



Conduct a Statistical Experiment to Investigate a Situation

Achieved	Merit	Excellence
Conduct an experiment to investigate a situation using statistical methods.	Conduct an experiment to investigate a situation using statistical methods, with <u>justification</u> .	Conduct an experiment to investigate a situation using statistical methods, with <u>statistical insight</u> .
<u>Justification</u> - Linking components of the investigation process to the context, explaining relevant considerations, and supporting findings with evidence from the experiment.		
<u>Statistical Insight</u> - Integrating statistical and contextual knowledge throughout, reflecting on the process, discussing variation, considering other relevant variables.		

The Investigation Process

The processes in this standard are related to:

- Pose an investigative question about a given experimental situation.
- Plan the experiment by:
 - Determining appropriate variables and measures
 - Determining data collection and recording methods
- Conduct the experiment and collect data.
- Select appropriate displays and measures.
- Discuss the displays and measures.
- Communicate findings in a conclusion.

Problems

Situations set in real-life or statistical contexts that provide opportunities to apply knowledge or understanding of investigative concepts and methods.

Key Vocabulary

Students are expected to understand and use terms related to investigative methods, such as:

- | | | |
|-------------------------------------|------------------------------------------|-------------------------------------|
| <input type="checkbox"/> Experiment | <input type="checkbox"/> Data collection | <input type="checkbox"/> Measure |
| <input type="checkbox"/> Variable | <input type="checkbox"/> Data recording | <input type="checkbox"/> Conclusion |
| <input type="checkbox"/> Measure | <input type="checkbox"/> Display | |