

Deer Valley Unified School District



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Unified School District

Boulder Creek High School
CTE & Academic Integration



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CTE Course: Marketing**Academic Course(s): Mathematics****Unit Name: Marketing Research**

Lesson Name: Processing Data for Decision Making

Lesson Synopsis: To make marketing decisions, marketing students will conduct surveys, compile responses, prepare charts/graphs and tables that visually represent data, and analyze data.

Time Frame:

CTE course – 5days

Academic Course(s) – 5 days

Objectives:

CTE course –

- Collect information for decision making through use of a survey instrument.
- Compile survey responses using spreadsheet software for interpretation and use of data.
- Create charts/graphs and tables with using spreadsheet software and the compiled data.
- Analyze data depicted in charts/graphs and tables for making marketing decisions.

Academic Course(s) –

- Collect data for analysis, through designing and implementing a survey.
- Organize survey data and display data in a table and as a bar graph using spreadsheet software.
- Analyze data depicted in graphs, making observations and predictions.
- Interpret their data and form questions to pose to other students about their graphs.

Standards:

CTE course -

- 6.2 Use spreadsheet or presentation software to prepare effective tables and graphs to communicate numerical data for marketing
- 9.1 Select and communicate information in an appropriate digital format
- 14.1 Conduct formal/informal research to collect appropriate topical information
- 27.4d Use information analysis techniques
- 34.4d Conduct market research

Academic Course(s) –

- Strand 2, Concept 1, PO 2. Organize collected data into an appropriate graphical representation with or without technology.
- Strand 2, Concept 1, PO 3. Display data, including paired data, as lists, tables, matrices, and plots with or without technology; make predictions and observations about patterns or departures from patterns
- Strand 2, Concept 1, PO 8. Design simple experiments or investigations and collect data to answer questions.

Bloom's Taxonomy

- Knowledge
- Comprehension

- Application
- Analysis

- Synthesis
- Evaluation

Resources & Materials:

CTE course –

Survey with questions addressing marketing decision topics (can be prepared in prior lesson in the marketing research unit). Survey can be administered electronically or on paper by having respondents each complete a survey or by having students conduct personal interview with respondents and recording responses on a tabulation sheet.

Computers and spreadsheet software for student use

Academic Course(s) -

Survey is prepared by students, which is taken by fellow classmates and returned to each respective survey team. Students will need computers and spreadsheet software to create visual display of gathered data.

Prerequisite Learning:*CTE course –*

Purpose of conducting marketing research

Market segmentation – demographics, geographics, psychographics

Information gathering strategies/technology

Fundamental marketing concepts & key decision areas (product, place, price, & promotion)

Academic Course(s) -

Students will already understand how to create bar graphs by hand and have practiced reading bar graph data and answering questions.

Learning Structures/Strategies**CTE Course****Set for Interest**

To realize the marketing concept (satisfy customers' needs and wants while generating a profit for the business), it is necessary to determine what customers actually want and need.

To overlay a mistake in this regard, the teacher can use business examples or provide a situation such as one of the following:

"We have decided that the student store will only sell milk, carrots, apple slices, and graham crackers. No further products will be ordered. We think this will be successful."

"In this class we are going to begin using a college textbook, have nightly readings of at least 10 pages, have essay papers due every other week, and every class period will be a lecture without provided guides for note-taking."

In response to the scenario, it is highly likely that students will think the decisions are ridiculous. Ask the students for their thoughts on these decisions and how they recommend these issues to be handled.

Input/Modeling

As a teacher, the customer is the student. To meet the learning needs and wants of students, a teacher must understand the students in their classroom. To do this, a teacher can review a class roster to determine the number of males/females, students by grade level, and birthdates for ages. Further information can also be obtained by teachers including student GPAs, concurrent courses, and AIMS (standardized testing) scores. Also, a teacher can conduct class surveys to determine the students' preferences (such as individual/group work, enjoyment of class activities, etcetera). From this information, a teacher can then make adjustments to instructional planning, activities, and assessment.

Similarly, students in this unit are conducting research to help them make decisions about the sale of products in our school's student store. In order to make these decisions, students need to conduct research to gather primary (surveys) and secondary data. Gathering information through a survey on student preferences relating to items sold at the student store will aide with informed decision-making.

Check for Understanding

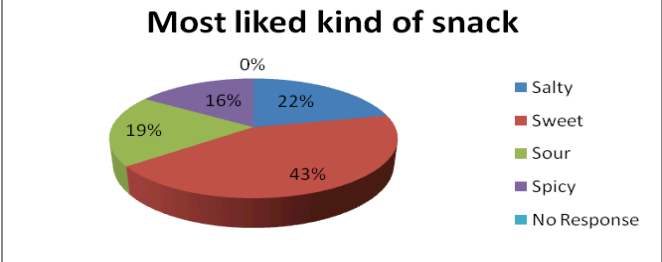
Students should be asked to summarize the marketing concept (stated above in set for interest). Then, provide fragments of data and ask how that piece of information can affect decisions. Data examples: The school has 2,340 students. 1,197 students in the school are male. 190 students are Hispanic. 502 students are in 12th grade.

Guided Practice

The data examples just mentioned are part of our secondary data. In addition, primary data has been collected through the use of the students' surveys.

Guide the class through tabulating the responses for one common survey question. One question on the class survey addressed the most liked kind of snack with the options being Salty/Sweet/Sour/ Spicy. Using the spreadsheet software, demonstrate (as students follow along) how to set up a table of information. Below is an example of the table. It is optional to include a column for percentages as raw numbers can also be used. Once students have made the table, walk them through selecting the data and inserting a chart/graph.

Most liked kind of snack		
KIND	#	%
Salty	57	22%
Sweet	113	43%
Sour	51	19%
Spicy	42	16%
No Response	0	0%
TOTAL	263	100%



Independent Practice

Provide students the time to performs these steps(tabulating responses, setting up a data table in the spreadsheet software, and inserting charts/graphs) for all remaining survey questions.

Closure

Ask students to evaluate the information depicted in their charts/graphs and tables. Have the students determine the most important piece of information they can gain from each of the charts/graphs they have created and how this may influence their marketing research decisions.

Assessment

Students will include the tables and charts/graphs as an appendix to their marketing research report. Findings from the data should be noted as they explain their findings and recommendations within the marketing research report.

Learning Structures/Strategies**Academic Course(s)****Set for Interest**

Students will enter class, find their partner, and begin the warm up. The warm up presents the students with a bar graph and asks critical thinking questions, for the students to practice their interpretation skills.

Warm up will be reviewed. Teacher will discuss importance of creating graphical representations of data.

Inform students that they will have a chance to turn the data they gathered previously in their surveys, into bar graphs and create their own questions, similar to the ones that you create for them. Another pair will be answering the questions the following day.

Input/Modeling

Show sample survey results and differentiate how valuable it is to see the results in a graph instead of text. Discuss how using the computer to make bar graphs is easier than by hand. Students will need this skill in college when they have to write papers and do presentations. Give example from portfolio.

Pass out laptops and instruct students to log on. Once they have logged on, they are not to do anything else and must pay attention to the teacher's screen.

The teacher will model the entire process using the warm up bar graph as an example. This will let the students see the steps involved and understand the final product that is expected of them.

The teacher will explain each step as they go, modeling thinking processes as well as the technical steps involved.

Check for Understanding

During the modeling process, teacher will ask questions to verify that all students are following along and understand the process.

As students begin and work on activity, teacher will monitor each pair's progress and assist them, asking specific questions and checking that they are following the correct procedures.

Guided Practice

Teacher will instruct students to begin activity and walk them through the initial first steps to get them started.

The class may be redirected during the activity to review the process, but will work in their independent pairs for the most part, requesting assistance as necessary.

Students are to...

- 1 - Open Microsoft Excel
- 2 - Type in data results
- 3 - Convert to a bar graph
- 4 - Adjust axis if necessary
- 5 - Copy and paste into a Word document

- 6 - Find a picture(s) to go with their topic.
- 7 - Write and type 3-5 questions about their graph.
- 8 - Finish formatting their final product and print.
- 9 - Save file and place in share folder.

Independent Practice

Students will receive homework to independently practice interpreting data, as well as an activity that allows them to create a visual display of data on their personal computer, or paper, whichever they prefer.

Closure

Students will put away materials. Teacher will ask the class what the most challenging part of the activity was. Each pair will share a key fact about their information.

Student pairs who finish the activity quickly will be asked to assist another pair in coming up with their interpretation questions and showing them how to complete the final steps in their final product. This will allow the student increase their understanding as they apply their skills to assisting another group and acting in a leadership role.

Assessment

Rubric will be used to assess the process and product from each student.

The following day's warm up, homework, and activity, will act as informal assessments, helping the teacher determine what areas of need still exist.