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Supply and Demand [12th grade]

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Stage 1: Desired Results

Understandings

Students will understand that...

- Interaction of Supply and Demand – in a free-market economy, price is a function of supply and demand
- In most cases, competitive markets send resources to the uses in which they have the highest value
- Elasticity is the measure of the responsiveness to changes in prices

Essential Questions

1. Who dictates price and quantity and how?
2. Is it fair to manipulate the prices of essential items (lumber, water, food, gas) in times of need/disaster such as hurricanes, tsunamis, war, earthquake in China, floods in Myanmar, recessions, budget deficits, etc.?

Knowledge

Students will know...

- Differentiate between demand and quantity demanded; and supply and quantity supplied
- Law of Demand and Supply
- Graph supply and demand when given supply and demand schedules
- Interaction of supply and demand; concept of equilibrium price and quantity
- Determinants of Supply and Demand and how price and quantity changes with these shifts
- Substitutes and Compliments
- Elasticity
- Market efficiencies and deficiencies
- Price ceilings
- Price floors

Note: Downward Sloping Demand Curve and Law of Diminishing Marginal Utility will be covered in the proceeding unit.

Skills

Students will be able to...

- 7A – understand the interaction of supply and demand
- 7B – understand the determinants of supply and demand

Analyze the effects of government policies such as rent control and subsidies

Give an example of the rationing function of markets

Stage 2: Assessment Evidence

Performance Task:

- Pneumonic Device for Determinants: Students will work in groups to devise their own pneumonic device to remember the determinants of demand and supply. They have the option of creating a song, poem, illustration, rap, rhyme, or acronym. They may combine the determinants from both supply and demand or create separate pneumonic devices for each. They must include all the determinants. It must be clear which determinants are being referenced. Additionally, the groups have to include at least 3 examples for demand and supply (6 examples total, not 3 for each determinant).
- Final Assessment: Students will choose a scenario from a list. These scenarios are disasters or major crisis or situations that require some kind of response from the government. The students are to devise their own policy in response to the situation. They must take into account the needs of society (the consumers) and the availability of resources. They must also consider how producers/suppliers would act during this time of crisis and how the government may encourage them to act. The scenarios may have actually happened or may happen in the future. The goal of the student is to design a situation where goods and services are allocated most efficiently and fairly. They must consider and explain the pros and cons of any policy proposal they create. Most importantly and more specifically, they must analyze the effects their policy would have on supply and/or demand. Included in this written proposal would be an oral presentation as well as visual graphs. This will be a group project.

Other evidence:

- Informal discussion of intro and exit questions
- A Market in Wheat Game, p. 50-61
- Determinants handout about beef and cars, Activity 13 and 16*
- Activity 14, 17 – Graphing demand/supply, movements along Demand, Supply and Shifts in Demand/Supply
- Determinants handout for homework about computer games, Practice Sheet: Supply - Demand
- Self assessment/reflection of presentation of policy project
- AP/IB format test with multiple choice and free response questions

*The Activity numbers assigned outlined in Advanced Placement Economics, Microeconomics: Student Activities, by John S. Morton and published by the National Council on Economic Education in 1996.

Stage 3: Learning Activities

(Steps taken to get students to answer Stage 1 questions and complete performance task) Note: approx. 50 min class

Day 1: Begin class by asking students an intro question that they must write down, “What does it mean to demand something?” Have students write down their responses in their warm-up section of their notebook (or on a sheet of paper). Then Think-Pair-Share the responses...Have students turn to their nearest neighbor and take turns sharing their response. Next, ask for volunteers to either share something they wrote or something they heard. Come up with a consensus class definition (possible responses might be force, make, influence, wish, order). Next explain to the students the economic definition of Demand (demand is the willingness and the ability to pay for an item or service). Have the students write down this definition in their notebooks. Next, ask them to share out loud the major difference between the class definition and the economic definition. Finally, have the students draw a simple picture of the economic version of the definition of Demand (this could be a stick figure with a bubble thought saying, “I want a new iPod, and I have the money to get it.” The stick figure might be holding a few dollar bills). After the warm-up, hold up a cell phone or iPod (or similar device...it may be more effective to borrow one from a student). Ask the entire class who would like to buy this device for \$500? Have the students raise their hands. Count these and create a T-chart on the board. Repeat at \$250, \$100, \$25, \$1. Ask the students to describe the relationship between price and quantity. Next, give the students short notes (“Note sheet: Demand and Supply” front side only) over Demand, Law of Demand, a Demand Schedule, and graphing a Demand Curve.

Use the example of becoming a teacher to start off the topic of supply. Ask students to raise their hand if they want to become a teacher. Start off by saying that the average teacher in the United States makes \$35,000 per year. Count the number of hands and make a T-chart. Continue to have the students raise their hands and record these numbers for the corresponding salaries \$50,000; \$100,000; \$1,000,000. Ask students to note any trends in the numbers. Provide the students with notes (“Note sheet: Demand and Supply” front side only) over the definition of Supply (quantities that producers are willing and able to provide at a given price) and the Law of Supply (the higher

the price the more supplied and vice versa). Graph the teacher example in their notes. Discuss what type of relationship we would call this (direct vs. inverse).

Now compare supply and demand on separate graphs discussing the difference between a change in the quantity demanded (only price changes) versus a change in Demand (something other than price. Be sure to revisit the concept of “other things equal” or *ceteris paribus*. Do the same for changes in the quantity supplied and change in Supply.

Class summary and guided practice. Work together with the students on the front side of “Demand, Supply, and Price”. At the bottom, spend some time allowing the students to come up with a combined graph of Demand and Supply. Ask, “where on the graph do buyers and sellers both agree?” (The intersection is where they both agree.) Ask the class what they should call the area where the two curves intersect (equilibrium). They may need to be encouraged to produce the “economic” answer. You may want to provide a hint of, “what do we call it when two things are balanced?” (equal...becomes equilibrium) Be sure to have the students label equilibrium price and quantity on the graph.

**Homework -- assign students to begin reading chapter 3 “Individual Markets” pp. 40-46 (demand) and pp. 46-49 (supply) of McConnell and Brue 15th edition.

Day 2: Quick warm-up review of Supply and Demand from yesterday’s notes and discussions. Introduce the first essential question, “Who dictates price and quantity and how?” Quick write: Have students take out a half sheet of paper and give them 90 seconds to write a response to this question. Make sure the students put their initials not their name in small print at the top. Pick up all the sheets and put them in a hat (or container) and then have each student draw a sheet. Give the students another 90 seconds to write a response on the back side. They must write whether they agree or disagree and explain why. Next, recollect all the sheets and choose 3 students to pick from the hat a sheet to share out loud. Without revealing the initials, these students read these responses. Discuss responses.

Pass out the rules of the market simulation game. Give each student either a Buyer or Seller nametag. Practice a transaction for each. Play three rounds. Record or have a recorder for all of the transactions. At the end of each round, have students compute profit or loss. Award the highest profit. At the end of all three rounds (approx. 5 minutes each) create a graph of the entire class’ transactions for buyers and sellers. Display this graph on the board. What do the students notice? Any trends? They should find that the highest number of transactions occurs around a certain price point. Why does this happen? What do we call this place? (equilibrium) Ask for input from the highest grossing buyers and sellers. What strategies did they use to maximize their profits?

Day 3: Discuss the market simulation game. Begin notes on the Changes in Demand and Determinants of Demand. Show the graph and how the curve shifts. Show how this shift affects price and quantity. Repeat for Supply. Provide an example for students to analyze an event and how this affects either supply or demand and then price and quantity. Use the backside of the notes, “Demand, Supply, and Price”. Cover all of the determinants of Demand and Supply providing examples. Assign the determinants handout about beef and cars “Reasons for Changes in Demand and Supply”. Do these in class discussing as you go.

Introduce the Pneumonic Device for Determinants assessment. Go over the rubric and guidelines. Either put the students into groups or have them get into their own groups (preferably 3 to 4). Show examples from past years. Give them the remaining time to work on these projects. Tomorrow they will present.

Day 4: After they have finished presenting, have the entire class put away all their projects and get out a sheet of paper. Give them a “pop” quiz over all the determinants of Demand and Supply. Have them trade papers to grade. Go over the answers then return and have the students fill in all the determinants they were missing. Do not take a formal grade for the “pop” quiz. Assign Activity 14 and 17 that covers plotting Demand/Supply Curves, Moves Along Demand/Supply, and Shifts in Demand/Supply. Work these as guided practice and group practice (allow the students to use the same groups they used for the pneumonic device project). Check these results in class as they work.

**Homework: Assign “Practice sheet: Supply – Demand”. Review the “Analyzing an Event” steps 1, 2, and 3. Work a problem together. Due tomorrow.

Day 5: Discuss “Practice Sheet” homework. Have students identify which determinant for each question.

Use a graph of Supply and Demand to discuss equilibrium (visual 2.6 on p. 122). Discuss if the price was below equilibrium and how buyers would react. Ask, “What would this look like in the store or in society?” How would the market solve this problem (raise the price)? The higher price is an incentive that brings more sellers into the market. Provide an example of when the price was too low for an item (PS2 sold on eBay or playoff tickets sold outside a stadium).

Now discuss if the price was above equilibrium. There would be a surplus. How would sellers get rid of the surplus (they would lower their prices)? What would this look like in a store (clearance section)? The lower price is an incentive that brings more buyers into the market.

Only in the middle of the graph where price is equal is where the number of sellers willing and able to sell a product is equal to the number of buyers who are willing and able to buy the product. Ask the students, “Are prices mostly constant or mostly fluctuating?” Explain to the students that equilibrium is a state of balance between opposing forces. It occurs because everywhere else there is a state of imbalance called disequilibrium (shortages and surpluses). Next, take a bowl and a small ball. Put the ball into the bowl so that everyone can see. They will watch as the ball rolls around and comes to rest in the middle. This is equilibrium. Now hit the side of the bowl so that the ball begins to roll around again and then settles. Hitting the bowl is like a shift in demand or supply. However, the difference is that equilibrium occurs at different levels of supply and demand (not necessarily back at the “middle of the bowl”).

Using this same graph of supply and demand, briefly review the difference between a Change in Demand (supply) and a change in the quantity demanded (supplied). Use visual 2.7 as review. Be sure to utilize the “Analyzing an Event” steps 1, 2, and 3.

Assign Activity 18 “Equilibrium Prices and Equilibrium Quantities” and Activity 19 “Shifts in Supply and Demand”. Group students according to ability. Do a thumbs-up (very comfortable), thumbs-sideways (for somewhat comfortable), thumbs-down (for still have questions) about determinants and shifting supply and demand. Then choose a student from each of these to form groups of 3. These groups should complete Activity 18 in about 10 minutes. Check this work in class. Then proceed to Activity 19. These students will need help especially in part B. Go over a few graphs in part B.

Remind students that they will need to take into account shifts of demand and supply when doing their final project.

****Homework:** Assign Activity 20, “How Markets Allocate Resources” (note: this assignment may be difficult for students. Relate to the “Practice Sheet: Supply - Demand of Computer Games). Assign reading p. 50-55 of McConnell.

Day 6: Discuss Activity 20. Review determinants of Demand and Supply. Review the difference between a change in demand (supply) versus a change in quantity demanded (supplied). These review questions could be asked as warm-ups. Also include a question regarding elasticity. “If the price of toilet paper jumped to \$25 per roll, would you still use it or would you switch to something else?” Have the students stand up and walk to one side of the room if they would still use toilet paper and to the other side of the room if they would switch to something else. Discuss. First of all, take the opportunity to review change in quantity demanded versus a change in demand (again). “By changing price, did we have a change in demand or quantity demanded (quantity demanded). If there were a lot of people that didn’t switch to something else explain that this means there was a small change in quantity demanded and that in economics we would call toilet paper an Inelastic item. However, if there were several students that switched then toilet paper may be Elastic.

Have the students return to their seats (after they have told you what some alternatives were☺). Remind students that as price increases the quantity demanded decreases (law of Demand). How much it increases or decreases is based on elasticity. Define elasticity on the board. Elasticity is a measure of the responsiveness to any stimulus. Price elasticity of demand is the response of quantity demanded to a change in price. Take a tennis ball and a baseball. Explain that dropping each ball is like a stimulus. The tennis ball bounces a lot, therefore, is elastic. The baseball bounces a little, therefore, is inelastic. Continue with notes covering Substitutability, Proportion of Income, Luxuries and Necessities, and Time. Use the clock buddy 8 o’clock to put students into groups (set up the clock buddies within the first few days of the semester...they can either be in groups of 2 or 3). Discuss the following

examples in the clock buddy group: Salt, New Cars, Pork Chops, African Vacation, Insulin, Insulin at one of four drugstores in a shopping mall. Write these examples on the board. Students must determine whether these items are elastic or inelastic and tell why for each. Discuss group answers as a class.

Return the students to their seats. Continue giving notes over the Total Revenue Test for price elasticity of demand. Because the relationship between price and quantity demanded is inverse, a total revenue test can be used to determine price elasticity of demand: $\text{Price} \times \text{Quantity} = \text{Total Revenue}$

- a. If total revenue moves in the same direction as price, demand is price inelastic
- b. If total revenue moves in the same direction as quantity or inversely to price, demand is price elastic.
- c. If total revenue remains the same as price increases, the demand is unit elastic.

Practice a few examples while taking notes. Also show the students an easier way to remember the relationship between total revenue and price. Take a rubber band. Tell the students that the top is price and the bottom is total revenue. As you stretch the rubber band vertically highlight that price is going up and total revenue is going down. They are going in *opposite* directions. The rubber band is elastic. As you let go of the rubber band price is going down but total revenue is going up...again, elastic when traveling in opposite directions. Next, use a large paperclip or pencil. Label the top price and the bottom total revenue. Hold the pencil vertically. Note that when moving the pencil up both price and total revenue move up...they travel in the same direction...it is inelastic. When traveling down, both price and total revenue are going down in the same direction, again, inelastic. After the students understand this concept explain that at higher prices with lower quantities products are more elastic and with lower prices but higher quantities products are more inelastic, such as gasoline. Have the students do a quick write for 1 minute describing the illustration (write in their notes...this could be in the summary section of the Cornell note taking format).

****Homework:** Assign Activity 22 and read McConnell chapter 20 pp. 374, 378-381.

Day 7: Discuss Activity 22 “Elasticity of Demand and Changes in Total Revenue”.

Place students in groups by Clock Buddies (9 o'clock). Have them W.R.A.P. Whisper Read Alternating Paragraphs. Each student will take a turn reading in a whisper to the other member(s). This gives them some time to read during class. This also helps students that are still acquiring the language to practice reading out loud and to hear others read for them as they follow along. It is also less intrusive and more comfortable than reading in front of the entire class. They are to read pp. 382-383 (Bumper Crops, Excise Taxes, Illegal Drugs, and Minimum Wage). After each section, they are to write a summary of 2-3 sentences of what happened and the result.

Keep them in these same groups. Briefly discuss their summaries as a class. Introduce the second Essential Question, “Is it fair to manipulate the prices of essential items (lumber, water, food, gas) in times of need/disaster such as hurricanes, war, recessions, budget deficits, etc.?” Have students write the question down. Have each student take 2 minutes to write a response to this question on the same paper as their summaries from the readings. Discuss within the groups.

Then have the groups work on more examples found in Activity 23, “Applying Elasticity to the Real World”.

Remind students that they will need to take into account elasticities when doing their final project.

Day 8: Notes on calculating elasticity coefficients, cross elasticity, and income elasticity. Do #1 of Activity 24 together in class. Discuss and then continue with notes of elasticity of supply. Complete #2 of Activity 24, discuss. Continue with notes on income elasticity. Be sure to define and explain normal goods and inferior goods. Have the students create a Frayer Model of each term (4 boxes with word in the middle, definition, example, picture, and definition in own words). Work problem #3 and discuss.

****Homework:** Read McConnell pp. 375-378, 383-386

Day 9: Begin by completing the backside of the “Note Sheet: Supply and Demand” that has the two columns. This will review elasticities and allow for an introduction into equilibrium and disequilibrium including price ceilings and price floors.

Next, graph a Price Ceiling below the equilibrium on the board (a separate sheet of paper for the students). Discuss

the quantity demanded and quantity supplied. “Which is greater?” “What do we call it when we have more demand than supply?” “What would this look like in the store?” Discuss why this creates a shortage. This of examples. Be sure to emphasize that the lower price is an incentive for buyers to buy more. Ask, “If people want to buy more of the product than sellers want to produce, who will get the product.” This should lead to a discussion on price ceilings’ effects, such as the development of black markets. Students may become confused that the price ceiling is below the equilibrium. This may seem counterintuitive. Explain that the ceiling prevents the price from going any higher. It prevents the price from reaching its natural equilibrium. If the price ceiling were above the equilibrium, what type of effect would it have then (none)? Also ask the students about why a government official might want to promote and implement a price ceiling. Use the example of milk prices in NYC. Be sure to get the students to make the conceptual jump to the problems inherent in price ceilings. For example, “who would produce items if they were all free?”

Graph a Price Floor above equilibrium. Discuss the quantity demanded and quantity supplied. “Which is greater?” “What do we call it when we have more supply than demand?” “What would this look like in the store?” Discuss why this is called a surplus. Label the surplus on the graph. Be sure to emphasize that the higher price provides an incentive to producers to make more stuff. Ask, “What will probably happen to the surplus?” Most likely, the government will end of buying the surplus.

Assign activity 25 to work on in class. This should take about 5 minutes.

**Homework: read pp. 386-390

Day 10: Assign Activities 26 “Rent Controls and Affordable Housing” in groups using clock buddies. Discuss answers. Be sure to highlight the importance of understanding policy decisions in regards to the final project and the second essential question, “Is it fair...”

**Homework: Assign Activity 27, “The Minimum Wage and Unemployment”. These will help in preparing students to use their skills to make and evaluate policy proposals.

Day 11: Discuss Activity 27. Ask, “Do you want a minimum wage?” “What is good, bad about minimum wage?” “What is the root problem that is the purpose of the minimum wage?” “What would you suggest as a solution to fixing this problem?” Again, it is important to have the students individually evaluate the pros and cons of policies. Be sure to tell the students that evaluating policies will aid them in designing their own policy for the final assessment. Answers to all of these questions could be written down or discussed in an open forum using the four corners of the room. One corner would be “Completely Get Rid of the Minimum Wage”, another corner would be “Keep the minimum and even raise it higher”, another corner would be “mostly agree with having a living wage”, and the last corner would say “mostly disagree with having the living wage. Have the students choose which corner they would go to prior to getting up. It is helpful to have them write down which corner they would go to and why (2 minute write). Once in the corners, have the students talk with the other members that are in their corner to come up with a succinct argument that they all agree with. Then the corners will choose one or two spokespeople to share their argument. Next, roll a die to determine which corner will go first. Then alternate with the “opposite” corner. After all groups have shared their argument, provide an opportunity to rebuttal any claims. After all rebuttals have taken place (this may need to be cutoff after a few minutes), allow any students to switch sides. Ask the students that switched why they did so (with no more rebuttals). Return the students to their seats. Provide another minute for the students to write down a response to their original choice whether they agree or not with their initial choice.

Introduce Activity 28, “Farm Price Supports”. Work together with the students as a form of modified notes. This should take the rest of the period. The purpose of this Activity is to get students to apply the supply and demand model to a policy problem and to develop their ability to interpret graphs with specific numerical scales in order to evaluate the results of different policy proposals under different conditions of demand elasticity. Again, this will give the students the skills necessary to evaluate and design their own policy for the final assessment.

Day 12: Explain the performance assessment policy project and rubric. Put the students into groups for the project. Reintroduce the essential question, “Is it fair to manipulate the prices of essential items (lumber, water, food, gas) in times of need/disaster such as hurricanes, war, recessions, budget deficits, etc.?” Each group will analyze the scenario from a different perspective. They will randomly draw a perspective from a hat from the following list: Pharmaceutical Company lobbyist, small acreage farmer, single mother of 3 kids, U.S. Senator, Red Cross, Billionaire investor from Omaha, NE, small business owner. As the groups work to provide a solution tell them to

be sure to consider elasticities, determinants of demand and supply, and the effect(s) on demand and/or supply. Also consider the effect of the change in demand and/or supply would have on prices and quantities. Then it is the groups' job to teach the class their solution. Every person must have a speaking position.

Every person must have a designated role:

- **Facilitator** -- makes sure discussions are moderated, keeps the group in good spirits, motivator, could surprise group with candy at one of the meetings type of thing
- **Main Spokesperson** -- when presenting to the class they do the majority of the speaking even though everyone has to have a speaking part...they could act as the narrator and transitional presenter
- **Resource Gatherer** -- this person organizes any materials needed, he/she keeps track of the materials between meetings with the group, this person also is the only person in the group allowed to ask the teacher questions at any point in time during this project
- **Recorder** -- this person takes notes during group meetings (but is not the sole person to be taking notes just the "official note-taker") and would be the person to type the final copy of the proposal (while the other members are present)
- **Illustrator** -- this person is responsible for drawing any graphs or other pictures to help explain the group's proposal...this can be completed by hand or computer

Even though each member will have a designated role, they are all responsible for the final product of the project. Just because a person is the Resource Gatherer, for instance, does not mean they should not help in the discussion or even aid the Illustrator. Keep in mind this is a group project, and it will require the active input from all members to make it a successful project. If one member takes the bulk of the work it will become obvious and the group will suffer points for this. In addition to the obvious downfalls of having one person do the bulk of the work each person will be filling out a self-reflection assessment as well as an assessment of each member's performance. This will have a great affect on your individual grade.

Grading: Students will be graded on an individual basis as well as a group basis resulting in two grades recorded (individual and group). Both grades will be considered major (exam weighted) grades. All the facets of the grading are explained in the corresponding rubric but will include the following: **Presentation Style, Economic Rationale, Illustrations, Group Participation, and Written Proposal.**

The class is also acting as a decision-making body that is listening to each proposal much like a city council or school board at a town hall meeting. The class is to decide on the best presented proposal based on presentation skills and anticipated effectiveness of proposal. The class cannot vote for itself. They will vote on "ballots" with their name on it to ensure effectiveness. The winning proposal will receive an additional 10 points.

Presentation due on Day 14. They get two class periods to complete (some of the work must be completed outside of the classroom). The written proposal is due on Day 15.

Day 13: Continue working on the project. Presentation due tomorrow. Written proposal is due the following day (Day 15)

Day 14: Present

Day 15: Review for standardized unit test. Give notes over major concepts. Have students come prepared to ask any questions they might have. Practice sample questions. Even though we are reviewing in class, the students should continue to work in groups outside of class to finish their projects.

Day 16: Unit Test

Supply and Demand Policy Proposal Grading Rubric

	Exceeding Expectations A+ to A (95 or higher) 20-19 points	Meeting Expectations A- to B (94-85) 18-17 points	Below Expectations B- to C (84-75) 16.8-15 points	Incomplete C- or less (74-0) 14.8 - 0 points	Total Points
Presentation Style (20 points) Each criterion worth 3.33 in this section only	<ul style="list-style-type: none"> - Everyone has a speaking part - presentation is 5-7 minutes - presentation parts were well organized and in a developed order with a resounding conclusion - all presenters were clear and audible - presentation had good pace - all answered questions 	<ul style="list-style-type: none"> - Everyone has a speaking part - presentation was either a minute over or a minute under - presentation was organized but no resounding conclusion - most of the presenters were clear and audible - presentation pace was moderate - not all members were able to answer questions 	<ul style="list-style-type: none"> - Everyone has a speaking part - presentation was more than a minute over/under - presentation felt like it jumped around - some presenters were unclear or hard to hear - pace was uncomfortable - only one member could answer a question or none at all 	<ul style="list-style-type: none"> - Not everyone had a speaking part - Presentation was only a couple of minutes - Presentation had no order - Most presenters were unclear or hard to hear - There was no pace - No one could answer questions 	
Economic Rationale (20 points)	Economic Rationale was clear and accurate and well explained, contained rationale for more than two other perspectives	Economic Rationale was mostly clear with only 1 or 2 inaccuracies, contained rationale for two other perspectives	Economic Rationale was mostly unclear with more than 2 inaccuracies, contained only one other perspective	Economic Rationale was very unclear and had numerous inaccuracies, contained no other perspective	
Illustrations (20 points)	Had 2 or more accurate and easy to read illustrations, more than 1 was a graph	Had 2 illustrations, mostly accurate with 1-2 errors at most, one was a graph	Had only 1 illustration or both illustrations were not graphs, or if the graph was inaccurate	Had no illustrations	
Group Participation (20 points)	All group members had a role, all members went beyond their role to help the group, members supported each other, compromised	All group members performed their role, members supported each other	Most group members performed their roles, but 1-2 members didn't perform their duties	Most group members didn't perform their roles, groups did not work together, many arguments, no compromises	
Written Proposal (20 points)	Typed, 12 point font, double spaced, margins set at 1", includes illustrations (these can be hand drawn), at least 2 pages in length	Typed, 12 point font, double spaced, margins set at 1", includes illustrations (these can be hand drawn), at least 2 pages in length	Typed, 12 point font, double spaced, margins set at 1", includes illustrations (these can be hand drawn), at least 2 pages in length	Any of the formatting adjusted from prescribed settings will result in an incomplete	
Total Points					

Policy Proposal: Crisis in Corn

Is it fair to manipulate the prices of essential items (lumber, water, food, gas) in times of need/disaster such as hurricanes, war, recessions, budget deficits, etc.? We've talked about this question several times throughout this unit on supply and demand. We've discussed in depth the benefits of using the market system to allocate resources. But this is for scenarios where our world seems to be in balance, constantly working to find the best use of all resources. What if our world tips out of balance due to unforeseen circumstances? What if there is an impending disaster if nothing is changed. Serious repercussions will follow if no action is taken.

Scenario: The world seems to be cruising along with no real qualms. Rich and poor alike seem to be getting along. In fact, there is a growing middle class. Everyone, rich and poor, feel like they have a fair opportunity to succeed. There are no wars. People trade freely. Religions respect one another. Politicians are genuinely concerned about making sure the interests of the people are always of utmost priority. New technologies and inventions are happening everyday that seem to only improve everyone's lifestyle and health.

One of these new companies invents a way to cross-pollinate corn with a cactus. This company claims and proves that corn can now grow in the dessert with almost no water but still have the same production. They say it will transform the world! And it does. Corn now grows uncontrollably in all of the deserts of the world. At first this seemed to be a welcomed transformation of the world's arid and previously "barren" landscapes. However, because the hybrid corn could grow in such harsh climates it soon began to grow in fields where wheat, rice and beans previously grew. The corn was so resistant to harsh conditions that it became almost removable as it spread. With the exception of a few small farms throughout the United States where the hybrid corn won't grow, wheat and rice is still produced. Other than these small farms no other "grain" type products exist.

Here are a few side effects of the new hybrid corn. Some research indicates that it may be addictive or at least habitual once made a part of your diet. This research suggests that the corn may cause some cancers but it is debatable. Some other researchers suggest that the corn actually prevents heart disease and reduces bad cholesterol. Environmentalists have been clamoring about the lost habitats of the deserts. Because the corn is so easy to grow, we do not have enough labor to harvest it all so illegal immigrants are used instead. Still, since not all of the hybrid corn can be harvested, it continues to spread into unwanted areas like national forests and other wildlife preserves. The few small farmers of wheat and rice have constantly complained about the unfair advantage of competing against so much surplus of hybrid corn. In the meantime, the small farms are often raided for their "unique" products of wheat and rice.

Each group will have the following roles.

Every person must have a designated role:

- **Facilitator** -- makes sure discussions are moderated, keeps the group in good spirits, motivator, could surprise group with candy at one of the meetings type of thing
- **Main Spokesperson** -- when presenting to the class they do the majority of the speaking even though everyone has to have a speaking part...they could act as the narrator and transitional presenter
- **Resource Gatherer** -- this person organizes any materials needed, he/she keeps track of the materials between meetings with the group, this person also is the only person in the group allowed to ask the teacher questions at any point in time during this project
- **Recorder** -- this person takes notes during group meetings (but is not the sole person to be taking notes just the "official note-taker") and would be the person to type the final copy of the proposal (while the other members are present)
- **Illustrator** -- this person is responsible for drawing any graphs or other pictures to help explain the group's proposal...this can be completed by hand or computer

Policy Proposal: Crisis in Corn (continued)

Each group will analyze this scenario from a different perspective. Each group will send up their Resource Gatherer to draw a perspective from a hat from the following list: **Chemical Fertilizer Company lobbyist, small acreage farmer of wheat and rice, single mother of 3 kids, U.S. Senator from Arizona, Red Cross, Billionaire investor from Omaha, NE, small grocery store owner, environmentalist, scientist with research supporting that hybrid corn causes cancer, Pharmaceutical company that claims to have a cure.**

- (1) The group's goal will be to offer a solution to this Corn Crisis taking into account their assigned perspective.
- (2) Next, be sure to include the economic rationale if your policy is followed. Be sure to consider elasticities, determinants of demand and supply, and the effect(s) on demand and/or supply. Your economic rationale does not have to solve everyone's problems, just that of the chosen perspective. It is your job to accurately explain what would happen to supply and demand if your proposal is followed. This does not have to be a positive outcome for everyone. The economic rationale should be explained for at least 2 other perspectives as well.
- (3) Predict what will happen to the world in the future if their policy is adopted and if it isn't.
- (4) Provide an economic solution that allocates resources efficiently. Explain in written form and in graphs. Is this fair? Explain completely.