LESSON PLAN

Subject: IT (Information Technology) and ICT(Information and Communication Technologies).

Topic: Using Microsoft Excel to calculate the value of a cell by formulas and functions.

Age of students: 16/17 Students of 1st grade, CLIL beginner stage

Language level: B1

**Content aims**

After completing the lesson, the student will be able to:

Describe Microsoft Excel's features.

List formulas and functions in Microsoft Excel.

Define a function, a formula and the order of operations (operator precedence).

Explain the differences between function and formula in Microsoft Excel.

Enter and edit the formulas in Microsoft Excel.

Create formulas and functions in worksheet cells to fill the missing place in the data series.

Change the styles of table.

**Language aims**

After completing the lesson, the student will be able to:

Use subject vocabulary.

Describe creating formulas and functions in Microsoft Excel.

# Materials:

**Materials needed**

Computer stations with installed Microsoft Excel 2007 or higher.

Printed or made in Microsoft Excel worksheet file with examples data tables.

**Optional materials**

Network to access the Internet

# Organization of lesson:

**Introduction**

Teacher asks students questions:

* How can I represent data? (table, graph).
* How to sum up the numbers from the set of numbers?
* How to calculate the arithmetic average?
* How to reference cell in Microsoft Excel?
* Have you ever used Microsoft Excel calculations?

**Procedure**

Lead-in:

* Teacher tells the students what formulas and functions in Microsoft Excel are.
* Teacher informs about basic function in Microsoft Excel (sum, average, min, max).
* Teacher defines terms and demonstrates Microsoft Excel's features.
* Teacher explains the differences between function and formula in Microsoft Excel.

Practice/task:

* Students sit at dedicated computer station.
* Teacher supplies printed materials with tasks for students (student handout).
* Teacher shows students how to enter a formula and insert function step by step by the dialog box.
* Students select a function from a category or from list.
* Students themselves create formulas and function in worksheet cells to fill the missing place in the data series (first and second task from a student handout).
* Teacher shows how to format series data table using the pre-set styles for tables.
* Teacher shows how to create a customize table style.

**Summary**

After completing the exercises and save file.   
Remind:

* how to reference cell in excel,
* how to enter formulas and insert functions in Microsoft Excel,
* finding totals using AutoSum & AutoFill,
* how to completing table data by copping formulas or functions,
* how to change the styles of table.

## Student handout[[1]](#footnote-1)

Create table 1 and table 2 in Microsoft Excel. Fill in missing cells in each table using Excel formulas and function.

**First task**

In the first table complete/calculate the percentage of students from the same village, students from the outside village and calculate total numbers of students for each groups. Microsoft Excel spreadsheet save as name given below table.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **class name** | **number of students** | **students from the same village** | **%** | **students from the outside village** | **%** |
| IA | 31 | 28 |  | 3 |  |
| IB | 30 | 20 |  | 10 |  |
| IIA | 28 | 16 |  | 12 |  |
| IIB | 29 | 12 |  | 17 |  |
| IIC | 26 | 20 |  | 6 |  |
| IID | 30 | 30 |  | 0 |  |
| IIIA | 26 | 24 |  | 2 |  |
| IIIB | 27 | 19 |  | 8 |  |
| IVA | 24 | 23 |  | 1 |  |
| IVB | 25 | 17 |  | 8 |  |
| **Total** |  |  |  |  |  |

Table 1: students.xlsx

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**Second task**

In the second table complete/calculate a total number and arithmetic average for each classes in the five years. A Microsoft Excel spreadsheet save as name given below table.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2011** | **2012** | **2013** | **2014** | **2015** | **Total** | **arithmetic average** |
| class I | 86 | 90 | 80 | 110 | 96 |  |  |
| class II | 115 | 104 | 96 | 99 | 91 |  |  |
| class III | 91 | 94 | 106 | 91 | 91 |  |  |
| class IV | 86 | 82 | 97 | 88 | 79 |  |  |
| **Total** |  |  |  |  |  |  |  |

Table 2: class.xlsx

1. Supplementary materials are available on the website at http://www.excel-easy.com/introduction/formulas-functions.html [↑](#footnote-ref-1)