SeaWorld Snack Shop

Objectives

Students gain experience using data to make predictions. They practice clearly communicating their findings.

Materials

- ❏ copies of the Food Services Planning Worksheet and the Food Services Data Sheet (one of each per student or per cooperative learning group)
- ❏ calculator
- ❏ pencil and paper

Action

1. For this activity, students take on the role of SeaWorld Food Services Managers. Their responsibility is to plan meals for the expected number of park guests.

2. Distribute *Food Services Planning Worksheet* and *Food Services Data Sheet* to each student or to each cooperative learning group.

3. To answer the questions on the *Food Service Worksheet*, students use the data on the *Food Services Data Sheet* and make estimations. They should show the math they use to arrive at a solution and should be prepared to explain to their boss their reasoning and why they think their solution will work.

ANSWERS

1. Assuming that park guests eat proportionately the same kinds of food that they ate last year, you should expect to sell 13% more food this year because attendance is projected to be up by about 13% ($170,000 \div 150,129 = 1.13$). Another assumption is that you will sell the same amount of food every day of the week, although some students may (correctly) guess that more people visit SeaWorld on weekends than on weekdays. Given these two assumptions, you should expect to sell the following:

cheeseburgers	$[(2,914 + 45) \div 7] \times 1.13$	$= 478$
hamburgers	$[(2,268 + 34) \div 7] \times 1.13$	$= 372$
chicken sandwiches	$[(1,956 + 47) \div 7] \times 1.13$	$= 324$
cheese sandwiches	$(18 \div 7) \times 1.13$	$= 3$
french fry orders	$[(2,914 + 2,268 + 1,956 + 18) \div 7] \times 1.13$	$= 1,156$

2. Total ounces of soda projected to be sold Saturday:

$[(382 \times 12) + (544 \times 20) + (290 \times 30) + (116 \times 36) + (63 \times 36)] \times 1.13 = 34,588$ ounces

small sodas:	382×1.13	$= 432$
regular size sodas:	544×1.13	$= 615$
large sodas:	290×1.13	$= 328$
sports bottles:	116×1.13	$= 132$
sports bottle refills:	63×1.13	$= 72$
milk:	55×1.13	$= 63$
hot cocoa:	70×1.13	$= 80$

3. Students prepare oral reports showing the most popular beverages sold during the week of July 10, last year. Visual aids should include some type of graph (bar, pie, etc.). Students may suggest a variety of reasons for fluctuating sales of sodas and cocoa, including park attendance, average length of park stay, and weather. Students may propose a variety of ways to increase milk sales.

4. Students' sales predictions should reflect that sales of a new food item will result in fewer sales of existing food items.

Food Services Data Sheet

LAST YEAR: week of July 10   actual weekly attendance: 150,129
THIS YEAR: week of July 10   projected weekly attendance: 170,000

LAST YEAR'S LUNCH SALES:

Cheeseburger Combo*	2,914	Cheeseburger a la carte	45
Hamburger Combo*	2,268	Hamburger a la carte	34
Chicken Sandwich Combo*	1,956	Chicken Sandwich a la carte	47
Cheese Sandwich Combo*	18		

* combos include french fries

LAST YEAR'S BEVERAGE SALES:

item	M	T	W	Th	F	Sa	Su
small soda (12 oz.)	274	188	268	193	296	382	167
regular soda (20 oz.)	289	253	271	292	291	544	288
large soda (30 oz.)	153	196	161	183	185	290	253
Sports Bottle (36 oz.)	69	71	96	71	82	116	63
Sports Bottle refill	33	65	85	86	59	63	64
milk	16	51	50	23	37	55	32
hot cocoa	46	16	22	22	40	70	9

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Food Services Planning Worksheet

1. Predict how many of each type of sandwich and how many orders of french fries you should be prepared to sell Wednesday of the week of July 10 this year. (Round up to the nearest whole food item.) What assumptions are you making? What (if any) of your assumptions do you suspect may be incorrect?

2. How many ounces of soda do you expect to sell Saturday? Estimate the number of beverages by size and type that you think will be sold. Round up to the nearest whole number.

3. Prepare an oral report to your boss ranking the most popular beverage types sold and which days of the week beverage sales are highest. Create visual aids, and be sure to include graphs. List several reasons why hot cocoa and soda sales might fluctuate daily. Are there factors besides park attendance that influence these sales? Propose an idea for increasing milk sales.

4. Write a memo to your boss suggesting offering another food item that is not on this list. What are your sales predictions, and how will these sales affect the meal projections you've already made (in number 1)?