Surveying Possible Customers

Day One:

CC 3.MD.3 I can create a survey to determine customers' interest in our plant business.

APK (Activate/Assess Prior Knowledge)

-What were some things you learned when Karin Coto visited and talked about her farm/business? Have students write a few things on their plant journals (which need to be collected for a participation grade.) Give students time to talk with their eye to eye, knee to knee partners. Then call on a few students to share with the whole class.

TIP (Teacher Input)

-Tell students that we will need to survey others to get a better idea of what to sell in our plant business. What is a survey? Why would it be important to get this information from our customers?

-Tell students we will be going to the kindergarten through second grade rooms to gather data. You will be working in groups of 2 or 3 to do this.

-Model how students will need to create a poster to help the younger students understand the main questions and a checklist on notebook paper to record their data. (Would you rather buy seeds or seedlings? Would you rather buy flowers or vegetables?) Students may also write a sentence or two explaining our project so they will know what to say when they go into the classrooms on Tuesday.

-Students will also copy a similar survey to take home to their families so we can gather data from them as well. This survey will need to be brought back on Tuesday so I can use it to model creating the graph.

SAP (Student Active Participation)

-Students work to complete the survey items. While they are working, I will call quiet groups to assign them a survey location for Tuesday.

-We will also need to start collecting containers to plant the seedlings. Students may copy a note about this on the back of the survey they will be taking home. We may also want to include a note if their family members or friends own/run a business and would be interested in coming to talk with our third graders to please let the teachers know.

ISS (Identifying Student Success)

-Review the survey information they will gather from their families. It will need to be returned on Wednesday so we can total the data we have gathered.

-What did you include on the survey? How will this information help us in our plant business?

Day Two

We will need to walk to the kindergarten-second grade classrooms to gather our data.

CC 3.MD.3 I can create a survey to determine customers' interest in our plant business. I can gather data. I can use the data to create a bar graph.

APK (Activate/Assess Prior Knowledge)

-What information will we be learning from the surveys we created? How will this information benefit us as we start to plan for our plant business?

TIP (Teacher Input)

-Taking data and creating graphs often helps you better understand and compare the information. You gathered data from your families and friends at home on the same questions we asked the kindergarten, first, and second grade students. Let's look at the data in two different forms: Would you rather buy seeds or seedlings? Would you rather buy flowers or vegetables?

-I will MODEL gathering data from the students to get a total of how many are interested in buying seeds or seedlings. I will then MODEL how to use the blank bar graph to display my information. I will point out the different areas of the graph: What will I write as a title? What information goes along the bottom of the graph? Along the left side of the graph? What happens if I count by ones and I don't have enough space for the numbers I need on the left side of the graph?

-MODEL again with the question "Would you rather buy flowers or vegetables?"

-Tell students they will work with their group to total their data and create a bar graph for the two questions.

SAP (Student Active Participation)

-Students work to complete the graphs.

ISS (Identifying Student Success)

-Have groups pair up with groups that visited the same grade level. The students may look at the graphs and compare the data. Were the classes similar or different across the grade levels in their wants for the plant business? How did you know? If we have time, students may write their response to this in their math notebooks.

Day Three

CC 3.MD.3 I can read the bar graphs to determine customer interest in our plant business.

APK (Activate/Assess Prior Knowledge)

-We have gathered data from our families and from the kindergarten, first, and second grade students at our school. What were some things you noticed about the data yesterday? Give students time to think and talk with their eye to eye, knee to knee partners. Then call on students to share with the whole class.

TIP (Teacher Input)

-We gathered data from our families and the students in the lower graders. Mrs. Gilbert's class also gather data about their families and the upper grades/preschool. We need to look at all of our data and summarize our findings to share with Mrs. Gilbert's class. Her class will be doing the same thing to share what they learned from their families and the other classes in the school. We will then use the schoolwide data tomorrow to make decisions about what we plan to sell in our plant business.

SAP (Student Active Participation)

-Students will have a basic recording sheet: What we summarized about the kindergarten data? First grade data? Second grade data? Mrs. Park's family and friends data?

-Students will work in pairs to view the graphs and create their summaries of data. I want to leave it open for them to create their own strategies for figuring out the summaries. However, if there are students that are struggling with the task, I will offer them a suggestion to help them organize their summary (First, you may want to look at if more kindergarten students overall wanted seeds or seedlings…..)

-If students finish early with the data summary, they will work on the question: Based on your summary of the data, what would be your recommendations for our plant business? Why?

ISS (Identifying Student Success)

-Gather students back on the carpet. This was a large task. How did you and your partner organize the data to figure out the summary? Did you try more than one strategy to organize the data before you found the best one for your team?

-On large chart paper, I will record our data summary for Mrs. Gilbert's class. What did you find out about the kindergarten data? First grade data? Second grade data? Mrs. Park's friends and family data?

-Looking just at our data, what would be your recommendations for our plant business? Why?

Day Four

CC 3.MD.3 I can read the bar graphs to determine customer interest in our plant business. I can look at the overall data from our class and Mrs. Gilbert's class to create a business plan.

APK (Activate/Assess Prior Knowledge)

-What did we do with our data yesterday? Why is the data we gathered important to the plan for our plant business?

TIP (Teacher Input)

-Share the summary of data we received from Mrs. Gilbert's class. This data will contain information from Mrs. Gilbert's class friends and family and the classes of fourth, fifth, preschool, Ms. Little, and Ms. Query.

-We need to look at our summary of data and Mrs. Gilbert's summary of data to see the trends or patterns we notice.

SAP (Student Active Participation)

-Students will work with a partner to complete a simple sheet that has the questions: "What did you notice about Mrs. Park's data?" "What did you notice about Mrs. Gilbert's data?" "As a whole, do more people want seeds or seedlings? How do you know?" "As a whole, do more people want to plant flowers or vegetables? How do you know?"

- I want to leave it open for them to create their own strategies for figuring out the summaries. However, if there are students that are struggling with the task, I will offer them a suggestion to help them organize their summary (First, you may want to look at if Mrs. Park's data overall wanted seeds or seedlings…..)

-If students finish early with the data summary, they will work on the question: Based on your summary of the data, what would be your recommendations for our plant business? Why?

ISS (Identifying Student Success)

-What did you discover from the data as a whole? How did you figure it out?

-Based on our data, what recommendations would you make for our plant business? Why?

-Today, Mrs. Gilbert and I will meet with Ms. Douglas to get our order ready for seeds. What do we want to do as a class? We can choose to do more than one. Give students time to think, talk with partners, and talk as a group to decide.

-Students plant seeds to start seedling projects.

-The classes will get together to set prices for the plant business. Music teachers work with the students to create advertisement jingles. The art teacher works with the students to paint yogurt cups to create pots for the seedlings. The art teacher may also want to work with the students to create posters to advertise in the classroom. The librarian will work with the classes to do research on the care of the plants, create care cards, and advertisement flyers.

Preparing for Market
Day One—vocabulary review
CC 3.E.1, 3.E.2 I can create definitions for entrepreneur, business plan, cost, profit, loss, wants, needs, supply, and demand. I can tell how these vocabulary words are related to the Mighty third grade plant business.
APK (Activate/Assess Prior Knowledge)
-Distribute a small sheet of construction paper to each student. Ask the students to draw a tic tac toe board on the paper, resulting in nine boxes.
-Students will label the top of each box with the following vocabulary words: entrepreneur, business plan, cost, profit, loss, wants, needs, supply, and demand. The students should leave room in the box to draw and write for the following parts of the lesson, so they will need to be careful not to write in too large of letters in the box.
-Give students a few minutes and have them write or sketch what they know about the words. The students may write definitions, where they have heard the words, or draw pictures.
TIP (Teacher Input)
-Tell the students that they will watch two video clips from online that show the vocabulary words. At this point, you may choose to have each student focus in on all of the words or you may want to assign partners to watch for a particular word in the videos, depending on the needs of the students.
-The first video clip is on National Geographic Kids. For teacher information, it contains the vocabulary words entrepreneur, business plan, wants, needs,cost, profit, and loss.
http://video.nationalgeographic.com/video/kids/cartoons-tv-movies-kids/cha-ching-kids/cha-ching-03-entrepreneur-kids/
-The second video is from the Biz Kids series on PBS. It is a short clip that highlights supply and demand.
http://bizkids.com/clip/supply-and-demand
SAP (Student Active Participation)
-Once students have had a chance to watch the video clips, you will have them write their knowledge of the words now in the boxes on their grid. If you chose to have partners watch for a specific vocabulary word, then the students would only focus on writing/drawing about their assigned word at this time. If needed, play the video clips a second time for students to gather more information.
-Once students have had time to jot down their new thinking, share the ideas as a class for the meaning of each of the vocabulary words. Clarify any misconceptions that students have during this time. If needed, give students time to write clearer definitions or draw sketches that show what the vocabulary words mean.
-Ask students to think about our Mighty plant business. How are these words related to our plant business? Give students time to talk with their partner.
-Once students have had time to talk, call on students to share. Be sure students see the relationships between the vocabulary words and what we are doing. What was our business plan? How did we decide what to do? How will we determine profit or loss in our Mighty plant business?
ISS (Identifying Student Success)
-Simon Says review game: Tell students that you will give simon says directions. They should use their finger or pencil to point to the correct vocabulary word on their grid as a review. For example, "Simon Says point to the word that tells about a person who shows initiative and starts a business."
-Once you have reviewed each of the vocabulary words, ask students to choose 3 words from their grid. They should write in the box how that particular vocabulary word is related to our Mighty plant business. These are ideas that were discussed during the Student Active Participation and should be a check of their current understanding.

Day Two—Marketing our Product
CC 3.E.2 I can identify ways to market our products for the Mighty plant business. I can create a flyer and poster to market our product.

APK (Activate/Assess Prior Knowledge)

-Remind the students that we have been working to prepare our plant business. Today, we will look at marketing.

-Show the students the brief Biz Kids video clip on the 4 P's of marketing.

http://bizkids.com/clip/direct-ed-the-4-ps-of-marketing

-Which of the 4 p's have we already taken care of with our Mighty plant business? (We have the product, the place, and the price.) Which of the 4 p's do we need to work on today? (We need to work on the promotion of our product.)

TIP (Teacher Input)

-We will need to work on the promotion of our Mighty plant business. What does it mean to promote or advertise a product? What are some ways you have seen products promoted or advertised? Give students time to talk with their partners. Then call on a few students to share with the whole class.

-The music teacher has worked with you on creating a jingle to advertise our products. We will work in our classrooms on creating flyers and posters.

SAP (Student Active Participation)

-We will look at some examples of flyers for different events/businesses.

http://www.bing.com/images/search?q=Promotional+Flyer+Samples&FORM=RESTAB

-What do you notice about the different flyers? Give students time to talk with their partners. Then call on a few students to share with the whole class.

-Point out that the flyers have only the most important information listed, include illustrations or photographs, needs to be neat and easy to read. What may happen if I don't put all the important information on the flyer? If I don't include illustrations or photographs?

-Students will work individually or with partners to create a flyer. The students' flyers will be copied and distributed to the students in the school before we start our sale.

-As students finish, they may also work to create posters to hang in the school. Remind students that the posters should also include the most important information, illustrations or photographs, and needs to be neat and easy to read.

-Extension: If there are students who finish early, they could figure out how many copies of each student flyer we will need to make. Pose the real life problem of "There are currently ____ Southwest Elementary students. Third graders have designed 48 flyers. How many copies of each student flyer will we need to make so that each Southwest Elementary student gets a flyer to take home?"

ISS (Identifying Student Success)

-What were some of the things we were looking for in a good flyer/poster design? Have students mix and freeze with their flyers. When you stop and pair with a friend, tell them one thing you noticed that they did well on the flyer (Did it include important information? Have illustrations/photographs? Neat and easy to read?)

-Flyers will be collected to be assessed (25 points each for important information/illustrations or photographs/neatness/creativity). The flyers will then be copied and distributed to market our Mighty plant business.

Day Three: Creating Seed Packets

CC 3.E.2 I can package seeds for our Mighty plant business. I can create a seed packet.

APK (Activate/Assess Prior Knowledge)

-Distribute a commercial seed packet to each table. Look at the seed packet. Talk with your table about what you notice about the seed packet. Think about the print, illustrations, information give on the packet.

-Once students have had time to talk, call on a few students to share with the whole class.

TIP (Teacher Input)

-Tell students that today we will work on packaging seeds for our Mighty plant business. We will also need to create seed packets.

-What do we need to include on each seed packet? As a class decide what information/visuals will need to be included on each seed packet. Create a class list on chart paper so students may refer to it as they work.

-Show the students the flower pictures. They may use this as a reference when creating seed packets.

SAP (Student Active Participation)

-Students will work on packaging seeds. If the seeds are larger, students may count out a particular number of seeds to put in each packet. If the seeds are smaller, measuring spoons may be easier for the students to use in packaging the seeds.

-Students will use a pencil to label and illustrate the seed packet. They will then use crayons/markers to color in the seed packets.

ISS (Identifying Student Success)

-Have students look at all of the seed packets they created today. Which seed packet is your best seed packet? Show your partner and tell him/her why it is your best seed packet.

-Seed packets will be collected to be assessed (25 points each for important information/illustrations or photographs/neatness/creativity). The seed packets will then be organized to be sold in our Mighty plant business.

Day Four—Creating the Do It Yourself Kits/Preparing Seedlings for Sale
CC 3.E.2 I can create a Do It Yourself kit for our Mighty plant business.
APK (Activate/Assess Prior Knowledge)
-What does "Do It Yourself" mean? Why did we decide to sell Do It Yourself kits in our Mighty plant business? Give students time to talk with their partners. Then call on a few students to share with the whole class.
TIP (Teacher Input)
-Model how to create the Do It Yourself kits. Students will need to count/measure seeds to put in a plastic sandwich bag. They will twist the bag and use curling ribbon or other string to tie the bag off. Students will need to scoop soil to put in a second plastic sandwich bag. Again, they will twist the bag and use curling ribbon or other string to tie the bag off.
-Students will put the soil bag and seed bag in the painted yogurt cup. If there are care card instructions, they can place this card in the painted yogurt cup as well. They will then place the entire cup in a quart size plastic bag. They will twist and tie the bag with curling ribbon.
SAP (Student Active Participation)
–Students will work with a partner to create the Do It Yourself kits.
-Extension: If there are students who finish early, they may work on the seedlings that we will be selling at the Mighty plant business. We will need to make sure the seedlings are clearly labeled on the popsicle stick markers, include care instruction cards, and the containers are clean on the outside since we have been caring and watering the plants outside.
ISS (Identifying Student Success)
–Have students place the Do It Yourself kits and seedlings around the room. Ask students to walk through the room to look at each kit.
-Would you buy one of these kits or seedlings if you were customer? Why? What did we do well with the packaging? Do you notice anything about the kits that we could fix so they would sell better?
-Do It Yourself kits and seedlings will be collected to be assessed (25 points each for including soil, seeds, and care instructions/neatness/clear labels). The Do It Yourself kits and seedlings will then be organized to be sold in our Mighty plant business.

Day Five—Organizing for the Mighty Plant Business
CC 3.E.2 I can work with classmates to organize our products for the plant business.
APK (Activate/Assess Prior Knowledge)
-Think about the last time you were in Walmart. Look at examples of the Walmart store maps.
http://www.bing.com/images/search?q=Walmart+Store+Map&qpvt=Walmart+Store+Map&FORM=IGRE
-What did you notice about how the store was organized? Give students time to talk with their partners. Then call on a few students to share with the whole class.
TIP (Teacher Input)
-Explain that stores and other businesses organize their products to make it easier for the customers to find things they need. If the products were not organized and labeled, what may happen? If students are having trouble seeing the connection between having things organized and labeled and increased sales, give the example of what may happen if Walmart had bananas, girls' shoes, boy's t-shirts, shampoo, and garden tools on one aisle. What would happen if each of the aisles had jumbled merchandise?
-Tell students that we will work to organize our business so we can get as many sales as possible. We want our business to make a profit. Quickly divide students into small teams to work. The tasks they will need to complete are listed below in the Student Active Participation.
SAP (Student Active Participation)
–Team Jobs:
1) Organizing Products: students will work to organize the products. They may choose to use the plant plastic trays, boxes, or other materials to organize the products.
2) Labels: students will work to create labels for the products we are selling. This group will need to work in conjunction with the team that is organizing the products to ensure there is a label for each type of our products. Label "tents" can be made by folding construction paper into a triangle (fold it into thirds, then tape it on the ends to create a tent.) The label tents could be placed on top or in front of the products next week.
3) Poster: The poster will have the name of our business and prices clearly listed.
4) Checklist: We will need to create a checklist so we can keep track of the products sold. Students will work together to make sure all products are listed and that the checklist is easy to use.

5) Money Trays: This group will create a tray to collect money in. They may use cups or other items to divide the box up for pennies, nickels, dimes, quarters, and dollars. This will help us when collecting and counting money earned from our business. This group may also want to draw how many quarters equal each of the prices to help younger students who may be shopping.

6) Tablecloth: This group will use markers to add a border to a white plastic tablecloth. The cloth will be used to cover desks for our business booth we will set up in the hallway.

ISS (Identifying Student Success)

–Briefly let each group share the jobs they completed for our Mighty plant business. After each group shares, ask: How do you think this will help our plant business? What would have happened if we did not do this job before we started our business?

Day Six—Looking at Data

-The Mighty plant business will open and sell our products in the morning. The next lesson will take place midway through the Mighty plant business.

CC 3.E.2, 3.MD.3 I can create a pictograph or bar graph of our Mighty plant business sales. I can make a business decision based on our Mighty plant business sales data.

APK (Activate/Assess Prior Knowledge)

-Remind students that we have been running our Mighty plant business for a few days. What have you noticed about the business? What products are students buying? What have you heard our customers saying about our business?

-Give students time to talk with a partner. Then call on a few students to share answers with the whole class.

TIP (Teacher Input)

–Tell students that we will need to look closely at our data to make business decisions. Post the checklist on projector so all students can see the products that have been selling so far in our plant business.

-Tell students it is often easier to see the data when it is organized into a pictograph or bar graph.

SAP (Student Active Participation)

Creating Graphs

–Students will be working with partners or small groups (based upon teacher judgment) to create a bar graph or pictograph that represents the plant business data. The teacher may choose to have students create the graphs with paper and pencil. They also may show the students how to create the graphs using a website such as Illuminations Data Grapher, http://illuminations.nctm.org/ActivityDetail.aspx?ID=204

-Once students have finished their graphs, there will be a series of questions tailored to our Mighty plant business. Which product is selling the most? The least? How many more _____ sold than _____? The teacher may also choose to have students make three generalizations about the graph.

Making Business Decisions

-Show the students the brief Biz Kids clip on the Lemonade Stand challenge. Tell students to be looking for how they tried to get customers and changes they made in their selling. http://bizkids.com/episode/the-biz-kid-challenge

–Show the students the products we have left. We have a few more days left to sell. Looking at our data, do you want to keep prices the same? Change prices? Should we change the way we are promoting our products? Give students time to talk with the students at their tables.

-Once students have had time to talk, call on student representatives from each group to get feedback. Write down students' responses on chart paper to create a class chart.

ISS (Identifying Student Success)

–Looking back at our graphs and ideas from our class chart, how should we run our plant business on the final few days? Reinforce the idea that our decisions need to be based on data and not just what we want to do/do not want to do. The teacher may choose to have students write their ideas individually and record reasons why they want to make that business decision. This writing, along with the graphs, may be collected for student understanding.

-If there is a consensus on the class chart, we can make the business decision (to change our marketing, to change prices, etc.) If there is not a clear consensus, the teacher may hold a class vote to make the decision. If prices are changed, posters and the checklist to track data will also need to be changed.

Day Seven: Looking at Final Data/Reflection

CC 3.E.2, 3.MD.3 I can create a pictograph or bar graph of our final Mighty plant business sales. I can reflect on how I would run the plant business during the next year.

APK (Activate/Assess Prior Knowledge)

-Remind students that we have been running our Mighty plant business for a few days. What was the business decision we made in the middle of the week? Did our decision work or not? What did you notice?

-Give students time to talk with a partner. Then call on a few students to share answers with the whole class.

TIP (Teacher Input)

-Tell students that we will need to look closely at our data to reflect on the success of our business. Post the checklist on projector so all students can see the products we sold in our plant business.

-Tell students it is often easier to see the data when it is organized into a pictograph or bar graph.

SAP (Student Active Participation)

Creating Graphs

-Students will be working with partners or small groups (based upon teacher judgment) to create a bar graph or pictograph that represents the plant business data. The teacher may choose to have students create the graphs with paper and pencil. They also may show the students how to create the graphs using a website such as Illuminations Data Grapher, http://illuminations.nctm.org/ActivityDetail.aspx?ID=204

-Once students have finished their graphs, there will be a series of questions tailored to our Mighty plant business. Which product is sold the most? The least? How many more _____ sold than _____? The teacher may also choose to have students make three generalizations about the graph.

Counting Money Earned

-While students are working at their seats on creating graphs, the teacher will call small groups of students to help them count and roll coins earned from our business.

Reflection

-Graphs: Looking at the graphs, what did you notice about our plant business? Using this data, what would you tell next year's third graders about the decisions they should make for the plant business? Reinforce the idea that decisions need to be based on data, not just preferences.

-Profit/Loss: Using the money we rolled, count up the money our class earned through the plant business. Tell the students that Ms. Douglas spent _____ on seeds and other materials for our business. Did our business make a profit or a loss? How do you know? Knowing now whether we made a profit or a loss, what would you tell next year's third graders to help them make decisions for the plant business?

ISS (Identifying Student Success)

-Collect students' pictographs and questions/generalizations for assessment.

-Individual Student Reflections: Distribute notebook paper to the students. Write the following question on the board for the students to respond to in writing: Based on your data and experiences from this year, what advice would you give next year's third graders on the Mighty plant business? Cite 3 pieces of evidence to support your advice.