

SECOND TERM

WEEKLY LESSON NOTES – B8

WEEK 7

Week Ending: 19-05-2023	DAY:	Subject: Computing	
Duration: 60mins		Strand: Productivity Software	
Class: B8	Class Size:	Sub Strand: Introduction to Electronic Spreadsheet	
Content Standard: B8.2.4.1. Demonstrate How to Use the Spreadsheet (using functions and complex formulas)		Indicator: B8.2.4.1.1. Perform operations using functions and Built-in functions.	Lesson: 1 of 2
Performance Indicator: Learners can perform operations using functions and Built-in functions		Core Competencies: CC8.2: CP6.1	
Reference: Computing Curriculum Pg. 32			
Activities For Learning & Assessment		Resources	Progression
<p>Starter (5mins)</p> <p>Revise with learners to review their understanding in the previous lesson.</p> <p>Share performance indicators and introduce the lesson.</p> <p>Main (35mins)</p> <p>Enumerate the difference between formulas and functions.</p> <p>Formulas:</p> <ol style="list-style-type: none"> 1. Formulas are expressions or equations used to perform calculations or manipulate data within a software application or spreadsheet. 2. They are typically written using mathematical operators, such as addition (+), subtraction (-), multiplication (*), and division (/), along with cell references, constants, and functions. 3. Formulas are used to perform calculations on a single cell or a range of cells. 4. They can incorporate logical operators, such as IF statements, to make decisions based on certain conditions. 5. Formulas are often used in spreadsheet applications like Microsoft Excel or Google Sheets to perform calculations, create relationships between data, and generate dynamic results. <p>Functions:</p> <ol style="list-style-type: none"> 1. Functions are pre-defined routines or procedures built into software applications or programming languages. 2. They are designed to perform specific tasks or calculations and can accept input parameters, process them, and produce a result. 3. Functions are written in a specific syntax, often with a function name followed by parentheses, and can take one or more arguments as input. 4. They can be used to perform complex calculations, manipulate strings, handle dates and times, and perform various other operations. 		Pictures and videos	Adding and modifying text using different font types to MS Publisher document

5. Functions are reusable and can be called from different parts of a program or used within formulas in spreadsheet applications.

Guide learners to access built-in functions to perform operations on sample data.

1. Mathematical Functions:

- SUM: Adds a range of numbers.
- AVERAGE: Calculates the average of a range of numbers.
- MAX: Finds the maximum value in a range.
- MIN: Finds the minimum value in a range.
- ROUND: Rounds a number to a specified number of decimal places.

2. Statistical Functions:

- COUNT: Counts the number of cells in a range that contain numbers.
- COUNTA: Counts the number of non-empty cells in a range.
- COUNTIF: Counts the number of cells that meet a specified condition.
- SUMIF: Adds the cells that meet a specified condition.
- AVERAGEIF: Calculates the average of cells that meet a specified condition.

3. Text Functions:

- CONCATENATE: Joins multiple text strings into one.
- LEFT: Extracts a specified number of characters from the beginning of a text string.
- RIGHT: Extracts a specified number of characters from the end of a text string.
- LEN: Calculates the number of characters in a text string.
- FIND: Searches for a text string within another text string and returns its position.

4. Logical Functions:

- IF: Performs a logical test and returns one value if true and another value if false.
- AND: Returns true if all arguments are true.
- OR: Returns true if any argument is true.
- NOT: Reverses the logical value of its argument.

5. Date and Time Functions:

- TODAY: Returns the current date.
- NOW: Returns the current date and time.
- DATE: Creates a date value using specified year, month, and day.
- DAY: Extracts the day value from a date.
- MONTH: Extracts the month value from a date.

6. Lookup and Reference Functions:

- VLOOKUP: Searches for a value in the leftmost column of a table and returns a value in the same row from a specified column.
- HLOOKUP: Searches for a value in the top row of a table and returns a value in the same column from a specified row.
- INDEX: Returns a value or reference of a cell at the intersection of a specified row and column in a range.
- MATCH: Returns the relative position of a value within a range.

Demonstrate the use of common spreadsheet functions such as SUM, AVERAGE, COUNT, COUNTA, COUNTIF, MAX and MIN.

Assessment

- In a spreadsheet, how would you use the SUM function to add up the values in cells A1 to A10?
- You have a list of student scores in column C, and you want to count the number of students who scored above 80. Which function would you use, and what would be the formula?
- Suppose you have a range of values in cells B1 to B8, and you want to calculate the average of all the non-empty cells in that range. Which function would you use, and what would be the formula?

Reflection (10mins)

Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson.

Take feedback from learners and summarize the lesson.

Homework/Project Work/Community Engagement Suggestions

Suppose you have a column of dates in cells E1 to E10, and you want to extract the month value from each date. Which function would you use, and what would be the formula to achieve this?

Cross-Curriculum Links/Cross-Cutting Issues

None

Potential Misconceptions/Student Learning Difficulties

None

Week Ending: 19-05-2023	DAY:	Subject: Computing
Duration: 60mins		Strand: Productivity Software
Class: B8	Class Size:	Sub Strand: Introduction to Electronic Spreadsheet
Content Standard: B8.2.4.1. Demonstrate How to Use the Spreadsheet (using functions and complex formulas)	Indicator: B8.2.4.1.1. Perform operations using functions and Built-in functions.	Lesson: 1 of 2
Performance Indicator: Learners can add and modify text using different font types		Core Competencies: CC8.2: CP6.1
Reference: Computing Curriculum Pg. 32		
Activities For Learning & Assessment		
<p>Starter (5mins)</p> <p>Revise with learners to review their understanding in the previous lesson.</p> <p>Share performance indicators and introduce the lesson.</p> <p>Main (35mins)</p> <p>Enumerate the difference between formulas and functions.</p> <p>Formulas:</p> <ol style="list-style-type: none"> 1. Formulas are expressions or equations used to perform calculations or manipulate data within a software application or spreadsheet. 2. They are typically written using mathematical operators, such as addition (+), subtraction (-), multiplication (*), and division (/), along with cell references, constants, and functions. 3. Formulas are used to perform calculations on a single cell or a range of cells. 4. They can incorporate logical operators, such as IF statements, to make decisions based on certain conditions. 5. Formulas are often used in spreadsheet applications like Microsoft Excel or Google Sheets to perform calculations, create relationships between data, and generate dynamic results. <p>Functions:</p> <ol style="list-style-type: none"> 1. Functions are pre-defined routines or procedures built into software applications or programming languages. 2. They are designed to perform specific tasks or calculations and can accept input parameters, process them, and produce a result. 3. Functions are written in a specific syntax, often with a function name followed by parentheses, and can take one or more arguments as input. 4. They can be used to perform complex calculations, manipulate strings, handle dates and times, and perform various other operations. 5. Functions are reusable and can be called from different parts of a program or used within formulas in spreadsheet applications. 		
Resources	Progression	
Pictures and videos	Adding and modifying text using different font types to MS Publisher document	

Guide learners to access built-in functions to perform operations on sample data.

1. Mathematical Functions:

- SUM: Adds a range of numbers.
- AVERAGE: Calculates the average of a range of numbers.
- MAX: Finds the maximum value in a range.
- MIN: Finds the minimum value in a range.
- ROUND: Rounds a number to a specified number of decimal places.

2. Statistical Functions:

- COUNT: Counts the number of cells in a range that contain numbers.
- COUNTA: Counts the number of non-empty cells in a range.
- COUNTIF: Counts the number of cells that meet a specified condition.
- SUMIF: Adds the cells that meet a specified condition.
- AVERAGEIF: Calculates the average of cells that meet a specified condition.

3. Text Functions:

- CONCATENATE: Joins multiple text strings into one.
- LEFT: Extracts a specified number of characters from the beginning of a text string.
- RIGHT: Extracts a specified number of characters from the end of a text string.
- LEN: Calculates the number of characters in a text string.
- FIND: Searches for a text string within another text string and returns its position.

4. Logical Functions:

- IF: Performs a logical test and returns one value if true and another value if false.
- AND: Returns true if all arguments are true.
- OR: Returns true if any argument is true.
- NOT: Reverses the logical value of its argument.

5. Date and Time Functions:

- TODAY: Returns the current date.
- NOW: Returns the current date and time.
- DATE: Creates a date value using specified year, month, and day.
- DAY: Extracts the day value from a date.
- MONTH: Extracts the month value from a date.

6. Lookup and Reference Functions:

- VLOOKUP: Searches for a value in the leftmost column of a table and returns a value in the same row from a specified column.
- HLOOKUP: Searches for a value in the top row of a table and returns a value in the same column from a specified row.
- INDEX: Returns a value or reference of a cell at the intersection of a specified row and column in a range.
- MATCH: Returns the relative position of a value within a range.

Demonstrate the use of common spreadsheet functions such as SUM, AVERAGE, COUNT, COUNTA, COUNTIF, MAX and MIN.

<p>Assessment</p> <ul style="list-style-type: none"> • In a spreadsheet, how would you use the SUM function to add up the values in cells A1 to A10? • You have a list of student scores in column C, and you want to count the number of students who scored above 80. Which function would you use, and what would be the formula? • Suppose you have a range of values in cells B1 to B8, and you want to calculate the average of all the non-empty cells in that range. Which function would you use, and what would be the formula? <p>Reflection (10mins)</p> <p>Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson.</p> <p>Take feedback from learners and summarize the lesson.</p>		
<p>Homework/Project Work/Community Engagement Suggestions</p>		
<p>Suppose you have a column of dates in cells E1 to E10, and you want to extract the month value from each date. Which function would you use, and what would be the formula to achieve this?</p>		
<p>Cross-Curriculum Links/Cross-Cutting Issues</p>		
<p>None</p>		
<p>Potential Misconceptions/Student Learning Difficulties</p>		
<p>None</p>		