Students have to be strategic with their thinking because if you spun less and made 53 that's incorrect because you made the largest number possible, not the smallest. (This activity should be used for your advanced

students, because this might confuse students without additional guided practice.)

- Have the students play the game for homework.

Alternative Assessments:
For students that are English Language Learners or have a learning disability in math you should provide more support for them or pair them with a buddy. Teachers can create reminder cards with numbers and pictures to demonstrate the vocabulary.

Critical Vocabulary:
Greater than, less than, more, fewer, equal to. Students should not only be able to define these words but also give examples, and use the vocabulary as they play the game.

Greater than – more than or a bigger number, i.e. 5 is greater than 3

Fewer – A smaller number, not as many, i.e. You have three apples and I only have one. I have fewer apples than you.

Less than – Not as many, a smaller number; i.e 5 is less than 7.

More – Larger than another number, i.e. You have seven apples and I have ten apples. I have more apples than you.
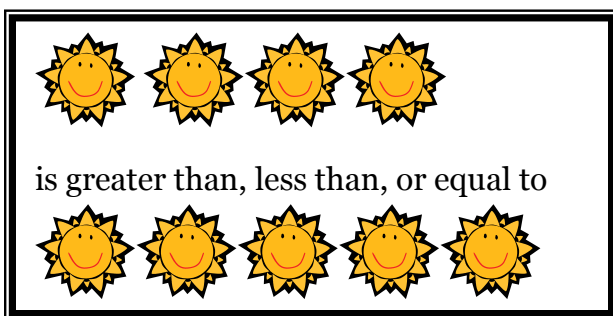
Comments:
This lesson is intended for students in First Grade. However it can be used for students in second grade, please differentiate based on the level of each child's mathematical understanding and thinking using the modifications/extensions provided. Sample task cards are below.

Author Info:

Tomika R. Altman-Lewis is an A.I.G. Facilitator at Burton Geoworld Elementary IB-PYP School in Durham Public Schools, Durham, NC. She has been teaching for over seven years. She has taught Kindergarten, First, and Second Grades as well as Remedial English, EOG Study Prep and Family and Consumer Sciences to students in grades 6th-12th. Currently she is an A.I.G. Facilitator that identifies, assesses, and teaches Gifted and Talented Students in grades First through Fifth and provides nurturing to students in grades Kindergarten through Second in an effort to identify potential A.I.G. Students. Tomika graduated from North Carolina Central University with an B.A. in Sociology and an B.S. in Family and Consumer Sciences with a concentration in Child Development and Family Relations and the University of North Carolina at Greensboro with a Master's in Specialized Education with an emphasis in Learning Disabilities. She is certified in AIG, ESL, Special Education (Learning Disabilities), Special Education (General Curriculum), Elementary Education, Family and Consumer Sciences, and Reading. In 2011 Tomika was selected as a Kenan Fellow to work with Barbara Bissell, the Department of Public Instruction's Math Chief, on a replacement to be utilized with the adoption of Common Core. This activity is one lesson from the replacement unit.

Sample Task Cards

is greater than, less than, or equal to

Select two cards and add them together. Are they greater than, less than, or equal to your partner's cards when they add theirs?

In your math journal use pictures and words and words to explain why 2 + 4 is equal to 3 +3.

Select two cards and subtract them. Are they greater than, less than, or equal to your partner's cards when they subtract theirs?