**EMERALD ROYAL INT’L SCHOOL**

**LESSON PLAN/NOTE FOR WEEK 1 ENDING: 5TH MAY, 2023**

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| **Term** | 3rd |
| **Week** | 1 |
| **Class** | SS1 |
| **Date** | 04/05/2023 |
| **Subject** | Data Processing |
| **Topic** | Inserting formulas and using functions |
| **Sub-Topic** | Writing complex formulas |
| **Period** | 7th |
| **Time** | 12:30 – 1:10 |
| **Duration** | 40minutes |
| **Number in class** | 7 |
| **Average age** | 14years |
| **Sex** | Mixed |
| **Specific Objectives** | By the end of the lesson, students should be able to:   1. Explain a complex formula and function 2. Write complex formulas |
| **Rationale** | To enable students learn how to write complex formulas |
| **Previous knowledge** | Students have been taught how to write simple formulas |
| **Instructional material** | Computer set with Microsoft Excel software |
| **Reference** | Data Processing for Senior Secondary Education (SS1 – 3) by Hiit Plc |

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| **STEPS** | **TEACHER’S ACTIVITIES** | **STUDENTS’ ACTIVITIES** | **LEARNING POINTS** |
| Introduction | The teacher introduces the lesson by asking the students to mention the shortcut for copying, cutting and pasting a document. | Students answer the teacher’s question orally. | To arouse the students interest for the lesson. |
| Step I | *The teacher explains the concept of complex formulas and functions.* Complex formulas Simple formulas have one mathematical operation, such as ****5+5****. ****Complex formulas**** have more than one mathematical operation, such as ****5+5-2****. When there is more than one operation in a formula, the ****order of operations**** tells us which operation to calculate first. To use Excel to calculate complex formulas, you'll need to understand the order of operations. The order of operations Excel calculates formulas based on the following ****order of operations****:   1. Operations enclosed in ****parentheses**** 2. ****Exponential**** calculations (to the power of) 3. ****Multiplication**** and ****division****, whichever comes first 4. ****Addition**** and ****subtraction****, whichever comes first   A mnemonic that can help you remember the order is ****P****lease ****E****xcuse ****M****y ****D****ear ****A****unt ****S****ally. Basic functions A ****function**** is a ****predefined formula**** that performs calculations using specific values in a particular order. One of the key benefits of functions is that they can save you time because you do not have to write the formula yourself. Excel has hundreds of functions to assist with your calculations. The parts of a function The order in which you insert a function is important. Each function has a specific order—called ****syntax****—which must be followed in order for the function to work correctly. The basic syntax to create a formula with a function is to insert an ****equals sign (=)****, ****function name****(SUM, for example, is the function name for addition), and ****argument****. Arguments contain the information you want the formula to calculate, such as a range of cell references. | Students listen to the teacher’s explanation and practicalize the steps involved | To ensure all students are carried along. |
| Step II | *Writing complex formulas*  Using AutoSum to select common functions  The ****AutoSum****command allows you to automatically return the results for a range of cells for common functions like SUM and AVERAGE.   1. Select the cell where the answer will appear (****E24****, for example). 2. Click the ****Home****tab. 3. In the ****Editing****group, click the ****AutoSum****drop-down arrow and select the function you want (****Average****, for example). 4. A formula will appear in ****E24****, the selected cell. If logically placed, AutoSum will select your cells for you. Otherwise, you will need to click the cells to choose the argument you want. 5. Press ****Enter****, and the result will appear.   The ****AutoSum****command can also be accessed from the ****Formulas**** tab.  You can also use the ****Alt+=**** keyboard shortcut instead of the AutoSum command. To use this shortcut, hold down the ****Alt**** key and then press the ****equals sign****. Working with arguments Arguments can refer to both ****individual cells**** and ****cell ranges****and must be enclosed within ****parentheses****. You can include one argument or multiple arguments, depending on the syntax required for the function.  For example, the function ****=AVERAGE(B1:B9)****would calculate the ****average**** of the values in the cell range B1:B9. This function contains only one argument.  Multiple arguments must be separated by a ****comma****. For example, the function ****=SUM(A1:A3, C1:C2, E2)****will ****add**** the values of all cells in the three arguments. | Students pay attention and ask questions where necessary. | For proper understanding of the lesson |
| Summary | *The teacher summarizes the lesson as thus:*  There are a variety of functions. Here are some of the most common functions you'll use:   * ****SUM****: This function ****adds**** all the values of the cells in the argument. * ****AVERAGE****: This function determines the ****average**** of the values included in the argument. It calculates the sum of the cells and then divides that value by the number of cells in the argument. * ****COUNT****: This function ****counts**** the number of cells with numerical data in the argument. This function is useful for quickly counting items in a cell range. * ****MAX****: This function determines the ****highest**** ****cell value**** included in the argument. * ****MIN****: This function determines the****lowest cell value**** included in the argument. | Students copy the note in their exercise books. | For reference purpose |
| Evaluation | The teacher asks the students to explain the process of wring a complex formula | Students answer the question orally | To ascertain the students level of understanding of the lesson |
| Conclusion | The teacher corrects the students where necessary. | Students take note of the correction(s) made. | To ensure proper understanding of the lesson |
| Assignment | The teacher gives the students the following assignment.  Describe the use of any function of your choice. | Students copy the assignment in their exercise books | To encourage studying at a home. |



24/5/2023

Principal Head Instructor