

Computer Applications

Instructional Framework

An instructional framework provides educators with a list of benchmark statements aligned to Common Core and national content area standards for a given course or program. The Missouri Computer Applications Instructional Framework lists a sequence of content for computer applications, organized into distinct units of instruction with component evidence of mastery statements.

Codes for the National Standards for Business Education are:

CD = Career Development

IT = Information Technology

COMM = Communication

M = Management

CP = Computation

Codes for Common Core English Language Arts and Literacy are:

L = Language

W = Writing

RI = Reading for Informational Text

WHST = Writing for Literacy in History/Social Studies, Science, and Technical Subjects

SL = Speaking and Listening

Codes for Common Core Mathematics are:

G-CO = Geometry: Congruence

N-Q = Number and Quantity: Quantities

Computer Applications Instructional Framework

A. Apply Input Methods	Common Core	NBEA Standards
1. Demonstrate improvement in speed and accuracy of keyboarding		IT.IV.1.1
2. Demonstrate proper keyboarding technique		IT.IV.1.1
3. Identify proper ergonomic principles		IT.IV.1.1
B. Execute Basic Computer Operations		
1. Use system tools (e.g., defragment, disk clean up)		IT.III.3-4.5
2. Use program interface (e.g., menu items, ribbons, toolbars, dialog boxes)		IT.V.1.2
3. Manage and transfer files		IT.III.1.2
4. Identify resources to obtain assistance (e.g., Help menu, software manual, Web site)		IT.III.3-4.6
5. Demonstrate proper network user procedures and protocol (e.g., logging on, saving to network)		IT.XII.2.2
6. Identify security issues related to computer hardware, software, and data		IT.XIV.4.1
7. Identify file formats and extensions		IT.III.1,2
8. Perform basic troubleshooting and maintenance		IT.III.3-4.5
9. Demonstrate input of data from various sources (e.g., Web, scanner, digital camera)		IT.IC.2-4.2
10. Identify hardware and software specifications to purchase a computer (e.g., RAM, processor, hard drive, software, and price)		IT.IV.4.5 IT.IV.4.6 IT.II.4.2 IT.II.2.4
11. Save files to various storage devices (e.g., CDs, USB, hard drive, DVD)		COMM.IV.3,3
12. Determine appropriate software applications for tasks		IT.V.1.1

C. Construct Business Documents using Word Processing Applications		
1. Demonstrate correct use of word processing terminology	RI 11-1.4	COMM.I.B.1.4
2. Create and format business documents (e.g., letters, memos, outlines, newsletters, and reports)	W 11-12.2	COMM.I.D.3.14 COMM.I.D.3.10 IT.V.1,2
3. Proofread and edit documents		COMM.I.D.3.6 COMM.I.D.2,6
4. Manipulate the features of word processing software to enhance documents (e.g., headers, footers, tabs)		COMM.IV.3.8
5. Create and format tables		IT.V.3.5
6. Create mail-merge documents		IT.V.3.5
7. Insert and manipulate graphics		COMM.IV.1.4 IT.V.3.5
8. Create documents using templates		COMM.IV.1.4 IT.V.3.5
9. Create hyperlinks within document		IT.V.3.5
10. Prepare envelopes and labels		IT.V.3.5
11. Illustrate the use of enhancement features (e.g., borders, lines, shading, bold, bullets)		COMM.IV.3,8
12. Demonstrate use of automatic features (e.g., AutoCorrect, spell-check, thesaurus)		COMM.IV.2.6
D. Construct Business Documents using Spreadsheet Applications		
1. Demonstrate correct use of spreadsheet terminology	RI 11-12.4	COMM.I.B.1.4
2. Create, design, and edit spreadsheets		COMP.I.1.2
3. Create basic formulas with addition, subtraction, multiplication, and division		COMP.I.1.5
4. Format cell, column, and row contents (e.g., font, color, alignment, shading, decimal)		COMM.IV.3.8 IT.V.3.5
5. Format columns and rows		COMM.IV.3.8
6. Use basic functions/formulas (e.g., auto sum, average, IF)		COMP.III.1.2 IT.V.1.2
7. Create, format, and edit charts and graphs	F-IF.7	IT.V.3.5
8. Interpret and organize spreadsheet data (e.g., sort and filter)		COMP.I.1.6 COMP.I.1.8
9. Integrate spreadsheets in other applications		IT.V.3.5
10. Link spreadsheet data		IT.V.3.5
11. Use advanced functions/formulas (e.g., payment, future value, statistical)	F-IF.1	IT.V.3.5
12. Use lookup tables		IT.V.3.5
13. Demonstrate protecting and freezing features		IT.V.3.5
14. Use relative and absolute cell references		IT.V.3.5
15. Create and use named ranges in formulas		IT.V.3.5
16. Analyze spreadsheet data using "what if" scenarios	F-IF.6	IT.V.3.5
17. Manipulate multiple worksheets in a workbook		IT.V.3.5

E. Construct Business Documents using Database Applications		
1. Demonstrate correct use of database terminology	RI 11-12.4	IT.IX.1.2
2. Create and manipulate a database		IT.IX.3.7
3. Process material using database features (e.g., sort, filter, and merge)		IT.IX.2.3
4. Generate, format, and print reports		IT.IX.4.4
5. Distinguish between different field types (e.g., text, numeric)		IT.IX.2.4
6. Integrate database information with other applications		IT.V.3.5
7. Create table relationships		IT.IX.3.1
8. Modify database using queries (e.g., combine, calculate, update, duplicate)		IT.IX.3.4
9. Design and use forms in database		IT.IX.3.2
10. Use import/export features (e.g., database, table)		IT.IX.4.5
F. Construct Business Documents using Presentation Applications		
1. Demonstrate correct use of presentation software terminology	RI 11-12.4	COMM.I.B.1.4
2. Create, format, and edit presentations		IT.V.1.2
3. Enhance presentations (e.g., sound, animation, graphics, transitions, and video)	N-Q.1, N-Q.2, N-Q.3	IT.V.3.5
4. Apply design and layout principles to presentations	N-Q.1, N-Q.2, N-Q.3	COMM.IV.3.8
5. Deliver an oral presentation		COMM.I.3.5
6. Utilize proper presentation etiquette (e.g., number of bullets, lines, words, and notes)		COMM.I.4.5
7. Integrate input from various software applications		IT.V.3.5
G. Explore the Internet and Online Classroom Portals		
1. Demonstrate correct use of Internet terminology	RI 11-12.4	COMM.I.B.1.4
2. Demonstrate principal usages of online communication (e.g., upload, download, attaching files)		COMM.I.D.1.6 COMM.IV.3.2
3. Demonstrate principal usages of the Internet (e.g., search, locating URLs)		COMM.IV.4.1 IT.VIII.1.1
4. Identify copyright principles (e.g., public domain, copy protection, licensing)	W 11-12.8	COMM.IV.3.9 BL.V.C.3.7
5. Employ proper online etiquette		COMM.IV.2.4 COMM.IV.2.7
6. Utilize browser tools (e.g., favorites, shortcuts, homepage, cookies, history)		COMM.IV.1.4
7. Utilize online productivity tools (e.g., cloud computing, Web 2.0, Google docs)		COMM.IV.4.1
8. Evaluate Internet resources		IT.VIII.1.2
H. Develop Workplace Readiness Skills		
1. Exhibit leadership skills through a student organization (e.g., FBLA, PBL).		COMM.II.A.4.5
2. Demonstrate ethical behavior when creating business documents		COMM.I.D.2.3
3. Identify career/self employment opportunities		CD.I.B.4.2