

## ITPS F: Spreadsheets

Why teachers need to be able to use spreadsheets (Statement of Purpose):

- To organize traditional grade books by student and assignment; to use formulas for calculating averages and totals; to be able to sort by test/assignment scores and last name
- To be able to organize a budget, including calculations of totals and balances; formatting decimal places and dollar signs
- To be able to create student assignments that require the use of spreadsheets for organizing and charting data; for instance, comparison of statistical data on countries, population data in the U.S., scientific data related to growth rates, etc...
- To be able to read and interpret student and school data presented in spreadsheet form; to be able to sort and find patterns in data

In order to demonstrate this competency, the student will create a spreadsheet that could be used for an educational purpose such as instruction, curriculum, and/or administration. The spreadsheet must contain at least ten rows of data, row and column headings, and at least two functions/formulas. In addition the student will sort data in multiple ways and create a chart or graph using axis labels and titles. The student must write a rationale for how this spreadsheet would be used for an appropriate educational purpose, as well as the data analysis. A link to the spreadsheet must be included. All materials must be submitted in the student's electronic portfolio.

### ITPS F - Spreadsheets Rubric

Criteria	Standard	Does Not Meet	Target	Exemplary
<i>Rationale</i>				
<b>Rationale</b>	IL-ISBE-TECH.1A IL-ISBE-TECH.1F IL-ISBE-TECH.2A IL-ISBE-TECH.3A IL-ISBE-TECH.3B	The rationale is poorly written or does not state an appropriate educational purpose.	The teacher candidate clearly explains an appropriate educational purpose for this artifact.	The rationale is well written and ties the purpose to an instructional, curricular, or administrative purpose.
<i>Criteria that demonstrate student's ability to organize and input data</i>				
<b>10 rows of data -or- complete inclusion of all available data</b>	IL-ISBE-TECH.1A IL-ISBE-TECH.2C IL-ISBE-TECH.2D IL-ISBE-TECH.3B	Fewer than 10 rows of data are included -or- there is incomplete data.	10 rows of data are included -or- there is complete inclusion of all available data.	More than 10 rows of data are included.
<b>Data, including row &amp; column headings, are logically organized</b>	IL-ISBE-TECH.1A IL-ISBE-TECH.2C IL-ISBE-TECH.2D IL-ISBE-TECH.3B	Data is not logically organized.	Data, including row and column headings, are logically organized.	Data, including row and column headings, are organized in a logical manner that contributes to the ease of using the spreadsheet.

Criteria	Standard	Does Not Meet	Target	Exemplary
<i>Criteria that demonstrate student's ability to manipulate the data</i>				
<b>Able to use function or formula</b>	IL-ISBE-TECH.1A IL-ISBE-TECH.2A IL-ISBE-TECH.2C IL-ISBE-TECH.2D IL-ISBE-TECH.2E IL-ISBE-TECH.3B IL-ISBE-TECH.5A	Fewer than two functions are used; invalid functions.	Uses at least two basic functions (SUM, AVG, +, -, /, x) and/or standard deviation, mode, median or mean are used.	Uses formulas related to formulas in other cells and/or uses more complex formulas, such as those found in a look-up table.
<b>Able to sort by different criteria</b>	IL-ISBE-TECH.1A IL-ISBE-TECH.2C IL-ISBE-TECH.2D IL-ISBE-TECH.2E IL-ISBE-TECH.3B IL-ISBE-TECH.5A	Does not show ability to sort by two or more criteria.	Demonstrates ability to sort data by one criterion in both ascending and descending order.	Demonstrates ability to sort data by two or more criteria at the same time.
<i>Criteria that demonstrate student's ability to interpret and present the data</i>				
<b>Able to create chart or graph from data</b>	IL-ISBE-TECH.1A IL-ISBE-TECH.2A IL-ISBE-TECH.2C IL-ISBE-TECH.2D IL-ISBE-TECH.3B IL-ISBE-TECH.5A IL-ISBE-TECH.5H	No chart or graph evident; incomplete chart; wrong type of chart chosen (i.e., chart does a poor job of representing the data).	Demonstrates ability to choose and create the most appropriate type of chart to clearly display a set of tabulated data. Chart includes axis labels and titles which help with clarity.	Demonstrates ability to transfer data and/or charts into other applications such as Word or presentation software.
<b>Able to interpret data from a spreadsheet</b>	IL-ISBE-TECH.1A IL-ISBE-TECH.2A IL-ISBE-TECH.2C IL-ISBE-TECH.2E IL-ISBE-TECH.3B IL-ISBE-TECH.5H	Inability to draw conclusions from data - or- inability to draw the most important/obvious conclusions presented by the data.	Draws at least two conclusions about patterns evident in the data.	Ability to make recommendations for change/improvement based on conclusions drawn from data; able to compare conclusions drawn from two or more sets of data.

**Students must meet all requirements at the "Target" level or above to successfully complete the ITPS F Assessment requirement.**