Curriculum Outcomes:

(SP 1) Describe the effect of: bias; use of language; ethics; cost; time and timing; privacy; cultural sensitivity on the collection of data.

Student Friendly:

What problems can arise when collecting data to calculate probability?

Feb 6-7:53 AM

Section 9.2
Potential Problems with Collecting Data

Sidney! What is the best hockey team in the NHL? What is your favorite brand of hockey gear?

What may influence his response????

May 22-6:14 PM

1. Sidney Crosby | Pittsburgh Penguins | Center

Yearly Endorsements: $4,500,000

"Sid the Kid" is the face of the NHL and the most marketable player in the league. His endorsement with Reebok is the largest endorsement deal for any hockey player. Crosby also has endorsements with Gatorade, Bell, Sport Chek, Frameworth and Tim Horton's. If he can somehow top this performance, more deals may come his way.
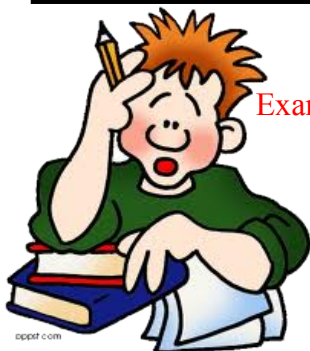
May 30-8:08 AM

Factors that MIGHT lead to Problems with Data Collection

Bias The question influences responses in favor of, or against the topic of the data collection.
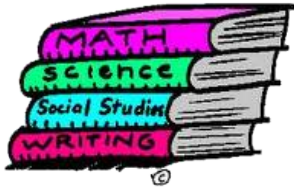
Example: "Don't you think teachers give too much homework?"

Bias against current amount of homework being assigned

May 22-6:56 PM

Use of Language

The use of language in a question could lead people to give a particular answer.

The above questions may influence people to respond "yes"

"What do you THINK" is a better way to start a question?

May 15-7:46 AM

Timing

WHEN the data is collected it could lead to particular results

"What is your favorite sport?"

Surveyed During Winter
Response : Hockey

Surveyed During Summer
Response : Baseball

May 22-7:21 PM

3

Privacy

If the topic of the data collection is personal a person may not want to participate or may give an untrue answer.

Example: "Did you ever try drugs?"

May 15-7:48 AM

Cultural Sensitivity

You are aware of other cultures. You must avoid being offensive and asking questions that do not apply to that culture.

Example: Which holiday is your favorite?   Circle one of the following:
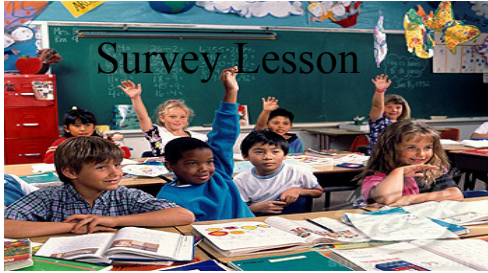Christmas   Easter

This question does not apply to all cultures.

May 22-8:01 PM

Ethics

Data is to only be used for the purpose that you told the participants. Otherwise, your actions are considered unethical.

Survey Lesson

Hi Mrs. Smith, this is Sally's teacher and I was informed today through Sally's survey you were having financial issues
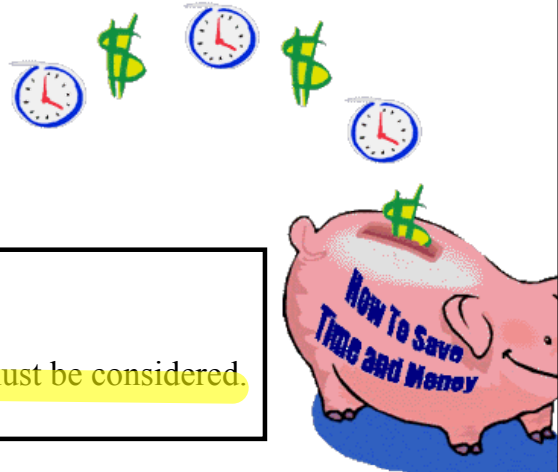
May 15-7:47 AM

Cost $

The cost of collecting data must be taken into account

- making questionnaires (printing/mailing)
- collecting data (people/gas)

may be more than you can afford

May 22-8:24 PM

Time

The time needed for collecting the data must be considered.

- If a survey takes an hour to complete, it may not be completed. This would limit the number of people willing to participate.

May 15-7:48 AM

Identifying and Eliminating Potential Problems

Example 1)

Explain why a problem may occur and the effect it would have on the results. Suggest how each could be avoided.

A survey is conducted to find out if citizens think the local government should provide more money for youth activities. The question asked was: "Would you support an increase in taxes to create more skated parks?"

Answer: Language use could be problematic. The question emphasizes what citizens would lose; that is, their taxes would increase.

The question downplays what citizens would gain by only mentioning skate parks, instead of a variety of activites.

Response would be swayed toward "yes"

Better Question "Do you think the local government should supply more funds for the youth recreational activities?"

May 22-8:46 PM

Analyzing Data Collection for Problems

Example 2)

Kan and Ike plan to open a shop in Saskatoon that would sell traditional Inuit crafts. To ensure Saskatoon is the best place for their business, they want to survey residents to find out how popular Inuit crafts are.

Kan knows that they would get the most accurate results if each household in Saskatoon is surveyed, but Ike points out that this problematic. Explain why.

population of **246,376**, Saskatoon

Erase

Answer:

The

The

May 22-9:00 PM

Overcoming Potential Problems

Example 3)

Antonio wants to find out if there is a relationship between household income and how much people spent on Christmas presents. Identify potential problems Antonio may encounter, and explain how he could deal with the problems.

erase

Answer:

-

- An a

-Income information

-Inapp

-gre
- less
-equal

May 22-9:11 PM