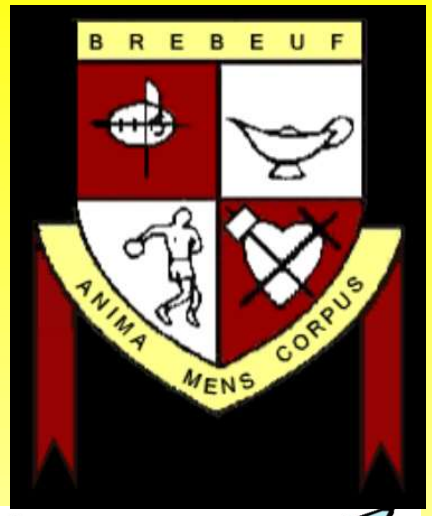
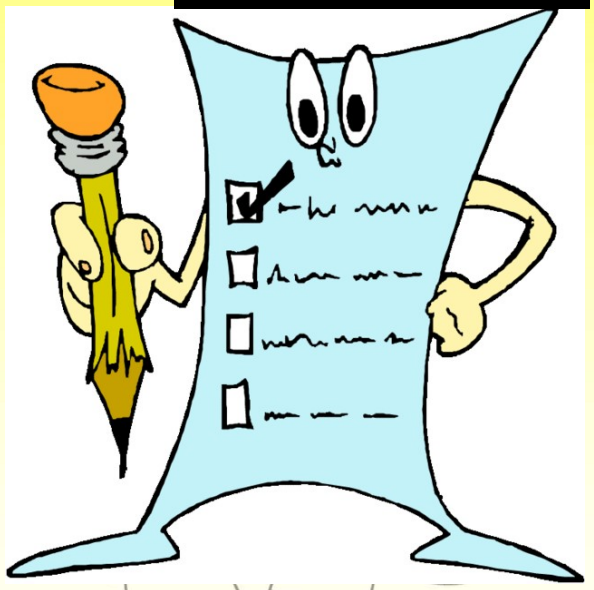
ST. JEAN DE BREBEUF

MATHEMATICS



CHAPTER 3.2

EFFECTIVE SURVEYS



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CHAPTER 3.2 EFFECTIVE SURVEYS

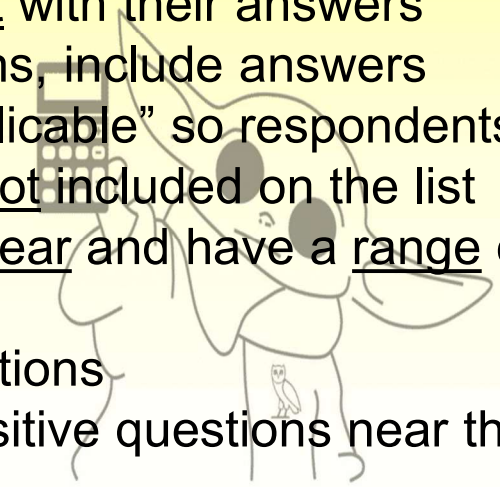
Effective surveys are designed with the purpose of generating *accurate* and *detailed* information and at the same time, making sure the respondents are *comfortable* answering the questions posed

EXAMPLE 1 *Principles of Proper Surveying*

There are **three** principles of proper surveying that should be followed:

(i) **Ethics in surveying**
- Introduction must inform participants of the intentions of the survey
- Participants must be willing
- Names of participants and personal information must be kept private and confidential

(ii) **Design for honest responses**
- *Privacy* and *confidentiality* increases the likelihood for participants to be honest with their answers
- In *multiple-choice* questions, include answers such as “Other” or “Not applicable” so respondents can have an option that is not included on the list
- *Rating scales* should be clear and have a range of ratings
- Do not ask too many questions
- Ask more difficult and sensitive questions near the end of the survey



CHAPTER 3.2 EFFECTIVE SURVEYS

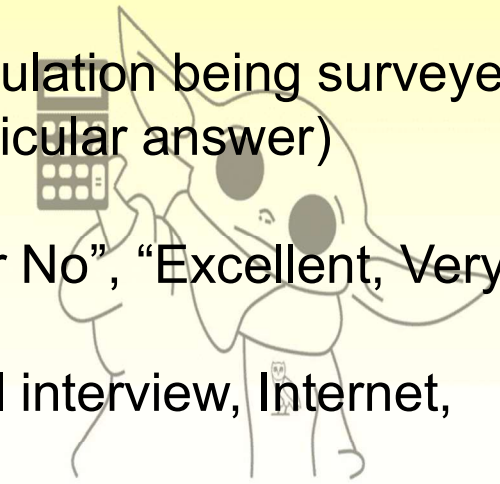
Effective surveys are designed with the purpose of generating *accurate* and *detailed* information and at the same time, making sure the respondents are *comfortable* answering the questions posed

EXAMPLE 1 *Principles of Proper Surveying*

There are **three** principles of proper surveying that should be followed:

(iii) **Eliminate bias**

- **Bias** is an unwanted influence on a sample that prevents it from being representative of a *population*
- Choose a **sample** which is representative of the population being surveyed
- Avoid leading questions (wording that leads to a particular answer)
- Pose questions that are neutral
- Provide choices that have a *natural order* (ie. “Yes or No”, “Excellent, Very Good, Good”)
- Use the most appropriate mode of delivery (personal interview, Internet, telephone, mail)



CHAPTER 3.2 EFFECTIVE SURVEYS

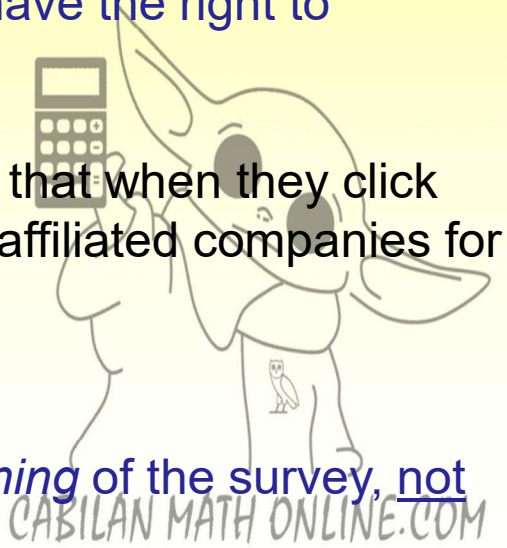
EXAMPLE 1 *Principles of Proper Surveying*

Identify which principles of surveying **(Ethics, Design for Honest Responses, Eliminate bias)** are <u>not</u> being followed in each example

(a)In a telephone survey, the surveyor *immediately* began asking the respondent questions, *without* indicating that a survey was being conducted

Ethics
→ participants were not informed about the survey
→ participants must be *willing* to participate and have the right to refuse participating

(b) At the *end* of an Internet survey, respondents were told that when they click "Finish", all of the information provided will be shared with affiliated companies for marketing purposes



Ethics
→ Should have been communicated at the *beginning* of the survey, <u>not</u> the end
→ Information from participants is to be kept *confidential*

CHAPTER 3.2 EFFECTIVE SURVEYS

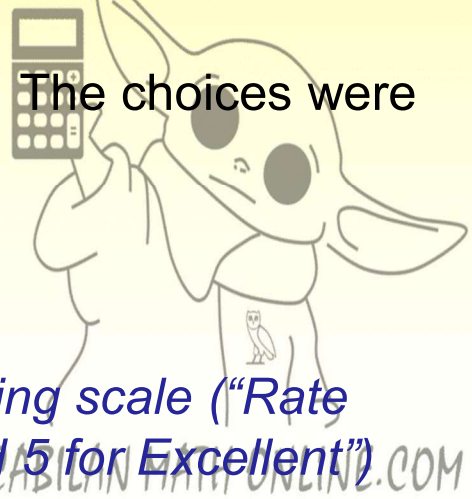
EXAMPLE 1 *Principles of Proper Surveying*

Identify which principles of surveying **(Ethics, Design for Honest Responses, Eliminate bias)** are <u>not</u> being followed in each example

(c) Survey participants were asked what kind of music they listen to and were provided with the following choices: *Rock, Alternative, Classic* and *Country*

Eliminate bias
→ *Not all genres of music were accounted for (ie. Rap, Dance, etc.)*
→ *Could add "Other" to accommodate unlisted genres*

(d) Restaurant customers were asked to rate their server. The choices were *Excellent*, *Fair* and *Poor*



Design for Honest Responses
→ *Not enough choices*
→ *Could add "Very Good" or add a <u>numerical</u> rating scale ("Rate customer service from 1 to 5, 1 for Very Poor and 5 for Excellent")*

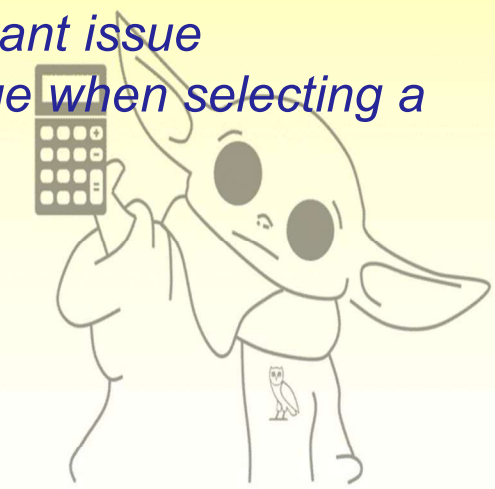
CHAPTER 3.2 EFFECTIVE SURVEYS

EXAMPLE 1 *Principles of Proper Surveying*

Identify which principles of surveying **(Ethics, Design for Honest Responses, Eliminate bias)** are <u>not</u> being followed in each example

(d) Surveyors asked "Do you think safety is the most important issue when selecting at school?"

Eliminate bias
→ Leading question
→ implies that safety <u>is</u> the most important issue
→ better to ask "What is the most important issue when selecting a school"



CHAPTER 3.2 EFFECTIVE SURVEYS

EXAMPLE 2 *Types of Survey Questions*

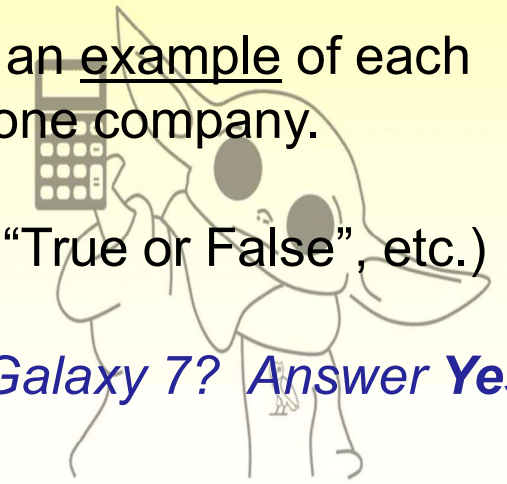
There are **five** types of questions that can be used in a survey:

(i) **Dichotomous** (two part classification)
(ii) **Multiple choice** (limited number of predefined answers)
(iii) **Rating scale** (values on a scale, usually involves ranking)
(iv) **Completion** (fill in the blanks or answer with a single response)
(v) **Open-ended** (respondent can answer freely)

A new cell phone company conducted a survey. Give an example of each survey question type which would relate to the cell phone company.

(a) Dichotomous (two part classification, "Yes or No", "True or False", etc.)

*"Do you like the design of the new Samsung Galaxy 7? Answer **Yes or No**?"*



CHAPTER 3.2 EFFECTIVE SURVEYS

EXAMPLE 2 *Types of Survey Questions*

(b) Multiple choice (offer predefined answers)

> *"What company is your service provider?* ***Bell, Rogers, Telus, Koodo, Other****"*

(c) Rating scale (values on a scale)

> *"How useful are the Applications on the new iPhone? Rate on a scale from 1 to 5; 1 for Not Useful and 5 for Very Useful"*

(d) Completion (fill in the blanks; single response answers)

> *"What retail outlet did you purchase your cell phone from?"*

CHAPTER 3.2 EFFECTIVE SURVEYS

EXAMPLE 2 *Types of Survey Questions*

(e) Open-ended (respondents can answer freely)

"Do you have any comments, concerns or suggestions about your service provider?"

CHAPTER 3.2 EFFECTIVE SURVEYS

EXAMPLE 3 *Mode of Delivery of a Survey*

Identify **one** advantage and disadvantage of each mode of survey delivery

METHOD OF DELIVERY	ADVANTAGE	DISADVANTAGE
Personal interview	Able to meet a person face to face	Person might not be willing to meet personally Scheduling inconveniences
Internet	Fast feedback Participants can access on their own time	Not all people have the convenience to access the Internet
Telephone	Many people can be reached Ability to *randomly* select people for survey	Calls may be made at inconvenient times for the participant
Mail	Allows participants to take their time in answering the survey	Very slow (takes a long time) Very costly

CHAPTER 3.2 EFFECTIVE SURVEYS

HOMEWORK / SEATWORK

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