



Investigate Time Series Data

Achieved	Merit	Excellence
Investigate time series data.	Investigate time series data, with <u>justification</u> .	Investigate time series data, with <u>statistical insight</u> .
<p><u>Justification</u> - Involves linking components of the statistical enquiry cycle to the context, and referring to evidence such as statistics, data values, trends, or features of visual displays in support of statements made.</p>		
<p><u>Statistical Insight</u> - Involves integrating statistical and contextual knowledge throughout the statistical enquiry cycle, and may include reflecting about the process; considering other relevant variables; evaluating the adequacy of any models; or showing a deeper understanding of models.</p>		

Statistical Enquiry Cycle

The statistical enquiry cycle for investigating time series data includes:

- Using existing data sets
- Selecting a variable to investigate
- Selecting and using appropriate display(s)
- Identifying features in the data and relating this to the context
- Finding an appropriate model
- Using the model to make a forecast
- Communicating findings in a conclusion

Time Series Data

Time series data involves observations of a variable collected over time, such as:

- Monthly sales figures
- Annual GDP growth
- Daily stock prices
- Weekly weather measurements

Key Vocabulary

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

- | | | |
|--------------------------------------|-----------------------------------|--|
| <input type="checkbox"/> Time series | <input type="checkbox"/> Forecast | <input type="checkbox"/> Residual |
| <input type="checkbox"/> Trend | <input type="checkbox"/> Model | <input type="checkbox"/> Autocorrelation |
| <input type="checkbox"/> Seasonality | | |