



Tucson Unified School District
Mexican American/Raza Studies Department

COUNTING WITH SOCIAL JUSTICE

SUGGESTED LEVEL: 3-6

By: Alzira Duncan
Maria Federico-Brummer

INTRODUCTION

Rethinking Mathematics – Teaching Social Justice by the Numbers edited by Eric Gunstein and Bob Peterson was the book we used to create these lessons using mathematics to help solve global issues. The articles used in some of the lessons were taken from the book and adapted when necessary to fit the elementary level. The objective of the authors was to use an approach that helps deepen students' understanding of society and to prepare them to be critical, active participants in a democracy. We tried to select some of the lessons that were culturally relevant to them. Some of the potential benefits of such a social justice approach to mathematics are:

- Recognition of the power of mathematics as an essential analytical tool to understand and potentially change the world.
- Deepening the students' understanding of important social issues
- Connecting math with their own culture and community
- Understanding their own power as active citizens in building a democratic society

Since mathematics is essential to the understanding of political and social justice issues, the idea would be for us teachers to integrate the lessons to local issues to bring meaning to the cultural and community component of the lives of our students. The underlying mathematical ideas – (dis)proportionality, probability, randomness, sample size, and the law of large numbers all become part of the context that student must understand to really see, and in turn demonstrate that something is amiss. Moreover, to understand some issues, students need to combine math with other subjects. When students have a deeper understanding for our global issues, it helps them realize their power and what they can do about it. It is important to encourage students to defend their rights and recognize injustices around them by counting, analyzing and acting on issues that are important not only to themselves but for humanity.

IMPLEMENTATION GUIDELINES

The lessons are designed for grades 3, 4, 5 and 6. It is possible to adapt the lessons for second graders by not doing all the activities for that specific lesson.

TEACHER PRE-INSTRUCTIONAL INFORMATION

Resources relevant to the lesson such as books, web sites, guest speakers, games, simulations, and anything else that the teacher can think of would only enhance the lesson if added. Please share with us from the Mexican-American/Raza Studies Department what else we could have done to make the lesson better and easier to execute. Also we would appreciate if you share with us any other lessons that you might use to complement these lessons.

MEXICAN AMERICAN/RAZA STUDIES

LESSON PLAN 2005-2006

Lesson Title: Counting with Social Justice

Grade Level: 3 -6 **By:** Alzira Duncan and Maria Federico-Brummer

Time Frame: 60 minutes per lesson **Number of Lessons:** 5

Coverage for these series of lessons

- a) Number zero and the Mayans
- b) Activities to learn the Mayan Numeral System
- c) Adding with Mayan numeral symbols
- d) Solving problems using real world issues

Preplanning: make copies of worksheets, read lessons before hand

Objectives:

The lesson objectives will be displayed on the board during the lessons. Each lesson has its own objective.

Criteria for Success:

1-Activities:

- Responding to the questions posed verbally
- Answering and supporting the questions that requires inductive and deductive reasoning '
- Solving problems with accuracy by using their mathematical skills.

2-Class discussions:

- willingly share ideas
- Supports statement made when appropriate
- Respectfully challenges ideas of others

3-Group work

- Share ideas
- Support statement made when appropriate
- Respectfully challenges ideas of others

Obs.:Teacher will introduce the criteria for success for the specific lesson at the beginning of each class.

b- Assessment:

- Teacher will circulate among students and take observational notes.
- Teacher will collect the activity sheets and evaluate them for understanding and accuracy.
- Teacher will read the students' journals and will use as a reference for re-teaching non-clear points.

At the beginning of the lessons teacher will tell the students the objectives of the lessons. The objectives will also be displayed on the board at the beginning of each lesson. Students will also write it down in their journals

LESSON 1

ZERO AND THE MAYANS

Objectives:

By the end of the lessons students will be able to:

- Write at least one sentence on the importance of the number zero. (M05-S2C2-PO2)
- Compare and contrast by using a Venn Diagram the Roman and Mayan numbers (M05-S2C1)

Materials:

Butcher paper
Markers of different colors
Drawing paper
Crayons

Pre-planning:

Butcher paper with focusing question
Butcher paper for FFOE (optional)
Venn diagram (board or butcher paper)
Drawing paper and crayons (1 per student)

FOCUSING QUESTION: WHAT IS THE IMPORTANCE OF THE NUMBER ZERO?

Activities

1-Activating Prior Knowledge

CAROUSEL BRAINSTORMING: Large sheets of butcher paper are posted on the wall at various points around the room. Each sheet has the same question "WHAT IS THE IMPORTANCE OF NUMBER ZERO?" written on it. Students are divided into groups of 4 -6 and assigned to one part of the room.

Directions to students:

- Each group starts with a different colored marker and stand in front of one of the pieces of newsprint.
- Choose a recorder.
- Brainstorm responses to the posted question/topic – quickly.
- After 2 minutes and at the signal, move one sheet to your right.
- Brainstorm quickly and add to the new sheet (2 minutes).
- At the signal, move to your right and repeat the process.
- Continue until each group has brainstormed responses to all of the questions.
- Have students go back to their desk and copy the most important ideas from the activity on their own piece of paper.

Teacher will place a butcher paper on the board with the question “What is the importance of Number Zero?” and students will be invited to share their findings. Teacher will write down their ideas. Teacher will make sure that students are aware that:

- There are numbers to the left and to the right of zero
- Negative numbers are the numbers to the left of zero
- With regards to money when you have less than zero you owe somebody money.
- A swimming pool is built using negative numbers because the ground is the zero level. So, the depth of a hole should be measured as negative number so people know that we are talking about something below the ground level.
- If there was no representation for number zero, then how would we tell them that we were 10, 20 or 100 years old.
- If someone has zero money, it is bad but still better than to owe or have -\$5.00
- On the other hand to have zero problems is good.
-

Teacher will now ask students to write a sentence explaining the importance of the number zero and its origin.

2-FFOEING - CREATIVE THINKING ACTIVITY – OPTIONAL

Fluency – lots of ideas

Flexibility – lots of different ideas – different categories




Originality – new – odd idea that makes sense

Elaboration – adding details, more and more details

Looking at the list of ideas, students and teachers can determine if they are **fluent** or not. **Flexibility** is the ability of getting ideas together and placing them under a category or categories - for example -- bad, happy, great could go under the category of feelings. Teacher asks students which of the answers could go together for some specific reason and ask them to name the group. Ask student to select the most **original**, unusual ideal and then **elaborate** on it either by illustrating it or writing about it.

3- COMPARE AND CONTRAST

Teacher will show the kids that we use the Roman numerals in chapter books sometimes and the Mayan numbers which we are not used at all in the U.S. Teacher will write down on a on one side of the butcher paper, I, V,

X and , ,  on the other side . Label both sides to illustrate which one is which and put the Venn Diagram next to them so the kids can share their similarities and differences. Depending on the grade level students can do it along with the teacher or independently.

For example, Roman numerals are made of letters - Mayan numbers are made of shape, and they both are for counting.

ACTIVITY 4

DRAWING WITH NUMBERS

Students will draw anything they choose using only numerical symbols. I, V, X, o,

Lesson 2

Mayan Numerals

Objectives:

By the end of the lessons students will be able to:

- Add with Mayan Number System (M05-S3C1-PO1,PO2,PO3)
- Identify the quantity by matching the numbers with symbols (M05-S1C1-PO2)

Materials:

The Mayan Number System activity sheet

Adding with Mayan Number activity sheet

Mayan Numbers

Teacher's Information – Adding with Mayan Number System, by Steven Fought

Pre-Planning

Copies of activities sheets – 1 per student

Focusing Question: How were the Mayans able to add if they didn't have real numbers?

Activities:

1- Activating Prior Knowledge: Students will receive a Mayan number system activity 1 paper. Teacher will read the paper with the students and clarify any questions students might have to complete the assignment. The idea here is to let the students using deductive reasoning, to come up with the Mayan number system. Students will use only the top part of their paper as a reference. If they are not comfortable with the activity and don't know the Roman Numerals teacher could share the Roman Numerals with them. Students should be able to try and successfully to transfer their knowledge from the Roman to the Mayan numerals. This activity could be individual or in groups of 2 or 3.

Roman Numerals: I, II, III, IV, V, VI, VII, VIII, IX, X

2- Adding with the Mayan numbers:

- Students will receive Lesson 2, Activity 2, illustrating the Mayan numbers. Students will correct their own mistakes on first activity.
- Students will then receive the Adding with Mayan Numbers activity and they will be asked to fill in the blanks. After students are done with their work teacher will ask for volunteers to go up to the board and put down their answers and one of his/her peers to evaluate the answer. This activity could also be individual or in pairs.

3-Meaning of the numbers – optional

Teacher will tell students that some numbers have special meaning for some cultures. For most cultures, 13 is not a lucky number but for other cultures is an extremely important number. Student will be asked to write a paragraph about why the number thirteen or any other number for that matter, would be considered lucky or unlucky. After the activity teacher will talk about the meaning of some the numbers according to the Mayans. Teacher will read The Meaning of Some Numbers according to our ancestors if necessary before the activity to help out with some different ideas.

Obs.: Reading materials for the teachers follow the activity sheets

Lesson 2 – Activity 1

Name: _____

Date: _____

The Mayan Number System

The Mayans had a number system consisting of shells, dots, and lines. You could write up to nineteen with just these symbols. The Maya were one of the only ancient civilizations that understood the concept of zero. This allowed them to write very large numbers.



Would mean 0



Would mean 1























Would mean 5

How would you write down the numbers 1 through 20 knowing that the three basic numbers that are used to make up these numbers.

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____





















Lesson 2 - Activity 2

Mayan Numbers 0-19

				
0	1	2	3	4
				
5	6	7	8	9
				
10	11	12	13	14
				
15	16	17	18	19

Lesson 2 - Activity 2

Mayan Numbers 0-19

				
0	1	2	3	4
				
5	6	7	8	9
				
10	11	12	13	14
				
15	16	17	18	19

Lesson 2 – Adding with Mayan Numbers

Activity 2

Name: _____ Date: _____

Solve the equation and change the number sentence into a number sentence using the Mayan numbers.

$5 + 7 = \underline{\quad}$

$12 + 8 = \underline{\quad}$

$13 + 9 = \underline{\quad}$

$18 + 15 = \underline{\quad}$

$20 + 20 = \underline{\quad}$

Teacher's Information

Adding Mayan Numbers

by Steven Fought

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Mayan numbers have any number of places, and numbers with as many as six or seven places have been identified in hieroglyphs discovered at the sites of Mayan cities.

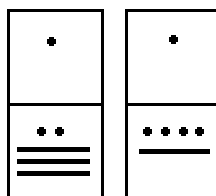
Because the dots are worth 1 and the bars are worth 5, there should never be more than four dots in a single place. When adding Mayan numbers, every group of five dots becomes one bar.

Likewise, the maximum value of one place is 19, so that four bars, or 20, is too large a number to fit in one place. The four bars are carried and equal one dot in the next highest place.

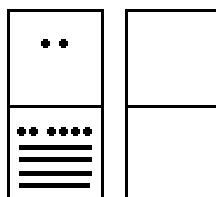
Let's add, in Mayan, the numbers 37 and 29:



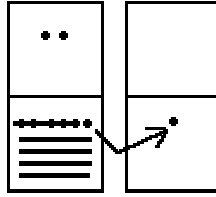
First draw a box around each of the places of the numbers so you (and I) won't get confused.



Next, put all of the elements from both numbers into a single set of places (boxes), and to the right of this new number draw a set of empty boxes corresponding to each place of the number to the left:

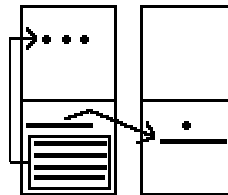


You are now ready to start carrying. Begin with the place that has the lowest value, just as you do with Arabic numbers. Start at the bottom place, where each dot is worth 1. There are six dots. Five dots make one bar, so draw a bar through five of the dots, leaving you with one dot which is under the four-dot limit. Put this dot into the bottom place of the empty set of boxes you just drew:

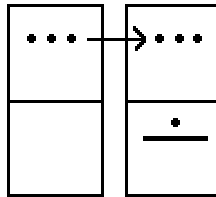


Now look at the bars in the bottom place. There are five, and the maximum number the place can hold is three. Four bars are equal to one dot in the next highest place, so draw a circle around four of the bars and an arrow up to the dots' section of the higher place. At the end of that arrow, draw a new dot. That dot represents 20 just the same as the other dots in that place.

Not counting the circled bars in the bottom place, there is one bar left. One bar is under the three-bar limit; put it under the dot in the set of empty places to the right.





















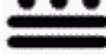
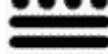
Now there are only three dots in the next highest place, so draw them in the corresponding empty box.



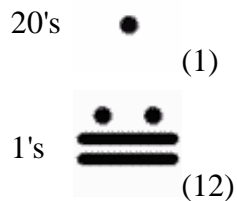
Mayan Mathematics

Instead of ten digits like we have today, the Mayans used a base number of 20. (Base 20 is vigesimal.) They also used a system of bar and dot as "shorthand" for counting. A dot stood for one and a bar stood for five.

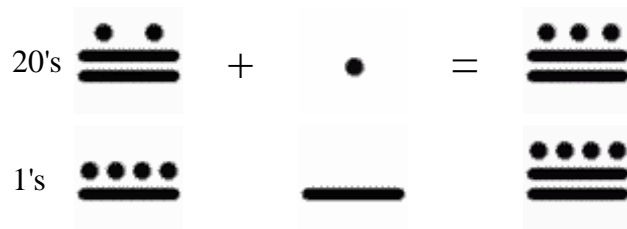
In the following table, you can see how this works.

				
0	1	2	3	4
				
5	6	7	8	9
				
10	11	12	13	14
				
15	16	17	18	19

Because the base of the number system was 20, larger numbers were written down in powers of 20. We do that in our decimal system too: for example 32 is $3 \times 10 + 2$. In the Maya system, this would be $1 \times 20 + 12$, because they used 20 as base. Numbers were written from bottom to top. Below you can see how the number 32 was written:



It was very easy to add and subtract using this number system, but they did not use fractions. Here's an example of a simple addition:



As you can see, adding is just a matter of adding up dots and bars! Maya merchants often used cocoa beans, which they layed out on the ground, to do these calculations.

If you have a Java-enabled browser, you will see an interactive number converter below. Fill in the a number in the top field, and press return to find its Maya equivalent.. Press +1 and -1 to change the number by one.

Base twenty was also used in their calendar, which is a major portion of these pages because calendars are developed by astronomers for keeping track of time.

If you want to use the Maya number pictures shown above, you are free to do so provided you thank or credit me. Here is a [zipped file](#) containing the 20 GIF images (just 8.5k)



THE MEANING OF SOME NUMBERS ACCORDING TO OUR ANCESTORS

NUMBER ONE – IS THE SYMBOL OF: BEGINNING, ORIGIN, STARTING POINT, A GROUP, THE COMPLETION OF A CYCLE

EL NÚMERO UNO - ES UN SIMBOLO DE PRINCIPIO, ORIGIN, PUNTO DE PARTIDA, CONJUNTO DE ELEMENTOS O CICLO QUE SE COMPLETA NO IMPORTANDO SU DIMENSIÓN.

NUMBER TWO – IS THE SYMBOL OF DUALITY, SYMMETRY – BALANCE, EQUILIBRIUM, EVENNESS, IN OUR NATURE THAT IS SHARED WITH THE DUALITY OF THE HUMAN BEING AND IN THE HARMONY THAT IS CREATED FROM THIS DUALITY.

EL NÚMERO DOS – EN ESTE NÚMERO ESTÁ REPRESENTADA LA DUALIDAD GENERADORA DE TODO LO EXISTENTE, LA MIMETRIA QUE EXISTE EN TODA LA NATURALEZA ES COMPARTIDA EN LA ESTRUCTURA DUAL DEL SER HUMANO Y EN LA ARMONIA QUE SE GENERA A PARTIR DE LA DUALIDAD.

THE NUMBER THREE – THE MEANING OF THIS NUMBER FOR US HUMANS IS THE FLUENCY, LIKE THE BLOOD THAT RUNS IN OUR VEINS, THE ONE THAT RUNS IN THE LYMPHATIC LIQUID IN THE PLANTS AND IN THE FLUIDNESS IN OUR WATERS.

EL NÚMERO TRES – EL SIGNIFICADO QUE TIENE PARA LOS SERES HUMANOS ES EL LUIDEZ, COMO LA QUE TIENE LA SANGRE QUE CORRE POR NUESTRAS VENAS, LA QUE EXISTE EN EL LIQUIDO LINFÁTICO EN LOS VEGETALES Y EN EL ALGUA EN TODA LA NATURALEZA.

THE NUMBER FOUR - FOR US HUMANS FOUR MEANS THE LEVEL OF INTEGRATION. IN HUMANS CONSTANTLY RECEIVES ENERGY COMING FROM THE FOUR DIRECTIONS. SO, WE GET OUR NUTRIENTS FOR LIFE FROM FOUR BASIC ELEMENTS, SUN, WIND, WATER AND EARTH.

EL NÚMERO CUATRO- EL CUATRO PARA LOS SERES HUMANOS SIGNIFICA INTEGRACIÓN. CONSTANTEMENTE ESTAMOS RECIBIENDO ENERGIA DE VIDA, PREVENIENTE DE LOS CUATROS RUMBOS, POR LO TANTO EN NOSOTROS COMO SERES SE REUNEN LAS INFLUENCIAS DE LOS RUMBOS NUTRIÉNDONOS DE VITALIDAD GENERADORA DE VIDA A TRAVÉS DE LOS CUATRO ELEMENTOS BÁSICOS: EL CALOR, EL VIENTO Y EL AGUA CON LA TIERRA.

THE NUMBER FIVE – IS THE NUMBER THAT CENTERS, THE BEGINNING OF A NEW PHASE.

EL NÚMERO CINCO – REPRESENTA EL COMINZO DE LA NUEVA ETAPA DE APRENDIZAJE. INVARIABLEMENTE, EL ELEMENTO QUE REPRESENTA AL CINCO QUEDARÁ EN EL CENTRO DEL MONTÓN. EL SIMBOLISMO DEL CINCO ES UN NÚMERO QUE CENTRA.

FROM THE BOOK *TONALPOHALLI* BY ARTURO MEZA GUTIERREZ

LESSON 3

The Hidden Grain in Meat

Objectives:

By the end of the lesson students will be able to:

- Activate prior knowledge by brainstorming and building vocabulary (M05-S1C2-PO9)
- Solve real world problems by using mathematical operations (addition, subtraction, division) (M05-S1C2-PO2)

Materials:

The Hidden Grain in Meat
Vocabulary Activity worksheet
Math Activity sheet
Drawing paper
Crayons

Pre-Planning:

Read lesson plan
Gather material
Copies – 1 per student for activity sheets

Focusing Question: How do people feed animals for us to consume?

Activities

1-Activating Prior Knowledge: whole class activity - teacher will ask students to share their ideas on what they know about feeding animals for consumption. Teacher will jot down their ideas on a butcher paper and save it for a later date. Teacher will accept all answers from students.

2-Building Vocabulary - Teacher will give each student a copy of "*The Hidden Grain in Meat*". Students are to read the passage and underline the words that they do not know.

- Teacher will then distribute the Vocabulary Activity for this lesson and ask students to add their underlined words to the end of the list if it is not already part of the list. Students will then look up the words in the text and try to figure out its meaning. If they can't they will ask their elbow partner for help.

- Teacher will have a whole class discussion about the definition of the words. He/she will ask out loud each word and ask students to volunteer their answers and he/she will ask about the added words and if they still need help to define it. Vocabulary words - one billion, fed, livestock, fatten, chronically, graze, pasture, leaner, penned, feedlots, and grain

3- **Reading and comprehension:** Using their copy of "The Hidden Grain in Meat". Student will be asked to rewrite one paragraph using their own words about the passage and one paragraph giving their opinion on the passage.

4- **Math Activity Sheet:** Students will solve the problems in the activity sheet

5- **Draw a picture that tells a story:** Students are instructed to draw a picture that tells The Hidden Grain in Meat story. Students are to present to the rest of the class and have a peer evaluation. Students when evaluating, the drawings are to tell the classmate at least 2 positive and one negative thing in the picture.

Name: _____ Date: _____

The Hidden Grain in Meat

By Stephanie Kempf

One billion of the world's people do not get enough to eat, yet half the grain grown in the world is fed to livestock. Why? To fatten the cattle up for sale to people who can afford to buy meat. Chronically hungry people rarely have money to buy meat.

Most cattle today do not graze freely on pasture grasses –if they did, their meat would be leaner and healthier. Instead, they are penned up in crowded “feedlots” and given large quantities of grain. The meat from grain-fed cattle is higher in fat.

For every 16 pounds of grain fed to a cow, we get only one pound back in meat on our plates. Producing that pound of meat requires 2,500 gallons of water. In many areas of the world, people do not have access to even a small amount of clean drinking water and must walk miles a day to get it.

The Hidden Grain in Meat Vocabulary

one billion (numbers)

fed

livestock

fatten

chronically

graze

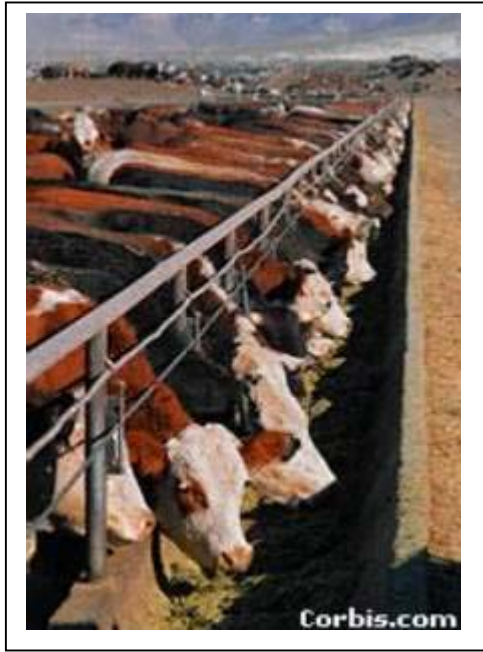
pasture

leaner

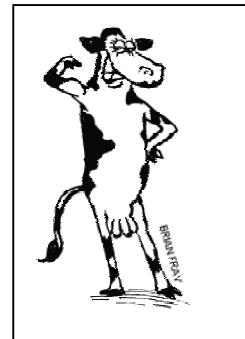
penned

feedlots

Feedlot



Leaner



Fat



Pasture



Graze



Name _____ Date _____

**The Hidden Grain in Meat
Math Activity sheet**

- 1- Find something/s in your class that weighs 16 pounds. What is it? How do you know that weighs 16 pounds?**

- 2- Find something/s in your class that weighs one pound. What is it? How do you know that it weighs only 1 pound?**

- 3- An average swimming pool uses 20,000 gallons of water. How many pounds of meat would we be able to get it for that amount of water?**

- 4- How much grain and water are used to get a**
 - half-pound hamburger? (show your work)**

 - quarter-pound hamburger? (show your work)**

- 5- How much grain and water would have to been produced to feed your class one quarter-pound hamburger? Show your work.**

- 6- How many pounds does a cow weigh?**

- 7- How many cows would be necessary for each student to have one pound of meat? (estimate)**

Draw a picture that tells the story of *The Hidden Grain in Meat*.

Draw a picture that tells the story of *The Hidden Grain in Meat*.

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Draw a picture that tells the story of *The Hidden Grain in Meat*.

LESSON 4

ARE WARS EXPENSIVES?

Objectives:

By the end of the lesson students will be able to:

- Activate prior knowledge by doing a pre-assessment activity (M05-S1C3)
- Respond in writing to questions asked about the passage
- Interpret graphs (M05-S2C1-PO8)
- Figure out costs of the war by answering questions on the math activity sheet. (M05-S2C2)
- Listing global issues in order of importance to them (SS5-S5-PO1, PO2, PO3)

Materials:

Copy of "Are Wars Expensive"

Pre-assessment activity sheet

Reading-comprehension activity sheet

Writing paper

Copy of the cartoon/graph

Calculators _ optional

Computer to access the site cited on the reading material(optional)

Pre-planning

Copies – 1 per student – of the activities sheets

Copies – 1 per student

Read lesson plan before hand

Activities:

1- **Activating Prior knowledge** - Students will start by answering a few questions on a pre-assessment activity to find out what they know about how costly it is to be in a war and also activate their prior knowledge. Teacher will follow the pre-assessment with a whole class activity having students share their ideas about the expenses of a war and he/she will jot it down on a butcher paper

2- **Reading-comprehension** - How Much Does It Cost? Students will read the article by Bob Peterson and will answer the reading comprehension activity sheet. The activity asks for the students to define some of the words on the text and also to interpret some of the text.

3- **Math activity** -How Much Does It Cost? Activity sheet
Students will work on the text looking at numbers cited on the text, prioritizing global issues and also allocating money to others. This activity will have students analyzing, synthesizing, and evaluating.

4- **ESTIMATING – ANALYZING** -CARTOON ACTIVITY SHEET

By looking at **Jim Borgamn’s cartoon**, students will estimate the percentages of the people that answer the questions posed to them. Students will also analyze the responses and evaluate the questions.

5- **ACTION** - LETTER TO PRESIDENT BUSH – ACTION

Students will write a letter to President Bush requesting him to help their number one cause. Students will have to include in the letter how much money is needed to make a difference to that specific cause. Student is required to show how he/she arrived to that amount of money to justify the request. For example, 100 people lost their home, belongings, in a flood. If everybody in the city donates \$20.00, $(800,000 \times 20 = 16,000,000)$. Since not everybody can afford to donate the money, we could estimate that we would receive half and we still need the other half to make it possible to rebuild probably, only part of the streets, stores, houses, and park lost during the natural disaster. Students could come up with fundraising ideas to collect more money.

How much does it cost?

By Bob Peterson
(adapted by Alzira Duncan)

Estimating the cost of the war in Iraq is like shooting at a moving target. The costs escalate daily in amounts that many people even imagine. For example, according to the website of the National Priorities Project, www.costofwar.com, by the end of March 2005 the cost of the war was over \$156 billion. This is in addition to the nearly \$400 billion military budget that the U.S. Congress appropriated for fiscal year 2004-2005. Today, July 11, 2006, the cost of the war is at \$296 billion + whatever the U.S. Congress appropriated for the year 2005-2006.

As of today, Arizona has spent \$3,881 billion and Tucson \$282 million. Phoenix has spent \$1 billion.

Dwight D. Eisenhower, Commander of Allied Forces in Europe during World War II and the 34th president of the United States (and a Republican), said on April 16, 1953: "Every gun that is made, every warship launched, every rocket fired, signifies in the final sense a theft from those who hunger and are not fed, those who are cold and are not clothed."

TOP GLOBAL PROBLEMS AND THE MONEY NEEDED TO SOLVE THEM

A nonprofit group called the Borgen Project has estimated what it would cost to end certain global problems. Here are some of their estimates for annual spending needed, based on a projection of 10 years of spending at these levels:

- | | |
|--|--------------|
| - Provide shelter for everyone | \$21 billion |
| - Remove landmines: | \$4 billion |
| - Eliminate nuclear weapons: | \$7 billion |
| - Provide refugee relief: | \$5 billion |
| - Eliminate illiteracy: | \$5 billion |
| - Provide clean, safe water | \$10 billion |
| - Provide health care and AIDS control | \$21 billion |
| - Stop deforestation | \$7 billion |
| - Pay off the debt of poor nations | \$30 billion |

Name: _____ Date: _____

**How much does it cost?
Pre-Activity sheet**

- 1- The cost of a war is as expensive as _____

- 2- How does the president get the money to pay for the war?

- 3- What else could people do with the money being allocated to the war?

Name: _____ Date: _____

**How much does it cost?
Pre-Activity sheet**

- 1- The cost of a war is as expensive as _____

- 2- How does the president get the money to pay for the war?

- 3- What else could people do with the money being allocated to the war?

Name: _____ Date: _____

**How Much Does It Cost?
Reading and Comprehension Activity sheet**

Answer the following questions.

- 1- What would be another word for estimating?**

- 2- What does Bob Peterson mean when he says that to estimate the cost of the war is like shooting at a moving star?**

- 3- What does the author mean by "the costs escalate daily"?**

- 4- What does the author mean when he says "in addition to the nearly \$400 billion..."? So, how much money has been allocated to the war up to that point?**

- 5- Define "debate"... a great deal of debate.....**

- 6- Define "combating"... was instead spent on combating....**

- 7- Define global social and economic problems...**

- 8- What did Dwight D. Eisenhower mean with his quote?**

- 9- Is this reading a fact or opinion? Why?**

Name: _____ Date: _____

**How Much Does It Cost?
Activity sheet**

1- Make a list from the most expensive to the least expensive global problem.

- 1-
- 2-
- 3-
- 4-
- 5-
- 6-
- 7-
- 8-
- 9-

2- How much has the war increased by since last March?(Show your work)

3- What was the average increase per month? (Show your work)

4-Prioritize – the most important issues to the least important of the list of Global Problems.

- 1-
- 2-
- 3-
- 4-
- 5-
- 6-
- 7-
- 8-
- 9-

5-Make your own list of global issues that you would like to see it solved.

- 1-
- 2-

6-If you were given \$60 billion what would you use it for? It has to be used to better humanity. (Show your work)

Cartoon activity sheet

Looking at Jim Borgamn cartoon, answer the following questions.

1-Estimate what percentage of the people answered Yes to the questions?

1-

2-

3-

4-

5-

2-What percentage of the people answered No to the questions?

1-

2-

3-

4-

5-

3- Why do you think the responses changed?

4-What is the importance of asking a question with all the information necessary to make a decision?

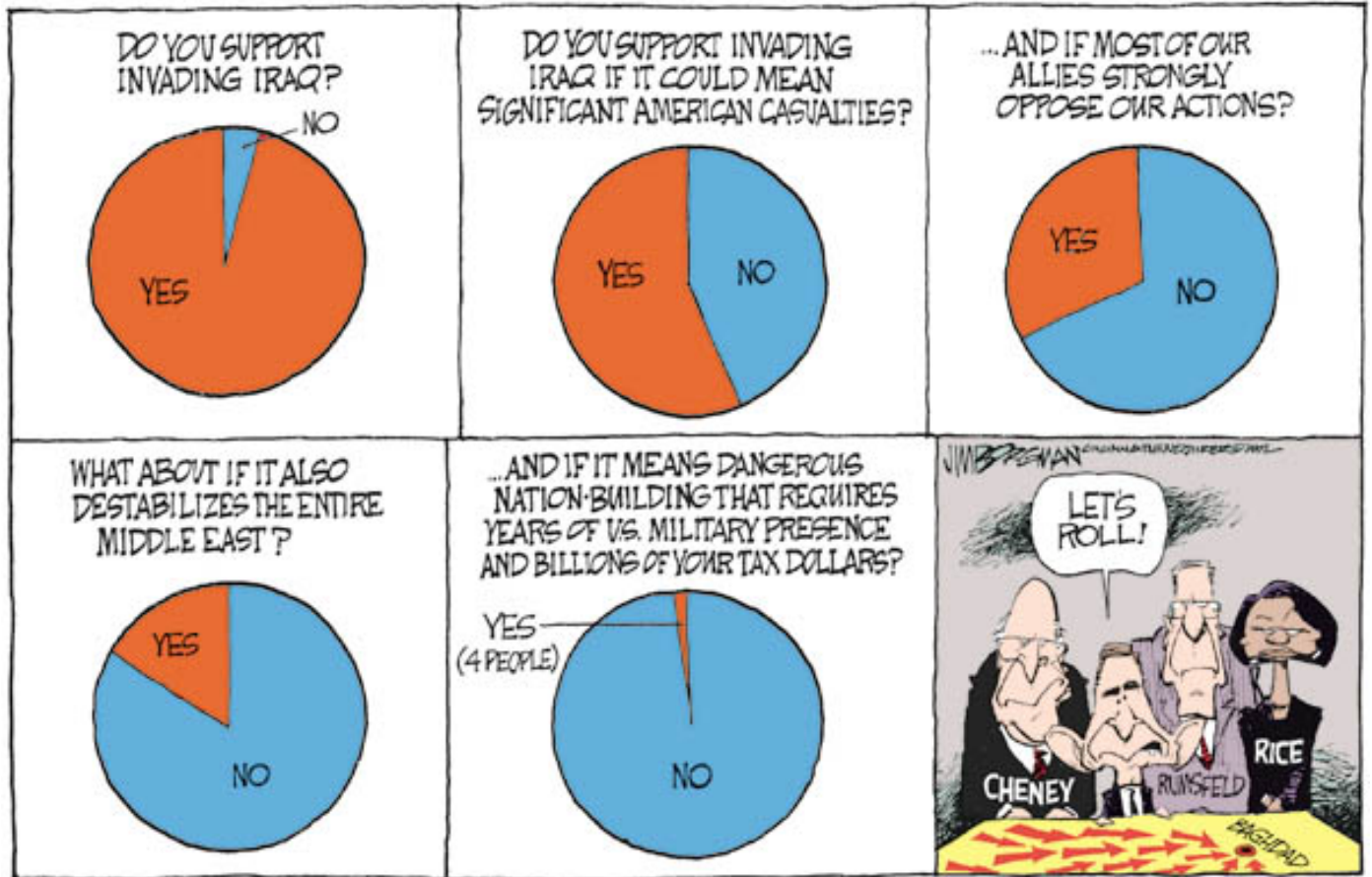
5- Who are the 4 people in the last square? Why is it funny?

6- Is the cartoonist pro or against the war? Why?

7- Are you pro or against the war? Explain your answer.

8-In what occasions do you think it is not necessary to give too much detail because it may hurt you?

9-Is this cartoon a fact or opinion? Why?



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LESSON 5

ARE WARS EXPENSIVES?

Objectives:

By the end of the lesson students will be able to:

- Activate prior knowledge by doing a pre-assessment activity(W05-C1-PO1)
- Responding in writing to questions asked about the passage(S3-R5-PO2, PO7, PO8)
- Analyzing the graph by answering the graph activity sheet (M05-S2C1-PO8)

Materials:

Copy of "Are Wars Expensive"

Pre-assessment activity sheet

Reading-comprehension activity sheet

Writing paper

Copy of the cartoon/graph

Calculators _ optional

Computer to access the site cited on the reading material (optional)

Pre-planning

Copies – 1 per student – of the activities sheets (3)

Copies – 1 per student "The Global Sweat Free Movement"

Read lesson plan before hand

Additional information on the sweatshops

Activities:

1- **Activating Prior knowledge** - Students will start by answering a few questions on a pre-assessment activity to find out what they know about the production of a pair of tennis shoes. The Sweatshop accounting pre-assessment sheet asks to help students think about what are in tennis shoes that make the price be what it is.

2- **Reading-comprehension** – Students will read the "The Global Sweat Free Movement and will answer 8 questions related to the passage.

3- Math activity –Sweatshop wages? Activity sheet

Students will work on the activity sheet to analyze some of the other issues that are a consequence of the workers wages, such as survival.

4- ESTIMATING – ANALYZING -GRAPH ACTIVITY SHEET

By looking at the graph students will be able to answer the questions accurately and also analyze the graph and give his/her opinion as to why some of the costs are what they are.

5-ACTION – Students will select one of the choices provided by the teacher or come up with one his/her own to act on the cause. Work could be individual or in group.

Name: _____ Date: _____

**Sweatshop Accounting
Pre-assessment**

- 1- How do you think people come up with a price for a pair of tennis shoes?

- 2- Let's say that a pair of tennis shoes cost \$100.00. How much do you think the person that makes them gets for each pair? How did you reach your answer? Show your work.

- 3- How much the material to make the tennis shoes cost?

- 4- How much for advertisement (TV, billboards, radio, magazines, etc)?

- 5- How much to use the brand company (Nike symbol on a shoe)?

- 6- How much does the store charge to sell the shoes?

- 7- What other costs do you think are included in the price?

- 8- Is this passage a fact or opinion? Why?

Name: _____ Date: _____

The Global Sweatfree Movement

A sweatshop is any factory where workers' basic human rights to form independent trade unions are violated, or where employees are not paid a living wage- which means enough money to support their families with dignity.

Sweatshop workers face dangerous and exploitative conditions and often suffer from health and safety hazards, lack of benefits, and arbitrary discipline. Many goods manufactured in poor nations- from Alpine car stereos, to Nike shoes and clothes, to children's toys sold at Wal-Mart- are produced in sweatshops.

Sweatshops also exist in the United States. A 2000 investigation by the Department of Labor found that two-thirds of the garment factories in Los Angeles failed to meet basic minimum wage and overtime laws- meaning that the workers in those factories were not paid fairly. And here in the U.S. workers routinely face repression and intimidation when they try to form unions, according to studies by Human Rights Watch and others. The products at the store may seem like a bargain, but they come with a very high human price for the workers that made them.

Answer the following questions using your own words.

- 1- What is a sweatshop?
- 2- How is the environment that the workers work under?
- 3- Sweatshops are only found in other countries. True or False?
- 4- Where can we find sweatshops in this country?
- 5- If there were 2100 garment (clothing) stores in Los Angeles, what would 2/3 of them be? (Show your work)
- 6- Why should we care that people are being exploited?
- 7- What can we do about it?
- 8- Why should we try not buying from the places that exploit other people?
- 9- Is this passage fact or opinion?

**What are you paying for?
Activity Sheet**

- 1- According to the graph, which production item is the lowest in cost? Why?**

- 2- According to the graph, which production item is the highest in cost? Why?**

- 3- Which of the two (the lowest and the highest) production item is more important? Why?**

- 4- What would be some of the reasons that the workers that make the shoes get the least amount of money?**

- 5- Transform each item into percentage form. For example, if the item is \$10.00 then it $10/100$, 10%. Show your work.**

- 6- Make a new graph to reflect the percentages.**

Name: _____ Date: _____

**Sweatshop wages
Activity sheet**

1- Assuming that one worker can make 1 pair of tennis shoes per hour and his work day consists of 10 hours, how much does he/she makes per day? (Show your work)

2- His/her weekly expenses are as following:

a- round trip bus fare to work:	\$2.50
b- breakfast (coffee or juice only)	\$1.90
c- lunch (beans, rice, some cheese, soda)	\$6.00
d- rent(sharing a room with anther family)	\$3.50
e- water (faucet don't always work)	\$1.50

subtotal _____

How much does he/she have left for the other expenses? _____

f- eletricity	\$1.80
g- powdered milk (2 children)	\$4.10
h- childcare	\$6.20
i- school	\$0.50

subtotal _____

Add both subtotals to get a total of his weekly expenses. How much does he have left now? _____

In your opinion, what does he/she have to do to make ends meet?

ACTION - Social Justice Action Activities

Choose one of the following activities to be done individually or in group.

Write a letter to the CEO of your favorite shoe company and ask about their sweatshops, wages, treatment of his workers, and why they chose that specific country to operate.

Research companies that have sweatshops overseas and find out the wages, working conditions, age of the people working for them and present to the class.

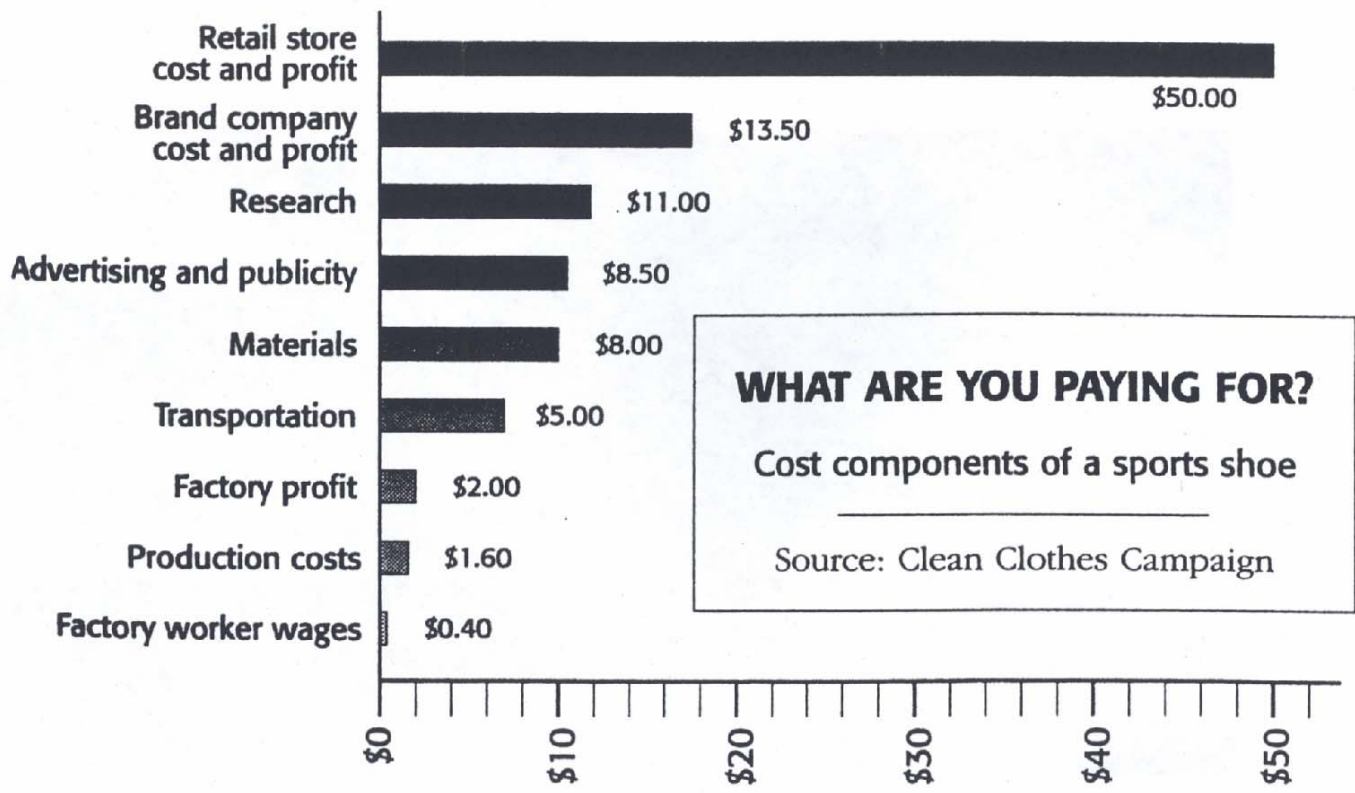
Write a story about what is behind the life of a pair of tennis shoes.

Draw a picture that illustrates a story about sweatshops.

Write and act on a sketch about the exploitation on the sweatshops.

Create a game that will illustrate the sweatshops.

Select your own action work and get teachers approval before acting on it.



Teacher - Reading material
Information acquired from the global exchange website
<http://www.globalexchange.org/campaigns/sweatshops/actnow.html>

Background and Other Resources

Socially Responsible Shopping and Action Guide

What is a sweatshop?

The U.S. General Accounting Office defines a sweatshop as "an employer that violates more than one federal or state labor, industrial homework, occupational safety and health, workers' compensation, or industry registration law." Most goods manufactured in poor nations-from electronic equipment to children's toys-are produced under conditions where workers are subject to extreme exploitation, including absence of a living wage or benefits, poor working conditions, such as health and safety hazards, and arbitrary discipline. To make matters worse, when workers try to stand up for their rights and form independent unions, they suffer harassment and repression.

Sweatshops are also prevalent in the United States where, the U.S. Department of Labor estimates, more than half of the sewing shops violate minimum wage and overtime laws and 75% of garment shops violate safety and health laws. In Los Angeles, 61% of all garment factories that sew on "Made in USA" labels violate minimum wage laws and 75% violate health and safety codes.

Why do sweatshops exist?

Sweatshops exist because transnational corporations are determined to find the cheapest labor possible-no matter what the human cost. With industry pressure to increase profits for shareholders and turn corporate executives into millionaires, corporations claim they are forced to move production to the global south or across state boundaries in order to be competitive. Corporations move jobs to countries with lower wages and bust unionization drives with threats to transfer production to countries where workers are even more desperate.

WHAT YOU CAN DO TO STOP SWEATSHOPS

1. Buy Fair Trade and Sweatshop-Free Products

Look for:

- Fair Trade Federation logo and TransFair USA certification labels guarantee that producers organized into democratic cooperatives receive a fair wage for their products, such as crafts, coffee, chocolate, tea and fresh fruit. Visit www.fairtradefederation.net, www.transfairusa.org, and www.globalexchangestore.org
- UNITE HERE!, No Sweat and other union made labels certify that the clothing was made in a unionized factory under fair labor conditions. Visit www.nosweatapparel.com, www.justgarments.net and www.ShopUnionMade.org to select from a list of union-made products (includes business apparel!). Also visit www.sweatshopwatch.org/sweatfree, which includes cooperative-made apparel.
- Worker Cooperatives are collectively owned by the workers themselves. Workers have control over their own wages and labor conditions, such as:
 - Maggie's Organics www.organicclothes.com 800-609-8593

- Market Place India www.marketplaceindia.org 800-736-8905
- Fuerza Unida www.fuerzaunida.freesevers.com 210-927-2294
- Buy Used Clothing from consignment or thrift stores. Donate unwanted clothing.

2. Host Chie Abad, former sweatshop worker and powerful speaker, to speak in your community and to activate your Sweatshop Free Campaign! Contact [Speakers Bureau](#) or 415-575-5550.

3. Demand Corporate Accountability from clothing companies and other corporations that are driving the "race to the bottom." Insist that they pay workers a living wage and support workers' right to organize!

Join Current Corporate Campaigns Against

- [Cintas](#)
- [Gildan](#)
- [WalMart](#)

4. Pass sweatshop-free government procurement policies in your community.

Governments are the largest purchasers of goods and services in the world. We can use the government's buying power to help build the market for green/fair goods by convincing institutional buyers to commit to purchasing sweatfree products. Our tax dollars pay, for example, for police and fire department uniforms, so let's ensure they're not supporting sweatshops!

Contact Global Exchange at 415-558-6938 or Valerie@globalexchange.org for a detailed how-to guide and more resources on passing sweatshop-free policies.

The following organizations are working to stop sweatshop abuses:

Global Exchange
www.globalexchange.org
 800-497-1994

United Students Against Sweatshops
www.usasnet.org
 202-no-sweat

Sweatshop Watch
www.sweatshopwatch.org
 510-834-8990

Campaign for Labor Rights
www.campaignforlaborrights.org
 541-344-5410

National Labor Committee
www.nlcnet.org
 212-242-3002

UNITE!
www.uniteunion.org
 212-265-7000

Coalition for Justice in the Maquiladoras
Coalitionforjustice.net
 210-732-8957

Tools for Action

- **NEW! SWEATFREE TOOLKIT**
Organize a sweatfree campaign in your community!
Global Exchange and [Sweatfree Communities](#) have developed the [Sweatfree Toolkit](#) to help you launch a successful campaign.
- **Join Global Exchange's [anti-sweatshop email list!](#)**
- **Support labor organizing and union drives.**
Support campaigns against corporations that violate human rights such as Nike, [Wal-Mart](#), and [Cintas](#).
- See our [Socially Responsible Shopping Guide](#)
- **Support the movement to challenge corporate charters and develop new codes of conduct.**
Check out these websites:
 - [Program on Corporations, Law & Democracy](#)
 - [Corporate Watch](#)
 - [Corporate Accountability Project](#)
- **Help build the movements that can redefine the system.**
Make our government reform economic institutions like the World Bank and IMF and renegotiate NAFTA and the World Trade Organization.
- **Support fair trade, not free trade.**
Find out where the products you buy are made and under what conditions. Support cooperatives and other alternatives to global corporate production. Buy farmer-direct locally grown organic produce. Join local fair trade campaigns like our [Fair Trade Coffee and Chocolate Campaigns](#).
- **Support human rights campaigns against military and political repression.**
Check out our campaigns on [Brazil](#), [Colombia](#), [Mexico](#), [Palestine](#).

Social Criticism Vocabulary

- 1-Race:** Humans considered as a group.
- 2- Class:** A social stratum whose members share certain economic, social, or cultural characteristics: *the lower-income classes*.
- 3-Gender:** The condition of being female or male; sex.
- 4-Privilege:** The principle of granting and maintaining a special right or immunity: *a society based on privilege*
- 5-Marginalization:** To relegate or confine to a lower or outer limit or edge, as of social standing.
- 6-Structure:** The interrelation or arrangement of parts in a complex entity: *political structure; plot structure*.
- 7-Agency:** The means or mode of acting; instrumentality.
- 8-Authority:** The power to enforce laws, exact obedience, command, determine, or judge
- 9-Resistance:** The act or an instance of resisting or the capacity to resist.
- 10-Hierarchy:** Categorization of a group of people according to ability or status.
- 11- Oppression:** A feeling of being heavily weighed down in mind or body.
- 12- Colonization:** The act or process of establishing a colony or colonies.
- 13- Discrimination:** Treatment or consideration based on class or category rather than individual merit; partiality or prejudice: *racial discrimination; discrimination against foreigners*.
- 14-Domination:** Control or power over another or others.
- 15- Exploitation:** Utilization of another person or group for selfish purposes: *exploitation of unwary consumers*
- 16-Neglect:** To fail to care for or attend to properly: *neglects her appearance*
- 17- Responsibility:** a form of trustworthiness; the trait of being answerable to someone for something
- 18- Scapegoat:** One that is made to bear the blame of others.
- 19- Self-defeating:** Injurious to one's or its own purposes or welfare
- 20- Conforming:** To act or be in accord or agreement; comply
- 21- Transformational:** The act or an instance of transforming
- 22- Capitalism:** an economic system based on private ownership of capital
- 23- Socialism:** Any of various theories or systems of social organization in which the means of producing and distributing goods is owned collectively or by a centralized government that often plans and controls the economy.
- 24- Hegemony:** The predominant influence, as of a state, region, or group, over another or others.
- 25-Cultural Capital:** forms of knowledge; skill; education; any advantages a person has which give them a higher status in society, including high expectations
- 26- Bigotry:** The attitude, state of mind, or behavior characteristic of a bigot; intolerance.
- 27-Tolerance:** The capacity for or the practice of recognizing and respecting the beliefs or practices of others.
- 28- Status Quo:** The existing condition or state of affairs.
- 29-Revolution:** A sudden or momentous change in a situation
- 30- Hypocrisy:** The practice of professing beliefs, feelings, or virtues that one does not hold or possess; falseness.
- 31- Deception:** a misleading falsehood, misrepresentation

Social Criticism Vocabulary

- 1- Race:
- 2- Class:
- 3- Gender:
- 4- Privilege:
- 5- Marginalization:
- 6- Structure:
- 7- Agency:
- 8- Authority:
- 9- Resistance:
- 10- Hierarchy:
- 11- Oppression:
- 12- Colonization:
- 13- Discrimination:
- 14- Domination:
- 15- Exploitation:
- 16- Neglect:
- 17- Responsibility:
- 18- Scapegoat:
- 19- Self-defeating:
- 20- Conforming:
- 21- Transformational:
- 22- Capitalism:
- 23- Socialism:
- 24- Hegemony:
- 25- Cultural Capital:
- 26- Bigotry:
- 27- Tolerance:
- 28- Status Quo:
- 29- Revolution:
- 30- Hypocrisy:
- 31- Deception: