

Teaching and Learning Content: ICT
Year Group: 9
Spring Term – Half Term 4



Data Science Unit

Students will learn how visualising data can help us to provide insights that may not be as obvious when looking at raw data. Students will gain a better understanding of how ever-improving advances in technology have made it more feasible to collect, store, and analyse much larger data sets than previously. Learners will be introduced to the investigative cycle PPDAC and apply part of this cycle to a data set. Students will develop their understanding of the investigative cycle by investigating a problem by working through the data and analysis steps.

Home Learning:

Students are expected to complete **at least one piece of ICT home learning every half term**

Key Questions: (A list of key questions)

- How important is it to be able to visualise data?
- How have advancements in technology made it easier to collect, store, and analyse data?
- Why is there the need for data cleansing? What data cleansing techniques can be applied to a data set?
- What is the PPDAC cycle? How can it be used to investigate problems?
- How can implementing steps of the investigative cycle on a data set help to solve a problem?
- What can we learn from the data?

**Diagnosis
& assessment sheet**

- Retrieval activities
- Self-assessment
- Mini whiteboard activities

Therapy

- Class discussion and sharing ideas
- DIRT tasks
- Peer to peer support

Students will: (Success Criteria)

- Be able to explain how visualising data can help identify patterns and trends in order to help us gain insights.
- Be able to recognise examples of where large data sets are used in daily life.
- Be able to select criteria and use data set to investigate predictions and evaluate findings to support arguments for or against a prediction.
- Be able to identify the steps of the investigative cycle and solve a problem by implementing steps of the investigative cycle on a data set.
- Be able to describe the need for data cleansing and apply these techniques to a data set.
- Be able to analyse visualisations to identify patterns, trends, and outliers and evaluate to draw conclusions.

Testing

- Peer assessment
- Student self-assessment
- Teacher assessment