ACTIVITY 4 – The More the Merrier

Introduction

The friendly invitation, “the more, the merrier,” may not have originated to describe market competition, but it certainly applies. The happy outcome of open, competitive markets is increased supply at lower prices. In general, markets characterized by ease of entry and relatively large numbers of sellers whose products readily substitute for one another are more competitive than markets with significant barriers to entry, relatively few sellers, and/or unique products with few substitutes. Thus, opening markets to competition by removing barriers to entry also opens the door to improved well-being for the poor.

This student activity simulates a transition from a closed, controlled, relatively non-competitive market to one that is open and highly competitive. Students experience the reality that opening markets to the entry and exit of sellers increases output and reduces prices in a process that makes possible higher standards of living for both buyers and sellers.

Materials

- Activity 4 Slide Deck - https://docs.google.com/presentation/d/1H5ZLOw2ymzAmU8eIkZEBs47Vsk7isasWND8b3zG-DNs/edit?usp=sharing
- Several (6-8) boxes of regular-size, identical paper clips
- Prototype paper clip bracelet made with 6 paper clips, fastened together chain style, connected into a circle
- Large bag of small pieces of candy – as many as 10 per student
- Half sheets of paper in 3 different colors (Ok to use scrap paper, if one side is blank.)
- Prepare approximately 4 sheets per student′ approximately ¾ color A, 3/16 color B, 1/16 color c. For example, for a class of 25 students prepare 72 sheets of color A, 20 sheets of color B, and 8 sheets of color C. Color A will become the 1 Classroom Buck notes, color B will be the 5 Classroom Buck notes, and color C will be the 10 Classroom Buck notes.
- 2 copies of Handout 5 cut apart to make 16 pieces of 1-Classroom Buck currency for bank and for sellers to use as change (See page 17 for master.)
- Handouts:

- Visual/Handout 2: Producer / Seller role description – 8-10 copies (page 12, may be laminated for future use)
- Visual/Handout 4: “Transaction Record” – 1 per student (pages 14-15)
- Visuals (or use Activity 4 Slide Deck):
    - Visual 1: Scenario (page 11)
    - Visual/Handout 2: Producer/Seller role description (page 12)
    - Visual/Handout 3: Worker / Buyer role description (page 13)
    - Visual/Handout 4: Transaction Record (page 14)
    - Visual 5: Currency Samples (page 16)
    - Visual 6: Market Record (page 18)

Key Terms

Competition	The effort of two or more individuals or organizations to get the business of others by offering the best deal. Consumers compete with other consumers for goods and services. Producers compete with other producers for sales to consumers.
Demand	The quantity of a good or service that consumers are willing and able to buy at given prices during a period of time.
Markets	Places, institutions or technological arrangements where or by means of which goods or services are exchanged.
Price	The amount people pay when buying a good or service.
Supply	The quantity of a good or service that producers are willing and able to sell at given prices during a period of time.
Standard of Living	The level of subsistence of a nation, social class or individual with reference to the adequacy of necessities and comforts of daily life.

Objectives

Students will be able to:
- Explain the relationship between increased competition and prices.
- Compare and contrast the conditions of open markets vs closed markets.
- Predict the impact opening markets would have on standards of living.

Time Required

- 50 minutes

Voluntary National Content Standards

CONTENT STANDARD 4: Incentives

People usually respond predictably to positive and negative incentives.

- Benchmark 1: Acting as consumers, producers, workers, savers, investors, and citizens, people respond to incentives in order to allocate their scarce resources in ways that provide them the highest possible net benefits.

CONTENT STANDARD 7: Markets and Prices

A market exists when buyers and sellers interact. This interaction determines market prices and thereby allocates scarce goods and services.

CONTENT STANDARD 9: Competition and Market Structure

Competition among sellers usually lowers costs and prices, and encourages producers to produce what consumers are willing and able to buy. Competition among buyers increases prices and allocates goods and services to those people who are willing and able to pay the most for them.

- Benchmark 1: The pursuit of self-interest in competitive markets usually leads to choices and behavior that also promote the national level of well-being.
- Benchmark 2: The level of competition in an industry is affected by the ease with which new producers can enter the industry, and by consumers' information about the availability, price and quantity of substitute goods and services.

Preparation

- Room set up – Arrange large furniture so that the room can be easily divided into a "buyer area" and a "seller area" at the beginning of the activity. (The size of these areas will change throughout the activity as students change their roles.) Leave an open space in the middle of the room for the market.
- "Hiring" an assistant – Using a teacher's aide or student assistant to distribute materials during the activity is advantageous. The aide can distribute currency blanks and bracelet supplies while you are giving instructions and or conducting discussions after each round, resulting in less unstructured time for students.

Procedures

1. Put a large pile of candy on your desk and tell students that each person's performance in the upcoming activity will determine how much candy he/she can buy at the end of the period. (If students ask the price of the candy, tell them it will be determined "by the market" or "at the end of the activity.") Pose the following discussion questions and record students' answers on the board, a flip chart, or overhead transparency. These "hypotheses" will be revisited in the debriefing discussion after the activity.
    a. Does market competition hurt the poor? (Divide the chart into 2 columns, headed "NO" and "YES." Record student responses — reasons, explanations, examples — in the appropriate columns.)
    b. Which are better for the poor: open, highly competitive markets or relatively closed markets in which the government controls the degree of competition? (Divide the chart into 2 columns, headed "OPEN" and "CLOSED." Record student responses in the appropriate columns.)
2. Display the "**Scenario**" visual and read the description so that students understand the conditions being simulated in the activity.
3. Give **Producer/Seller role descriptions** to 2 students. (Add or subtract 1 producer/seller for class sizes above 30 or below about 20.) Move the 2 sellers to the "seller area" and move the rest of the students to the "buyer area." Instruct students to leave an open area between.
4. Display the visual of the **Seller/Producer role description** so that all students understand the role of the 2 producers/sellers. Demonstrate how the bracelet is made and give a prototype to the 2 sellers to examine. (Do not hand out production materials yet.) Remind the producers/sellers that their goal in the activity is to get as many classroom bucks as they can.
5. Explain that the rest of the students will be workers in the government's new currency production facility. Display the visual and/or read aloud from the **Worker/Buyer role description** so that all students (including the 2 sellers) understand the role of the workers/buyers. Remind the workers/buyers that their goal in the activity is to get as many bracelets as they can.
    a. Mention, but don't belabor, the importance of making currency carefully. Explain that as the banker, you will determine whether or not currency is acceptable. Make sure that sellers understand that they may ask you to determine whether currency is valid or "counterfeit." If sellers accept faulty currency, they risk not being able to turn it in for candy at the end of the activity. This is simply a class management tool that allows you to keep all "workers" occupied throughout the production sessions.

6. Distribute a **Transaction Record** handout to each student and display the corresponding visual. Instruct students to circle their roles at the beginning of each round. Explain that there will be several timed rounds of the game and that they will record their gains at the end of each round. At the end of the game, they may use their Transaction Records to purchase candy.
    a. Bracelet producers/sellers must have classroom bucks to purchase candy.
    b. Workers/buyers must have bracelets to purchase candy.
7. Answer any questions students have about the procedures of the game. Instruct students that they must stay in their assigned roles. (If students question this or object, you may also announce that in later rounds, you may offer opportunities to change roles.)
8. Caution students not to begin work until you start the time for the production session. Distribute the half-sheets of paper so that the 3 colors are distributed (approximately) in the following ratio: 3/4 color A; 3/16 color B; 1/16 color C. (For a class of 25 students, give 18 color A, 5 color B, 2 color C.) Announce that students will be using the paper to make 1, 5, or 10 classroom bucks, and designate the paper color (color A = 1 buck, color B = 5 bucks, and color C = 1 buck) for each denomination. Give a box of paper clips to each seller. Display the currency designs..
9. **<u>Round 1:</u>** Open a 5-minute production/work period. Warn students when there are 30 seconds remaining.
10. End the production session. Quickly remind students that during the market session sellers may offer their bracelets for sale at any price and may even sell at different prices to different buyers. Buyers may offer and/or agree to purchase at any price using the currency pieces they produced.
    a. Explain that you will act as a bank for those needing change for 5s and 10s.
    b. Remind sellers to be on the lookout for "fake" currency and that you will be available to judge whether a particular piece of currency will be accepted by the bank.
    c. Remind both buyers and sellers to record transactions on their "Transaction Record" handouts.
    d. Explain to buyers that any money not spent on bracelets will be collected at the end of the market period. We will assume that any money not spent on bracelets was spent on something else.
11. Announce the opening of a 3-minute market session.
12. End the market session after 3 minutes (or earlier if all the bracelets have been purchased). Instruct students to complete their transaction records for the round.
    a. While they are doing so, circulate through the room, picking up all the currency from round 1.

b. Teacher Note: Anticipate a variety of unscripted occurrences. For example, a group of students may ask whether they can work together to produce currency. The answer should depend on your judgment based on classroom management rather than on the demands of the activity. Similarly, if students try to resell bracelets, decide if you will allow it based on whether it is disruptive. If an occurrence is likely to happen in real markets, let it happen in the activity, unless you believe that it gets students off-task or changes their goals in participating in the activity. The one exception is that students may not change roles except as provided for in later rounds of the game. Do not, for example, allow students to "quit" their jobs at the currency factory and go to work for one of the bracelet producers. This results in too many bracelets and too little money, vastly complicating the debriefing.

13. Collect classroom bucks (or ask your assistant to do so) from the sellers as deposits to their bank accounts. Collect the purchased bracelets from the buyers for safekeeping. This classroom management strategy prevents thefts and eliminates the development of a secondary market. Also collect the worker/buyers' remaining bucks. (Remind students that they spent the money on other things when they couldn't purchase bracelets. This step keeps the money supply stable from round to round, so that subsequent price changes reflect changes in supply.)
14. Display the **Market Record** visual or recreate the chart on the board to fill-in. Ask the sellers to report. (If sellers had trouble keeping accurate records because they were so busy, you may also collect this information by having buyers report their purchase prices.) Record the number of bracelets produced at the various prices. Draw students' attention to the range of prices and the numbers produced and sold.
    a. Discussion questions:
        i. Workers/Buyers: Did everyone who wanted a bracelet purchase one? (No) Why not? (Answers will include both that not enough bracelets were produced and that some workers didn't have enough money.)
        ii. Who was able to purchase a bracelet and who was not? (Students who made $10 classroom bucks will have more bracelets than students who made $1 bucks.)

    iii. Producers/Sellers: Were you able to make as much money as you wanted to? Why did the two of you end up with different amounts of bucks? *(Answers should include: the different skills of the two bracelet producers: the fact that not everyone would pay as high a price as the seller was asking; and that sellers may have had different asking prices, because they didn't know what consumers would pay. It may also be the case that producers/sellers were placed far enough apart in the room that they couldn't easily get information about their competitors' prices.)*

15. If you played the first round as practice, have students cross out that round on their transaction sheets. Then, play round 1, using the same set up and directions as the practice round.
    a. If students are not used to simulations or if you have a large class or students of very diverse abilities, there is much to be gained by playing a practice round. For teachers with shorter class periods (45 min.), this is also an excellent way to prepare students on one day and run the full activity and debriefing on the following day.
    b. Check to make sure students have crossed through the practice round on their record sheets. Also be sure to collect all bucks from both buyers and sellers, and to collect or take apart all bracelets.
16. After completing and discussing round 1, announce that there will be at least 2 more rounds of the game and that AFTER the next round, workers/buyers who choose to do so may become producers/sellers by purchasing a production "license" from the teacher for 4 classroom bucks or borrowing 5 classroom bucks from the bank. (Loans must be repaid before candy can be purchased at the end of the game.)
17. **<u>Round 2</u>**. Distribute 1 more half-sheet of colored paper to each worker/buyer. (Remind workers that their currency denomination assignments will remain the same throughout the game.) Replenish the producers/sellers' paper clips if necessary. (Producers should not be limited by not having enough paper clips. This is not an activity about resource constraints.) Conduct a 5-minute production/work period, followed by a market period. Remind students to record all transactions during the market period.
18. Display the **Market Record** visual. Ask the sellers to report. Record the number of bracelets produced, and the price of each bracelet sold. Draw students' attention to the range of prices and the numbers produced and sold, and to the differences/similarities between rounds 1 and 2.
    a. Discussion Questions:

i. Workers/Buyers: Did everyone who wanted a bracelet purchase one? *(No)* Were you more satisfied with the bracelet sale than in the first round? *(Probably not – the conditions have not changed.)* Why not? *(Answers will include both that not enough bracelets were produced and that workers didn't have enough money to pay the price. Also, there may be some complaints that the "rich" people are taking all the bracelets, and the "poor" people don't have a chance to get any.)*
ii. Who was able to purchase a bracelet and who was not? (Students who made $10 classroom bucks will have more bracelets than students who made $1 bucks.)
iii. Producers/Sellers: Were you able to make as much money as you wanted to? (No. Producers/sellers would have liked to charge a higher price and/or produce more.) Was round 2 different from round 1? If so, how? (Sellers may comment that they got better at making bracelets because they had more experience. They may also comment that the buyers knew more about the market and that may have affected the speed of transactions and/or the price.)

19. **Round 3**: Before beginning round 3, announce that more resources have become available and offer the opportunity for workers/ buyers to become producers/sellers for 4 Bucks cash, or 5 Bucks loan (which must be repaid at the end of the activity). *(**Note**: Limit the number of additional sellers to 3-5, depending on the number of students in the class, or you won't have enough buyers in the market session. Do not announce the number of seller licenses available, just open a line. When you have enough sellers, close the line by saying that there are no more resources available.)*
    a. Use a marker to write "seller" on students' transaction records next to Round 3.
    b. Collect 4 Bucks or write "5 Buck loan" on transaction records. Collect bracelets and any unspent currency from the new producers. (The number of bracelets each student purchased will already be recorded on his/her transaction record. Use the marker to circle the number.) Tell students they will be given credit for the bracelets at the end of the game, but you are picking them up because they can sell only bracelets they produce.
    c. Direct students to move into the producer/seller area and give them paper clips.
    d. Collect bracelets and unspent currency from remaining workers/buyers and collect money (bank deposits) from sales by producers/sellers before starting the next round.

20. Announce that some workers/buyers will be working overtime. Distribute 2 half-sheets of paper to some of the workers/buyers. (The purpose of "overtime" is to keep the money supply relatively stable. For example, if you added 3 producers, two former 1-Buck workers and one a former 5-Buck worker, give an extra sheet of paper to 2 of the remaining 1-Buck workers and 1 of the remaining 5 –Buck workers, or to 7 1-buck workers. Distribute only 1 half-sheet to each remaining $5 or $10 worker.
21. Conduct the 3rd production period and then the 3rd market period, reminding students to record all transactions.
22. Tally the results of round 3 on the Market Record visual.
23. (Optional) Conduct round 4 if time permits or debrief after round 3. Announce that licenses are still available and that sellers have the option of quitting their businesses and becoming worker/buyers. (If bracelet prices dropped enough, some sellers will decide that they would be better off as workers. If only a few take this option, make them 5-Buck workers. If more than a few, designate some 1-Buck workers.)

DEBRIEFING

- Direct students' attention to the Market Record visual. What happened to the production level and price of bracelets over the activity? (Price and quantity remained relatively stable in rounds 1 and 2. In round 3, prices fell, and the quantity supplied increased. Note: If you did not play a practice round, you may see differences in rounds 1 and 2 that are attributable to students figuring out their roles and/or gaining more information about the market. If you played a 4th round, the decline in price and increase in quantity should be even more noticeable.)
- Why were prices lower in the 3rd round? More bracelets were supplied, and the price was lower because there were more producers who were competing with one another for the buyers' money. Since the bracelets were all the same, the way sellers attracted buyers was to offer a lower price.
- Why were there more bracelets produced and sold in the 3rd round? There were more producers, and the price of bracelets was lower.
- (To the original 2 sellers) How did your income in the 3rd round compare to your income in the 1st and 2nd round? Why? It is likely that their income was lower in round 3 because they had to lower prices to compete with other producers/sellers. However, some sellers may have experienced an increase in income by selling more bracelets than they sold in earlier rounds.

- (To the new sellers) Did you benefit by becoming a producer/seller instead of a worker/buyer? Why? Answers will vary. Some will have improved their situation by becoming sellers, but others may contend that they would have ended up able to buy more candy if they had remained workers/buyers. Point out that while the economy as a whole benefited from greater production and lower prices, the opportunity to enter the market entails risk for an individual and does not guarantee that he or she will be better off.
- (To workers) Why did you choose to remain workers/buyers instead of becoming sellers in the 3rd round? Answers will vary. Some students may not have wanted the risk of becoming sellers. Others may have believed that they would make more money (and get more candy) by remaining workers/buyers.
- Were you better or worse off in the 3rd round than you were in the 1st and 2nd rounds? Why? It is likely that most of the students will say they were better off in the 3rd round. With the lower price of bracelets, more bracelets available, more income for workers, and more purchases of bracelets, many students were able to earn more candy in round 3 than they were in earlier rounds.
- Which group of workers benefited most from opening the market to more competition in the 3rd round? You may wish to take a count, asking how many $1 workers, $5 workers, and $10 workers felt they were better off in the 3rd round. The lower prices and greater availability made the biggest difference for the poorest workers/buyers - both those who remained workers/buyers and those who chose to become producers/sellers.
- Rounds 1 and 2 simulated what is known as a “closed” market. What are the conditions of closed markets? Few sellers – sometimes only one, low level of competition, low level of production, high price.
- What countries in the modern world or in recent history have market conditions similar to those we simulated in rounds 1 and 2? Accept a variety of answers. Students may propose any of today’s communist nations, nations in which markets are severely restricted, etc. They may also point to historical examples like the Soviet Union, India under the caste system, South Africa under apartheid, etc.
- What happened to the level of competition in the market from round 2 to round 3 (and if you ran round 4, from round 3 to round 4), and why? The level of competition increased as additional sellers entered the market.
- Given your experience in the bracelet market, what would you predict would happen to the prices and availability of products if a nation restricted entry into markets? Fewer products would be available at higher prices.

- It's easy to think of examples in which communist or dictatorial governments close markets, sometimes to the extent of allowing only 1 producer/seller: the state. However, markets are not either "open" or "closed." Instead, there are degrees of openness, and even very open, highly developed economies may close particular markets to some extent by restricting the entry of new producers/sellers. For example, import tariffs close markets by making it harder for foreign producers/sellers to enter. What other kinds of regulations within a market economy close markets to a greater or lesser extent? Licensing regulations for doctors, teachers, barbers, lawyers, etc.; taxi-cab medallion requirements in NY city; and permit requirements etc. are some examples. Help students to see that even within market economies we have various levels of open and closed markets, and the more open the market, the lower the prices and the more available goods are to people at lower income levels.
- Direct students' attention to the flip chart "hypotheses" recorded in the discussion before the simulation.
- Which hypotheses are supported by the bracelet simulation?
- Which hypotheses are challenged by the bracelet simulation?
- The bracelet activity shows that opening markets to competition makes more goods and services available at lower prices. As such, it challenges those hypotheses that suggest the poor are exploited or further impoverished by opening markets to greater competition.
- Given your experience in the bracelet market, would it be better to be a poor person in a country with open markets or in a country with closed markets? Why? Although the $10 workers may have found no advantage to opening the market in round 3, the $1 workers clearly benefited from the freedom of new sellers to enter the market. More bracelets were produced, and the sellers had to compete for sales by lowering their prices. Additionally, workers/producers may comment that they had the opportunity to try to change their condition by becoming producers/sellers - something they couldn't do in round 1.

Assessment

Given your experience in the bracelet market, what would you predict would happen if a country with closed markets and government sellers were to allow additional sellers to enter the market? Standards of living would rise, and poverty would be reduced.

Visual 1

Scenario

- You live in a small country in which the repressive military dictator was recently overthrown. The new government promises to improve standards of living by an aggressive program of industrialization.
- To make good on these promises, the government has taken the following steps:
- The property of wealthy (and often corrupt) merchants has been confiscated and many have been jailed or exiled
- All non-licensed stores and production facilities have been closed
- A new loan for industrialization has been negotiated with the IMF (International Monetary Fund) and several new factories have recently come online
- The severely inflated currency of the country has been declared worthless and citizens may trade in their money for replacement currency (in the form of Classroom Bucks)
- To maintain control of marketing practices, only 2 merchants are licensed to operate stores, and it is a crime to operate or buy from an unlicensed store

Visual/Handout 2

Producer/Seller Role Description

In this activity you are a producer/seller of bracelets. You will produce paper clip bracelets and sell them for Classroom Bucks to others in the class. Your goal is to earn as many Bucks as possible. At the end of the activity, you may use the Classroom Bucks from your sale of bracelets to purchase candy.

- The activity will last at least 3 rounds. Each round will be made up of a production period of approximately 5 minutes and a market period of approximately 3 minutes.
- Each bracelet must be made of 6 paper clips, connected to form a complete circle. You may produce bracelets only during the timed production periods. You may sell only the bracelets that you produce.
- You may sell bracelets only during the market period of each round. All sales are cash sales, using Classroom Bucks. You may sell at any price you wish. You may price all bracelets the same or negotiate a selling price for each.
- At the end of a market period, you may keep any unsold bracelets and sell them in subsequent rounds.

Visual/Handout 3

Worker/Buyer Role Description

In this activity you are a worker/buyer. Your job will be to help design and produce classroom currency called Classroom Bucks.

The currency you make during the production sessions will be your wage. You may produce currency only during the timed production periods. You will try to spend your wages during the market sessions to purchase paper clip bracelets.

Your goal is to purchase as many bracelets as you can over the course of the game. We will assume that any money you do not spend on bracelets is spent on other goods and services. At the end of the activity, you may exchange the bracelets you have purchased for candy.

You may purchase bracelets only during the market period of each round. All sales are cash sales using Classroom Bucks. You may buy at any price you can find. You may negotiate with sellers over price.

- **Reminder**: **You may not save currency for future rounds**. At the end of each market session, any currency not used for bracelets will be collected from you, to indicate that you spent it on other things.

Visual/Handout 4

Transaction Record

Producer/Seller

<———— Circle One ————>
Worker/Buyer

Round 1

Price Received

Total Bracelets Sold

Price Paid

Total Bracelets Purchased

Round 2

Price Received

Total Bracelets Sold

Price Paid

Total Bracelets Purchased

Visual/Handout 4 (continued)

Transaction Record

Producer/Seller

<———— Circle One ————>

Worker/Buyer

Round 3

Price Received

Total Bracelets Sold

Price Paid

Total Bracelets Purchased

Round 4

Price Received

Total Bracelets Sold

Price Paid

Total Bracelets Purchased

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Visual/Handout 5

Currency Production Instructions

- Fold and tear the paper carefully and copy the drawing precisely.
- The currency you produce in this portion of your workday becomes your pay, and you must use it to purchase bracelets.
- Sellers do not have to accept currency they believe to be counterfeit unless the banker tells them the currency is valid.

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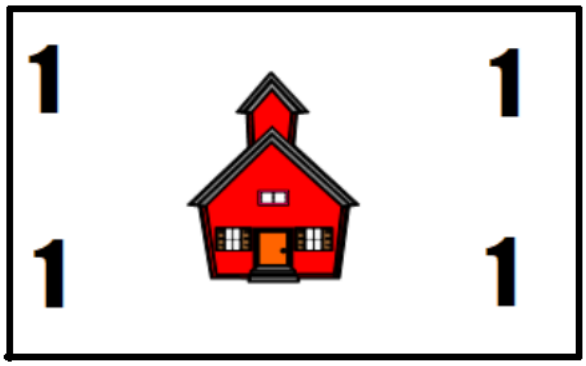
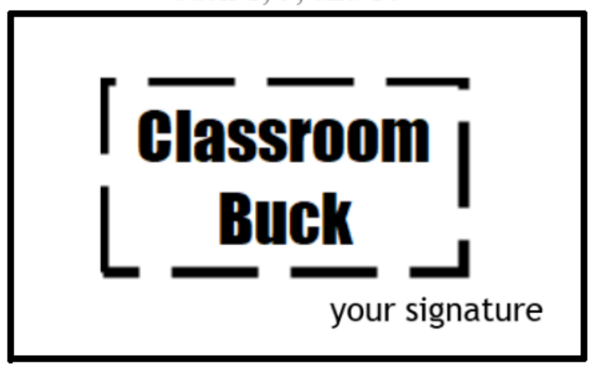
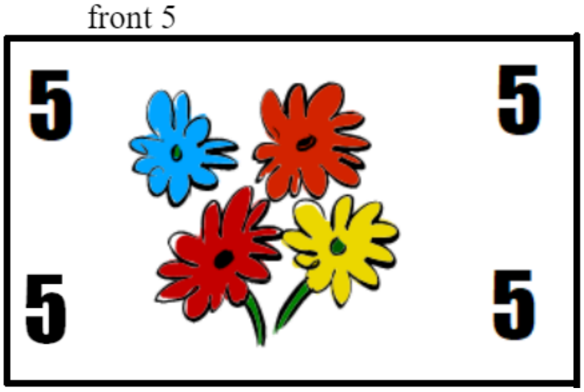


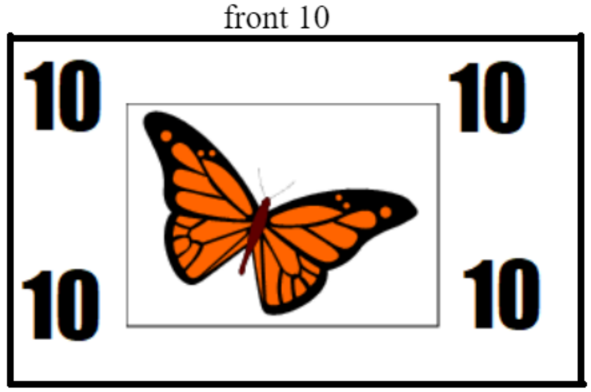
back 1, 5, and 10

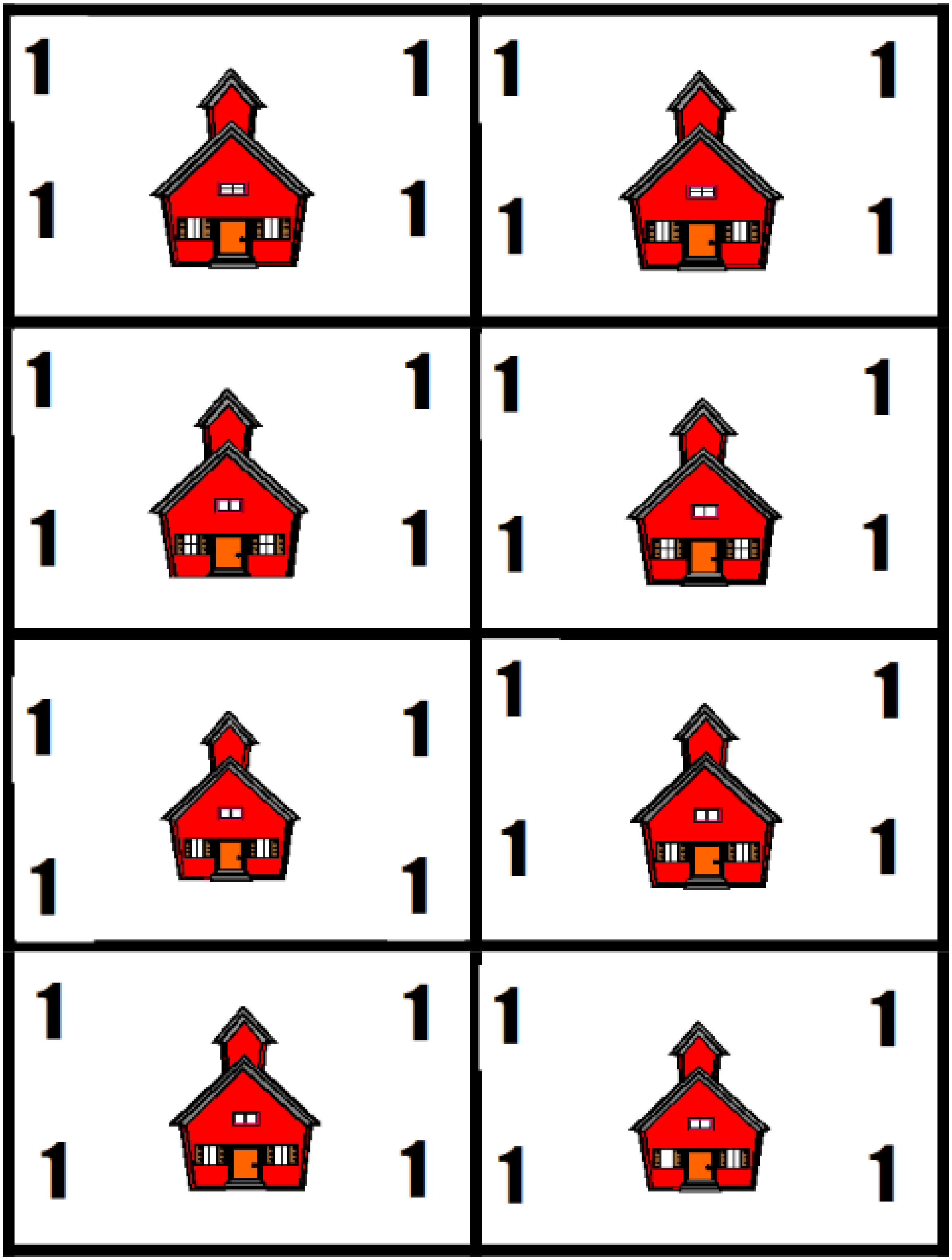


front 5



front 10

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Visual 6

Market Record

ale Price	1	2	3	4	5