Data Analytics – 2024
Unit 3 Outcome 2 and Unit 4 Outcome 1 – Student template for planning the School-assessed Task (SAT) – Blank

Key knowledge	Key skills	SAT Criterion	SAT Indicators
• features of a research question, including a statement identifying the research question as an information problem	• frame a research question	1. **Skills in developing a research question.**	• Documents a research question as an information problem. • Documents evidence of critical and creative thinking to identify, clarify and critically analyse data and the sources of data to be collected.

SAT Plan

Key knowledge	Key skills	SAT Criterion	SAT Indicators
• features of project management using Gantt charts, including the identification and sequencing of tasks, time allocation, dependencies, milestones and the critical path	• create, monitor and modify project plans using software	2. **Skills in project management.**	• Prepares a Gantt chart using software that documents all stages and activities of the problem-solving methodology for U3 O2 and U4 O1. • Documents all the relevant tasks, sequencing, time allocations, milestones, dependencies and critical path.

SAT Plan

Key knowledge	Key skills	SAT Criterion	SAT Indicators
• functional and non-functional requirements, including data to support the research question, constraints and scope	• analyse and document solution requirements, constraints and scope of infographics or dynamic data visualisations	3. **Skills in documenting analysis.**	• Documents the data used to support the research question. • Documents the functional and non-functional requirements, constraints and scope. • Documents evidence of critical and creative thinking through questions and strategies to critically analyse the data and solution requirements.

SAT Plan

Key knowledge	Key skills	SAT Criterion	SAT Indicators
• roles, functions and characteristics of digital system components • physical and software security controls used by organisations for protecting stored and communicated data • primary and secondary data sources and methods of collecting data, including interviews, observation, querying of data stored in large repositories and surveys • techniques for searching, browsing and downloading data sets • suitability of quantitative and qualitative data for manipulation • characteristics of data types and data structures relevant to selected software tools • methods for referencing secondary sources, including the APA referencing system • criteria to check the integrity of data, including accuracy, authenticity, correctness, reasonableness, relevance and timeliness • techniques for coding qualitative data to support manipulation • key legal requirements for the storage and communication of data and information, including human rights requirements, intellectual property and privacy	• apply techniques for searching, downloading, browsing and referencing data sets • propose and apply appropriate methods to secure stored data	4. **Skills in data collection.**	• Acquires data sets from primary and secondary data sources. • Prepares data for manipulation and uses data types and data structures. • References primary and secondary data using the APA referencing system.

SAT Plan

Key knowledge	Key skills	SAT Criterion	SAT Indicators
• types and purposes of infographics and dynamic data visualisations • design principles that influence the appearance of infographics and the functionality and appearance of dynamic data visualisations • design tools for representing the appearance and functionality of infographics and dynamic data visualisations, including data manipulation and validation, where appropriate • techniques for generating alternative design ideas • criteria for evaluating alternative design ideas and the efficiency and effectiveness of infographics or dynamic data visualisations	• select and apply design tools to represent the functionality and appearance of infographics or dynamic data visualisations • generate alternative design ideas • develop evaluation criteria to select and justify preferred designs • produce detailed designs using appropriate design methods and techniques	5. **Skills in designing the database and/or spreadsheet solutions and the infographics or dynamic data visualisations.**	• Generates alternative design ideas. • Develops evaluation criteria with reference to design ideas and infographics or dynamic data visualisations. • Produces preferred design for infographics or dynamic data visualisations. • Documents evidence of critical and creative thinking through design ideas, solution requirements and justification of preferred designs.

SAT Plan

Key knowledge	Key skills	SAT Criterion	SAT Indicators
- the functional capabilities of software to create infographics and dynamic data visualisations - characteristics of information for educating targeted audiences, including age appropriateness, commonality of language, culture inclusiveness and gender - characteristics of efficient and effective infographics and dynamic data visualisations - functions, techniques and procedures for efficiently and effectively manipulating data using software tools - techniques for creating infographics and dynamic data visualisations - techniques for validating and verifying data - techniques for testing that solutions perform as intended	- select and apply software functions, conventions, formats, methods and techniques to develop infographics or dynamic data visualisations - select and apply data validation and testing techniques, making any necessary modifications	**6. Skills in using database and/or spreadsheet software.**	- Use of database and/or spreadsheet software tool/s to store and manipulate data. - Applies appropriate validation techniques. - Documents the use of suitable testing techniques and test data. - Documents evidence of critical and creative thinking through the modification of designs and evaluation criteria for solution development.
		7. Skills in using data visualisation software.	- Use of data visualisation software tool to create infographics or dynamic data visualisations. - Applies appropriate validation and verification techniques. - Documents the use of suitable testing techniques to ensure the solution performs as intended. - Documents evidence of critical and creative thinking through the modification of designs and evaluation criteria.

SAT Plan

Key knowledge	Key skills	SAT Criterion	SAT Indicators
• procedures and techniques for handling and managing files, including archiving, backing up, disposing of files and security	• propose and implement procedures for managing files	8. **Skills in managing files.**	• Documents procedures for the management of files. • Proposes and implements procedures to manage the security of files.

SAT Plan

Key knowledge	Key skills	SAT Criterion	SAT Indicators
• strategies for evaluating the effectiveness of infographics and dynamic data visualisations solutions …	• apply evaluation criteria to evaluate the efficiency and effectiveness of infographics or dynamic data visualisations solutions	**9. Skills in evaluating the solution.**	• Proposes strategies for evaluating the effectiveness of the infographics or dynamic data visualisations. • Documents the evaluation of the efficiency and effectiveness of infographics or dynamic data visualisations in meeting requirements. • Documents evidence of critical and creative thinking through the evaluation of the analysis, design and development stages and improvements to the solution.

SAT Plan

Key knowledge	Key skills	SAT Criterion	SAT Indicators
• techniques for recording the progress of projects, including adjustments to tasks and timeframes, annotations and logs • … and assessing project plans	• monitor, modify and annotate project plans as necessary • assess the effectiveness of the project plan in managing the project	**10. Skills in assessing the project plan.**	• Documents the modifications made to the initial project plan throughout the duration of the project. • Assesses the effectiveness of the project plan.
SAT Plan			