

Unit 02: Microsoft Excel 2013

Content Area: **Template**
Course(s):
Time Period: **Full Year**
Length: **FY**
Status: **Published**

Standards Alignment

New Jersey Student Learning Standards

CCSS.Math.Content.HSF-IF	Interpreting Functions
CCSS.Math.Content.HSF-IF.C	Analyze functions using different representations
CCSS.Math.Content.HSF-IF.C.7	Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.
LA.K-12.NJSLSA.W	Writing
LA.K-12.NJSLSA.W6	Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.
LA.WHST.9-10.6	Use technology, including the Internet, to produce, share, and update writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

Integration of Career Readiness, Life Literacies and Key Skills

CRP.K-12.CRP1	Act as a responsible and contributing citizen and employee.
CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP3	Attend to personal health and financial well-being.
CRP.K-12.CRP4	Communicate clearly and effectively and with reason.
CRP.K-12.CRP5	Consider the environmental, social and economic impacts of decisions.
CRP.K-12.CRP6	Demonstrate creativity and innovation.
CRP.K-12.CRP7	Employ valid and reliable research strategies.
CRP.K-12.CRP8	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP.K-12.CRP9	Model integrity, ethical leadership and effective management.
CRP.K-12.CRP10	Plan education and career paths aligned to personal goals.
CRP.K-12.CRP11	Use technology to enhance productivity.
CRP.K-12.CRP12	Work productively in teams while using cultural global competence.

Technology / Integration of Computer Science and Design Thinking

TECH.8.1.12	Educational Technology: All students will use digital tools to access, manage, evaluate, and
-------------	--

synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.

TECH.8.1.12.A	Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.
TECH.8.1.12.A.2	Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review.
TECH.8.1.12.A.5	Create a report from a relational database consisting of at least two tables and describe the process, and explain the report results.
TECH.8.1.12.F	Critical thinking, problem solving, and decision making: Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.
TECH.8.1.12.F.1	Evaluate the strengths and limitations of emerging technologies and their impact on educational, career, personal and or social needs.

Interdisciplinary Connections: NJSLS for ELA, Social Studies, Science and/or Math Section

Capacities of the Literate Individual

Students Who are College and Career Ready in Reading, Writing, Speaking, Listening, & Language

They use technology and digital media strategically and capably.

Integration of Diversity, Equity and Inclusion; Climate Change; Informational and Media Literacy

see Crosswalks

21st Century Life and Careers

Stage I: Desired Results

Transfer/Overview/Rationale

Transfer / Overview / Rationale

Unit Rationale

The purpose of this unit ...

The purpose of this unit is for students to become proficient in Excel 2013. Excel 2013 is the spreadsheet application in the newest Microsoft Office Suite. Students will learn how to use Excel's powerful tools for organizing, visualizing,

analyzing and calculating data.

Meaning

Essential Questions

Essential Questions

- What is the purpose of Excel?
- Can you identify the parts of a worksheet?
- How would you apply formatting to objects?
- How do you sort and filter data?

Enduring Understanding/Indicators of Understanding

Enduring Understanding/Indicators of Understanding

Excel is a useful tool to use to organize and analyze data

Acquisition (Student Learning Objectives)

Knowledge

Knowledge

Students will know...

1.How to create and manage worksheets and workbooks.

2.How to create cells and ranges

3. How to create tables

4.How to apply formulas and functions

5.How to create charts and objects

Skills

Skills

Student will be skilled at ...

1.Creating new blank workbooks

2. Creating workbooks using templates

3 Importing files

4.Opening non-native files directly in Excel

5.Adding worksheets to existing workbooks

6.Copying and moving worksheets

7.Searching for data within a workbook

8.Inserting hyperlinks

9.Changing worksheet order

10. Using Go To

11. Using the Name Box

12.Changing worksheet tab color

13. Modifying Page Setup

14.Inserting and deleting columns and rows

15.Changing Workbook Themes

16. Adjusting Rows and Columns

17.Inserting Watermarks

18.Inserting Headers and Footers

19.Setting Data Validation

20.Hiding Worksheets, Columns and Rows

21.Customizing the Quick Access Toolbar

22.Customizing the Ribbon

23.Managing Macro Security

22.Changing Workbook Views

23.Recording Simple Macros

24.Adding value to workbook properties

25. Setting the magnification level

26.Displaying formulas

27. Freezing panes

28.Assigning shortcut keys

29.Splitting the window

30. Freezing panes

31.Setting a print area

32.Saving workbooks in alternative file formats

33.Appending data to worksheets

34.Finding and replacing data

35.Copying and pasting data

36.Using autofill

37. Expanding data across columns

38.Inserting and deleting cells

39.Merging cells

40.Modifying cell alignment and indentation

41.Changing font and font styles

42.Using the format painter

43.Wrapping text within cells

44.Applying number formats

45. Applying cell formatting and styles

46.Creating WordArt

47.Applying Conditional Formatting

48.Inserting sparklines

49.Transposing columns and rows

50.creating named ranges

51. Creating outlines

52. Collapsing groups of data in outlines

53. Inserting subtotals

54. Converting tables and ranges

55. Adding and removing cells within tables

56. Defining titles

57. Applying styles to tables

58. Banding rows and columns

59. Inserting total rows

60. Removing styles from tables

61. Filtering records

62. Sorting data on multiple columns

63. Changing sort order

64. Removing duplicates

65.Utilizing references (relative, mixed, and absolute

66.Using functions

67.Creating charts

68.Adding data series to charts

69.Applying chart layouts and styles

70.Using Quick Analysis

71.Adding chart legends

72. Resizing charts

73.Modifying chart parameters

74.Creating text boxes

75. Applying SmartArt

76.Inserting images

77.Adding borders to objects

78.Adding style and effects to objects

79.Changing object colors

80.Modifying object properties

81.Positioning charts

Stage 3: Learning Plan

Resource and Mentor Texts

Resources and Mentor Texts

Microsoft IT Academy

www.microsoft.com/itacademy

Formative Assessment Strategies

Formative Assessment Strategies

Quiz- Verbal and Written

Exit tickets

Student/Teacher feedback

Observation

Learning Activities/Unit of Study

Learning Activities/Unit of Study

"Module 2: Lesson 3
Module 3: Lesson 5
Module 5: Lesson 11"
Lesson 3: Creating workbooks
Lesson 3: Creating workbooks
Lesson 5: Accessing data from other applications
Lesson 5: Accessing data from other applications
Lesson 11: Manipulating worksheets
Lesson 11: manipulating worksheets
"Module 4: Lessons: 8,9
Module 5: Lessons: 11,12"
Lesson 8: Finding and replacing data
Lesson 12: Managing the display of worksheets
Lesson 11: Manipulating worksheets
Lesson 9: Locating cells and ranges
Lesson 9: Locating cells and ranges
"Module 1: Lesson 2
Module 5: Lessons: 11,13
Module 6: Lesson 17
Module 7: Lessons: 18,19
Module 8: Lesson 24"
Lesson 11: manipulating worksheets
Lesson 19: Managing page layout and printer
Lesson 13: Inserting, deleting, and hiding data
Lesson 17: Changing worksheet appearance
Lesson 2: Identify and selecting worksheet elements
Lesson 18: Preparing workbooks for printing
Lesson 18: Preparing workbooks for printing
Lesson 24: Ensuring valid data
"Module 1: Lesson 1
Module 2: Lesson 3
Module 5: Lessons: 12,13,14
Module 8: Lesson 23
Module 14: Lessons: 44,45"
Lesson 12: Managing the display of worksheets
Lesson 13: Inserting, deleting, and hiding data
Lesson 45: Personalizing the user interface
Lesson 45: Personalizing the user interface
Lesson 44: Automating task
Lesson 1: Exploring Excel 2013
Lesson 44: Automating task
Lesson 3: Creating workbooks
Lesson 1: Exploring Excel 2013
Lesson 23: Changing reference types
Lesson 14: Displaying multiple parts of a workbook
Lesson 44: Automating task
Lesson 14: Displaying multiple parts of a workbook
"Module 2: Lesson 4
Module 7: Lessons: 19,20,21"

Lesson 21: Specifying print items
Lesson 4: Saving workbooks

Lesson 21: Specifying print items
Lesson 20: Setting print scaling
Lesson 19: Managing page layout and printer
Lesson 4: Saving workbooks
Lesson 21: Specifying print items
Lesson 4: Saving workbooks

"Module 3: Lessons: 5,6,7
Module 4: Lessons 8
Module 5: Lesson 13"
Lesson 5: Accessing data from other applications
Lesson 8: Finding and replacing data
Lesson 6: Copying and pasting data
Lesson 7: Filling cells automatically
Lesson 7: Filling cells automatically
Lesson 13: Inserting, deleting, and hiding data
"Module 6: Lessons: 15,16,17
Module 13: Lesson 41"
Lesson 16: Formatting cell structure
Lesson 15: Formatting text
Lesson 16: Formatting cell structure
Lesson 15: Formatting text
Lesson 17: Changing worksheet appearance
Lesson 41: Inserting graphic objects
"Module 3: Lesson 6
Module 4: Lesson 10
Module 12: Lessons: 37,38,39"
Lesson 37: Applying conditional formatting
Lesson 38: Working with sparklines
Lesson 6: Copying and pasting data
Lesson 10: Identifying cells and ranges by using names
Lesson 39: Summarizing data

Module 10: Lessons: 29,31,32
Lesson 29: Creating and formatting tables
Lesson 32: Modifying table structure
Lesson 31: Modifying table formatting
Module 10: Lessons: 29,31,32
Lesson 29: Creating and formatting tables
Lesson 31: Modifying table formatting
Lesson 32: Modifying table structure

Lesson 31: Modifying table formatting
Module 10: Lessons: 30,32
Lesson 30: Sorting and filtering table data
Lesson 32: Modifying table structure

Module 8: Lesson 23
Lesson 23: Changing reference types
Lesson 22: Building formulas
Module 9: Lessons: 25,26
Lesson 25: Summing data
Lesson 26: Using basic statistical functions

Module 9: Lesson 27
Lesson 27: Using advanced statistical functions
Module 9: Lesson 28
Lesson 28: Manipulating text by using functions
"Module 11: Lessons: 33,35
Module 12: Lesson 36"
Lesson 33: Creating charts
Lesson 35: Modifying data in charts
Lesson 36: Quickly formatting and presenting data
Module 10: Lessons: 33,34,35
Lesson 34: Formatting charts
Lesson 33: Creating charts
Lesson 35: Modifying data in charts
Lesson 34: Formatting charts
Lesson 33: Creating charts
Module 13: Lessons: 40,41,42,43
Lesson 41: Inserting graphic objects
Lesson 42: Creating business diagrams
Lesson 40: Inserting pictures
Lesson 43: Formatting graphic objects

Modifications and/or Accommodations

Suggested Modifications (ELL, Sp. Ed, Gifted, At-risk of Failure)

English Language Learners

Native language support: The teacher provides auditory or written content to students in their native language.

Adjusted Speech: The teacher changes speech patterns to increase student comprehension. This could include facing the students, paraphrasing, clearly indicating the most important ideas, and speaking more slowly.

Visuals: The teacher uses graphics, pictures, visuals, and manipulatives. This helps ELL students better understand and comprehend the subjects at hand.

Front-Loading Vocabulary: The teacher front loads vocabulary. This means providing students with a list of important vocabulary words they will need to know for a book, lesson, etc. prior to the lesson being taught. Including pictures to go with the vocabulary words is also very beneficial for the students.

Special Education Students

Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working memory is easily overloaded by excessive detail. The best way to deliver information is to organize it into meaningful units. Because students with special needs get overloaded easily, chunking is an effective strategy

to use with them.

Checking for Understanding: It is important to constantly check for understanding, especially for students who have accommodations. Teachers want to make sure students understand the concepts being covered in a way that makes sense to them.

Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

Oral Reading: The teacher will read work orally to students. Class work such as tests and literature circles may need to be read aloud to the student.

Timers: The teacher will use timers as an instructional tool. The use of timers is beneficial for students who have trouble completing tasks. Timers can be helpful so the student is aware of how much time they have to complete an assignment.

Students with 504 Plans

Chunking: The teacher presents information in a way that makes it easy for students to understand and remember. Chunking is based on the presumption that our working memory is easily overloaded by excessive detail. The best way to deliver information is to organize it into meaningful units. Because students with special needs get overloaded easily, chunking is an effective strategy to use with them.

Checking for Understanding: It is important to constantly check for understanding, especially for students who have accommodations. Teachers want to make sure students understand the concepts being covered in a way that makes sense to them.

Extra time: The teacher provides students with special needs extra time to complete work or answer questions. It is important to give students enough time to process their thoughts.

Gifted & Talented Strategies

Extensions/Enrichments: Teachers will provide gifted and talented students with extension/enrichment projects. Students will be challenged to further their understanding, to apply acquired knowledge, and/or to produce something in reference to acquired knowledge.

Modify/Change Activities: Teachers will monitor and modify activities to accommodate those students who need to be challenged further. Additional reading, problem-solving, writing, or project work is necessary for those students who are ready to move on at a rate more accelerated than their peers. In this way, G & T students are provided the same opportunity for support as special needs students.

Students at Risk of School Failure

Directions or Instructions: Make sure directions and/or instructions are given in limited numbers. Give directions/instructions verbally and in simple written format. Ask students to repeat the instructions or directions to ensure understanding occurs. Check back with the student to ensure he/she hasn't forgotten.

Peer Support: Peers can help build confidence in other students by assisting in peer learning. Many teachers use the 'ask 3 before me' approach. This is fine, however, a student at risk may have to have a specific student or two to ask. Set this up for the student so he/she knows who to ask for clarification before going to you.

Alternate or Modified Assignments: Always ask yourself, "How can I modify this assignment to ensure the students at risk are able to complete it?" Sometimes you'll simplify the task, reduce the length of the assignment or allow for a different mode of delivery. For instance, many students may hand something in, the at-risk student may jot notes and give you the information verbally. Or, it just may be that you will need to assign an alternate assignment.

Increase One to One Time: When other students are working, always touch base with your students at risk and find out if they're on track or needing some additional support. A few minutes here and there will go a long way to intervene as the need presents itself.

Contracts: It helps to have a working contract between you and your students at risk. This helps prioritize the tasks that need to be done and ensure completion happens. Each day write down what needs to be completed, as the tasks are done, provide a checkmark or happy face. The goal of using contracts is to eventually have the student come to you for completion sign-offs.

Hands On: As much as possible, think in concrete terms and provide hands-on tasks. This means a child doing math may require a calculator or counters. The child may need to tape record comprehension activities instead of writing them. A child may have to listen to a story being read instead of reading it him/herself.

Tests/Assessments: Tests can be done orally if need be. Break tests down in smaller increments by having a portion of the test in the morning, another portion after lunch and the final part the next day.

Seating: Seat students near a helping peer or with quick access to the teacher. Those with hearing or sight issues need to be close to the instruction which often means near the front.