



Park Hill School District

Building Successful Futures • Each Student • Every Day

7th Grade Technology Applications

Course Description: The purpose of Technology Applications is to utilize International Society for Technology in Education (ISTE) standards to develop knowledge and skills for 21st Century learners. Students will use the software in Microsoft Office to integrate real-world skills for the workplace. Online collaborative communication, and the use of digital media, will enhance student learning. Digital citizenship is emphasized throughout the course.

Scope and Sequence:

Timeframe	Unit	Instructional Topics
23 days	Microsoft Office	Topic 1: Microsoft Word Topic 2: Microsoft Excel
20 days	Video Editing	Topic 1: Video Editing Software
10 days	Infographic	Topic 1: Career Research Topic 2: Tech Effect
20 days	Graphic Design	Topic 1: Photoshop
13 days	Web Design	Topic 1: HTML

Unit 1: Microsoft Office

Subject: 7th Grade Technology Applications

Grade: 7

Name of Unit: Microsoft Office

Length of Unit: 23 Days

Overview of Unit: Students will learn the productivity tools contained within Microsoft Office Word and Excel. Topics include tables to organize data, use of ribbons to create attractive and easy to understand documents, and utilize tools to format documents into finished products. In Excel, students will create formulas, sort information, and create graphs.

Priority Standards for unit:

- ISTE-EMPOWERED LEARNER.1.D - Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.
- ISTE - KNOWLEDGE COLLECTOR.3.A - Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.
- ISTE - CREATIVE COMMUNICATOR.6.B - Students create original works or responsibly repurpose or remix digital resources into new creations.
- ISTE - COMPUTATIONAL THINKER.5.B - Students collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.

Supporting Standards for unit:

- ISTE-DIGITAL CITIZEN.2.B - Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.

Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom's Taxonomy Levels	Webb's DOK
the fundamental concepts of technology operations	Understand	Understand	2
the ability to choose, use and troubleshoot current technologies	Demonstrate	Apply	3
their knowledge to explore emerging technologies	Transfer	Apply	3

effective research strategies to locate information and other resources for their intellectual or creative pursuits	Plan	Apply	3
effective research strategies to locate information and other resources for their intellectual or creative pursuits	Employ	Apply	3
original works or responsibly repurpose or remix digital resources into new creations	Create	Create	4
relevant data sets	Collect and Identify	Apply	2
digital tools to analyze data sets	Use and Analyze	Apply	3
data in various ways to facilitate problem-solving and decision-making	Represent	Create	3

Essential Questions:

1. How do you know which office application to use for a given task?
2. How can office applications be used to communicate your message?
3. How does learning the options in one application transfer to the other programs?

Enduring Understanding/Big Ideas:

1. You may choose one tool over another based on purpose, audience, and sharing capabilities.
2. A message may be communicated through visual representation, written composition, interactive, and formal presentation.
3. Many of the tools across applications are similar. Once this skill is developed in one application, it is transferable to others.

Unit Vocabulary:

Academic Cross-Curricular Words	Content/Domain Specific
● Row ● Formula ● Border ● Column ● Paragraph	● Cell ● Text Wrap ● Picture Wrap ● Free Rotate ● Concatenate ● Cell

	● Ruler ● Spreadsheet ● Table ● Header ● Line Spacing ● Margins ● Screen Shot ● Sort ● Ribbon ● Tool Bar
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Topic 1: Microsoft Word

Engaging Experience 1

Title: All About Me Poster

Suggested Length of Time: 3-4 days

Standards Addressed

Priority:

- ISTE-EMPOWERED LEARNER.1.D - Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.
- ISTE - KNOWLEDGE COLLECTOR.3.A - Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.
- ISTE - CREATIVE COMMUNICATOR.6.B - Students create original works or responsibly repurpose or remix digital resources into new creations.
- ISTE-EMPOWERED LEARNER.1.D - Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

Supporting:

- ISTE-DIGITAL CITIZEN.2.B - Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.

Detailed Description/Instructions: Students use the ribbons to create a poster that talks about themselves and their favorite things. Students must include shapes, lines, pictures, text boxes, text wrapping, enhanced text, bullets and numbers.

Bloom's Levels: Create

Webb's DOK: 2

Engaging Experience 2

Title: Wanted Poster

Suggested Length of Time: 2-3 days

Standards Addressed

Priority:

- ISTE-EMPOWERED LEARNER.1.D - Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

- ISTE - KNOWLEDGE COLLECTOR.3.A - Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.
- ISTE - COMPUTATIONAL THINKER.5.B - Students collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.

Supporting:

- ISTE-DIGITAL CITIZEN.2.B - Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.

Detailed Description/Instructions: Students use a teacher-designed table to organize information. Students use the paintbrush, text, color, borders, shading, and pictures to enhance their message.

Bloom's Levels: Create

Webb's DOK: 2

Topic 2: Microsoft Excel

Engaging Experience 1

Title: Introductory Activities (Party Time, Payroll, Weather)

Suggested Length of Time: 1 week

Standards Addressed

Priority:

- ISTE-EMPOWERED LEARNER.1.D - Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.
- ISTE - KNOWLEDGE COLLECTOR.3.A - Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.
- ISTE - COMPUTATIONAL THINKER.5.B - Students collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.

Supporting:

- ISTE-DIGITAL CITIZEN.2.B - Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.

Detailed Description/Instructions: Students are introduced to basic tools in Microsoft Excel. Students create a mock party plan using a set amount of money to create budget. Students create a mock payroll to calculate gross income, net income, tax withdrawals and other deductions. Students evaluate a month of weather data and make a chart showing those changes.

Bloom's Levels: Apply, Create

Webb's DOK: 2

Engaging Experience 2

Title: Advanced Activities (Magic Square, Super Hero)

Suggested Length of Time: 1 week

Standards Addressed

Priority:

- ISTE-EMPOWERED LEARNER.1.D - Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.
- ISTE - KNOWLEDGE COLLECTOR.3.A - Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.

- ISTE - COMPUTATIONAL THINKER.5.B - Students collect data or identify relevant data sets, use digital tools to analyze them, and represent data in various ways to facilitate problem-solving and decision-making.

Supporting:

- ISTE-DIGITAL CITIZEN.2.B - Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.

Detailed Description/Instructions: Students create a Sudoku style square to reinforce the importance of using cell reference versus simply typing in a number. Students use a teacher provided list to merge information from multiple columns into a single column and sort the information. Students also apply IF statements to the data.

Bloom's Levels: Apply, Understand

Webb's DOK: 2

Engaging Scenario

Engaging Scenario (An Engaging Scenario is a culminating activity that includes the following components: situation, challenge, specific roles, audience, product or performance.)

Dream Room: Students are given a budget and have to shop to find required items based on a specified set of criteria. Students must have an additional 10 items in addition to the required items.

Summary of Engaging Learning Experiences for Topics

Topic	Engaging Experience Title	Description	Suggested Length of Time
Microsoft Word	All About Me Poster	Students use the ribbons to create a poster that talks about themselves and their favorite things. Students must include shapes, lines, pictures, text boxes, text wrapping, enhanced text, bullets and numbers.	3-4 Days
Microsoft Word	Wanted Poster	Students use a teacher-designed table to organize information. Students use the paintbrush, text, color, borders, shading, and pictures to enhance their message.	2-3 Days
Excel	Introductory Activities (Party Time, Payroll, Weather)	Students are introduced to basic tools in Microsoft Excel. Students create a mock party plan using a set amount of money to create budget. Students create a mock payroll to calculate gross income, net income, tax withdrawals and other deductions. Students evaluate a month of weather data a make a charge showing those changes.	5 days
Excel	Advanced Activities (Magic Square, Super Hero)	Students create a Sudoku style square to reinforce the importance of using cell reference versus simply typing in a number. Students use a teacher provided list to merge information from multiple columns into a single column and sort the information. Students also apply IF statements to the data.	5 days

Unit 2: Video Editing

Subject: 7th Grade Technology Applications

Grade: 7

Name of Unit: Video Editing

Length of Unit: 20 Days

Overview of Unit: Students will learn video editing skills including storyboarding, timing of text and transitions, inserting media including audio, video and images.

Priority Standards for unit:

- ISTE-EMPOWERED LEARNER.1.D - Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.
- ISTE - CREATIVE COMMUNICATOR.6.B - Students create original works or responsibly repurpose or remix digital resources into new creations.
- ISTE - CREATIVE COMMUNICATOR.6.D - Students publish or present content that customizes the message and medium for their intended audiences.
- ISTE-EMPOWERED LEARNER.1.D - Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

Supporting Standards for unit:

- ISTE-DIGITAL CITIZEN.2.C - Students demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom's Taxonomy Levels	Webb's DOK
original works or responsibly repurpose or remix digital resources into new creations	Create	Create	4
content that customizes the message and medium for their intended audiences	Publish or Present	Create	4
the fundamental concepts of technology operations	Understand	Understand	2
current technologies and are able to transfer their knowledge to explore emerging technologies	Choose	Understand	2

current technologies and are able to transfer their knowledge to explore emerging technologies	Use	Apply	3
current technologies and are able to transfer their knowledge to explore emerging technologies	Troubleshoot	Evaluate	3
the fundamental concepts of technology operations	Understand	Understand	2
the ability to choose, use and troubleshoot current technologies	Demonstrate	Apply	3

Essential Questions:

1. What are ways you would use video editing in your daily life?
2. How can you use a video to convey a message?
3. In what ways can a video be enhanced/manipulated using video editing software?
4. Why is storyboarding important when creating a video?

Enduring Understanding/Big Ideas:

1. Video editing may be used to create graduation videos, wedding videos, highlight reels, and other personal reflections.
2. A video is a universal, engaging, and efficient way to convey a message to a broader audience. It touches on many different senses and allows you to tell your story from your own perspective.
3. You can add music, narration, pictures, text, transitions, animations. You can alter the speed, sound, and hues.
4. A storyboard creates a process/blueprint to follow for the end product and helps to create the desired result. It helps eliminate feature creep.

Unit Vocabulary:

Academic Cross-Curricular Words	Content/Domain Specific
● Music ● Narration ● Pictures ● Text ● Transition ● Publish	● Feature Creep ● Animation ● Splice ● Scrub ● Import ● Render ● Export ● Mp3 ● Mp4

Topic 1: Video Editing Software

Engaging Experience 1

Title: Music Video

Suggested Length of Time: 1 week

Standards Addressed

Priority:

- ISTE-EMPOWERED LEARNER.1.D - Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.
- ISTE - CREATIVE COMMUNICATOR.6.B - Students create original works or responsibly repurpose or remix digital resources into new creations.
- ISTE - CREATIVE COMMUNICATOR.6.D - Students publish or present content that customizes the message and medium for their intended audiences.

Supporting:

- ISTE-DIGITAL CITIZEN.2.C - Students demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

Detailed Description/Instructions: Students will create a lyric video where the lyrics are timed to the music. They can use their own original creation for a background image or they can use pictures from the internet.

Bloom's Levels: Create

Webb's DOK: 3

Engaging Experience 2

Title: Video Planning and Preparation

Suggested Length of Time: 2 days

Standards Addressed

Priority:

- ISTE-EMPOWERED LEARNER.1.D - Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.
- ISTE - CREATIVE COMMUNICATOR.6.B - Students create original works or responsibly repurpose or remix digital resources into new creations.
- ISTE - CREATIVE COMMUNICATOR.6.D - Students publish or present content that customizes the message and medium for their intended audiences.

Supporting:

- ISTE-DIGITAL CITIZEN.2.C - Students demonstrate an understanding of and respect for the rights and obligations of using and sharing intellectual property.

Detailed Description/Instructions: Students will lay out their ideas for their completed video through brainstorming and laying out of a blueprint for their video.

Bloom's Levels: Remember

Webb's DOK: 1

Engaging Scenario

Engaging Scenario (An Engaging Scenario is a culminating activity that includes the following components: situation, challenge, specific roles, audience, product or performance.)

Newscast Video: Students will create a collaborative newscast including an anchor with an introduction, international, national and local stories, a human-interest story, a sports segment, and a weather segment.

Summary of Engaging Learning Experiences for Topics

Topic	Engaging Experience Title	Description	Suggested Length of Time
Video Editing Software	Music Video	Students will create a lyric video where the lyrics are timed to the music. They can use their own original creation for a background image or they can use pictures from the internet.	5 days
Video Editing Software	Video Planning and Preparation	Students will lay out their ideas for their completed video through brainstorming and laying out of a blueprint for their video.	2 days

Unit 3: Infographics

Subject: 7th Grade Technology Applications

Grade: 7

Name of Unit: Infographics

Length of Unit: 10 days

Overview of Unit: In the Infographic unit students will create a visual representation of information previously researched. They will use color, text, images and spacing to convey their message.

Priority Standards for unit:

- ISTE - KNOWLEDGE COLLECTOR.3.B - Students evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.
- ISTE - INNOVATIVE DESIGNER.4.B - Students select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.
- ISTE - KNOWLEDGE COLLECTOR.3.A - Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.
- ISTE-EMPOWERED LEARNER.1.D - Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

Supporting Standards for unit:

- ISTE-DIGITAL CITIZEN.2.B - Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.

Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom's Taxonomy Levels	Webb's DOK
the accuracy, perspective, credibility and relevance of information, media, data or other resources	Evaluate	Evaluate	3
digital tools	Select, Use	Apply	2
a design process that considers design constraints and calculated risks	Plan, Manage	Apply	3
the fundamental concepts of technology operations	Understand	Understand	2
the ability to choose, use and troubleshoot current technologies	Demonstrate	Apply	3

Essential Questions:

1. Why is it important to be able to convey a message in multiple ways?

Enduring Understanding/Big Ideas:

1. It may be more interesting to the audience to view information in an alternate format.
Knowing the audience will help the creator know what type of format to use.

Unit Vocabulary:

Academic Cross-Curricular Words	Content/Domain Specific
• Career	• Infographic

Topic 1: Career Research

Engaging Experience 1

Title: Researching Careers

Suggested Length of Time: 1 day

Standards Addressed

Priority:

- ISTE - KNOWLEDGE COLLECTOR.3.A - Students plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits.

Detailed Description/Instructions: Students will use the Occupational Outlook Handbook online to research careers.

Bloom's Levels: Understand

Webb's DOK: 2

Engaging Experience 2

Title: Career Infographic

Suggested Length of Time: 3 days

Standards Addressed

Priority:

- ISTE - KNOWLEDGE COLLECTOR.3.B - Students evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.
- ISTE - INNOVATIVE DESIGNER.4.B - Students select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.
- ISTE-EMPOWERED LEARNER.1.D - Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

Detailed Description/Instructions: Students use color, font, images and space to display information about selected careers.

Bloom's Levels: Apply, Create

Webb's DOK: 3

Topic 2: Tech Effect

Engaging Experience 1

Title: Researching the Effect of Technology

Suggested Length of Time: 1 day

Standards Addressed

Priority:

- ISTE - KNOWLEDGE COLLECTOR.3.B - Students evaluate the accuracy, perspective, credibility and relevance of information, media, data or other resources.
- ISTE - INNOVATIVE DESIGNER.4.B - Students select and use digital tools to plan and manage a design process that considers design constraints and calculated risks.

Detailed Description/Instructions: Students will read a selected reading from Common Sense Media about the effect technology has had on our daily lives. Students will then interview two people outside of their own generation about the effects of technology.

Bloom's Levels: Understand

Webb's DOK: 2

Engaging Scenario

Engaging Scenario (An Engaging Scenario is a culminating activity that includes the following components: situation, challenge, specific roles, audience, product or performance.)

Tech Effect Infographic: Students use font, color, space and images to display information about a selected topic in an infographic.

Summary of Engaging Learning Experiences for Topics

Topic	Engaging Experience Title	Description	Suggested Length of Time
Career Research	Researching Careers	Students will use the Occupational Outlook Handbook online to research careers.	1 day
Career Research	Career Infographic	Students use color, font, images and space to display information about selected careers.	3 days
Tech Effect	Researching the Effect of Technology	Students will read a selected reading from Common Sense Media about the effect technology has had on our daily lives. Students will then interview two people outside of their own generation about the effects of technology.	1 day

Unit 4: Graphic Design

Subject: 7th Grade Technology Applications

Grade: 7

Name of Unit: Graphic Design

Length of Unit: 20 days

Overview of Unit: In the Graphic Design unit, students will use various tools to modify images and create their own original works. This will include selection tools, clipping masks, content aware, blurring an image, adding shadows, removing large objects and creating text.

Priority Standards for unit:

- ISTE - CREATIVE COMMUNICATOR.6.B - Students create original works or responsibly repurpose or remix digital resources into new creations.
- ISTE - CREATIVE COMMUNICATOR.6.D - Students publish or present content that customizes the message and medium for their intended audiences.
- ISTE-EMPOWERED LEARNER.1.D - Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

Supporting Standards for unit:

- ISTE-DIGITAL CITIZEN.2.B - Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.

Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom's Taxonomy Levels	Webb's DOK
original works or responsibly repurpose or remix digital resources into new creations	Create	Create	4
content that customizes the message and medium for their intended audiences	Publish	Create	3
content that customizes the message and medium for their intended audiences	Present	Apply	3
the fundamental concepts of technology operations	Understand	Understand	2
the ability to choose, use and troubleshoot current technologies	Demonstrate	Apply	3

Essential Questions:

1. Why do we create digital media?
2. How can you manipulate/edit a picture using Photoshop?

Enduring Understanding/Big Ideas:

1. Students will understand the need for a creative way to present information for various audiences. Students will understand that presenting information in creative ways benefits them and sets them apart from others.
2. By using selection tools, content-aware, masks and layers, hue and saturation, text, and manipulation tools, students can manipulate and enhance their digital media.

Unit Vocabulary:

Academic Cross-Curricular Words	Content/Domain Specific
• Toolbars	• Layout • Whitespace • Layers • Masks • Content-Aware • Saturation • Selection Tools • Manipulation Tools • Hue and Saturation

Topic 1: Photoshop

Engaging Experience 1

Title: Introductory Activities

Suggested Length of Time: 10 Days

Standards Addressed

Priority:

- ISTE - CREATIVE COMMUNICATOR.6.B - Students create original works or responsibly repurpose or remix digital resources into new creations.
- ISTE - CREATIVE COMMUNICATOR.6.D - Students publish or present content that customizes the message and medium for their intended audiences.
- ISTE-EMPOWERED LEARNER.1.D - Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

Detailed Description/Instructions: Students will complete activities designed to introduce or review selection tools (pen tool, creating with selection tools), clipping masks, content aware, blur, working with text, shadows, and removing large objects.

Bloom's Levels: Apply

Webb's DOK: 3

Engaging Experience 2

Title: Advanced Activities (Logo)

Suggested Length of Time: 2 days

Standards Addressed

Priority

- ISTE - CREATIVE COMMUNICATOR.6.B - Students create original works or responsibly repurpose or remix digital resources into new creations.
- ISTE - CREATIVE COMMUNICATOR.6.D - Students publish or present content that customizes the message and medium for their intended audiences.
- ISTE-EMPOWERED LEARNER.1.D - Students understand the fundamental concepts of technology operations, demonstrate the ability to choose, use and troubleshoot current technologies and are able to transfer their knowledge to explore emerging technologies.

Detailed Description/Instructions: Students will use the tools learned to follow a tutorial and create a 3D image that uses text features.

Bloom's Levels: Create

Webb's DOK: 3

Engaging Scenario

Engaging Scenario (An Engaging Scenario is a culminating activity that includes the following components: situation, challenge, specific roles, audience, product or performance.)

Students will use what they have learned to create an original product. This could include a magazine cover, an album cover, a promotional poster, etc. Students may need to use tutorials to meet assignment criteria.

Summary of Engaging Learning Experiences for Topics

Topic	Engaging Experience Title	Description	Suggested Length of Time
Photoshop	Introductory Activities	Students will complete activities designed to introduce or review selection tools (pen tool, creating with selection tools), clipping masks, content aware, blur, working with text, shadows, and removing large objects.	10 days
Photoshop	Advanced Activities (Logo)	Students will use the tools learned to follow a tutorial and create a 3D image that uses text features.	2 Days

Unit 5: Coding

Subject: 7th Grade Technology Applications

Grade: 7

Name of Unit: Coding

Length of Unit: 13 days

Overview of Unit: In the coding unit, students will be introduced to the wonderful world of coding. Using HTML students will create a website which has: a textured/patterned background, formatted fonts, lists, hyperlinks, adding images and videos, tables, horizontal lines and many other exciting concepts!

Priority Standards for unit:

- ISTE-EMPOWERED LEARNER.1.C - Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.
- ISTE - INNOVATIVE DESIGNER.4: Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.
- ISTE - COMPUTATIONAL THINKER.5.D - Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

Supporting Standards for unit:

- ISTE-DIGITAL CITIZEN.2.B - Students engage in positive, safe, legal and ethical behavior when using technology, including social interactions online or when using networked devices.

Unwrapped Concepts (Students need to know)	Unwrapped Skills (Students need to be able to do)	Bloom's Taxonomy Levels	Webb's DOK
technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways	Use	Apply	3
problems by creating new, useful or imaginative solutions	Identify	Understand	2
problems by creating new, useful or imaginative solutions	Solve	Evaluate	4
how automation works	Understand	Understand	2

algorithmic thinking	Use	Apply	3
a sequence of steps to create and test automated solutions	Develop	Create	4
the fundamental concepts of technology operations	Understand	Understand	2
the ability to choose, use and troubleshoot current technologies	Demonstrate	Apply	3

Essential Questions:

1. How does learning to program teach logic and reasoning?
2. What possibilities can coding open up for students?

Enduring Understanding/Big Ideas:

1. Students will use the skills in programming to resolve issues in an orderly and rational manner.
2. Students will learn workforce essential skills such as analyzing errors and apply thinking skills while attempt to resolve an issue in another way.

Unit Vocabulary:

Academic Cross-Curricular Words	Content/Domain Specific
	● HTML ● JAVA ● Blockly ● Pair Programming ● Physical Computing ● App ● Mobile Computing ● Microbit ● Hexadecimal ● Tags

Topic 1: HTML

Engaging Experience 1

Title: Skill building Activity

Suggested Length of Time: 4-5 days

Standards Addressed

Priority:

- ISTE-EMPOWERED LEARNER.1.C - Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.
- ISTE - INNOVATIVE DESIGNER.4: Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.
- ISTE - COMPUTATIONAL THINKER.5.D - Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

Detailed Description/Instructions: Students will complete a practice page that teaches them how to justify, change/enhance font appearance, create blocks of text, create lists (bulleted and numbered), create horizontal lines, add patterned/textured backgrounds, include graphics hyperlinks, videos, and a table.

Bloom's Levels: Apply

Webb's DOK: 2

Engaging Experience 2

Title: Supplementing Coding Activities

Suggested Length of Time: Ongoing throughout coding unit

Standards Addressed

Priority:

- ISTE-EMPOWERED LEARNER.1.C - Students use technology to seek feedback that informs and improves their practice and to demonstrate their learning in a variety of ways.
- ISTE - INNOVATIVE DESIGNER.4: Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.
- ISTE - COMPUTATIONAL THINKER.5.D - Students understand how automation works and use algorithmic thinking to develop a sequence of steps to create and test automated solutions.

Detailed Description/Instructions: Students may choose to code when finished with class projects on code.org, hourofcode.com, python.org.

Bloom's Levels: Apply; **Webb's DOK:** 2

Engaging Scenario

Engaging Scenario (An Engaging Scenario is a culminating activity that includes the following components: situation, challenge, specific roles, audience, product or performance.)

Students will create a custom school-appropriate website using the skills learned in the unit: justification, changing/enhancing font appearance, creating blocks of text, creating lists (bulleted and numbered), creating horizontal lines, adding patterned/textured backgrounds, including graphics hyperlinks, videos, and a table.

Summary of Engaging Learning Experiences for Topics

Topic	Engaging Experience Title	Description	Suggested Length of Time
HTML	Skill building Activity	Students will complete a practice page that teaches them how to justify, change/enhance font appearance, create blocks of text, create lists (bulleted and numbered), create horizontal lines, add patterned/textured backgrounds, include graphics hyperlinks, videos, and a table.	5 Days
HTML	Supplementing Coding Activities	Students may choose to code when finished with class projects on code.org, hourofcode.com, python.org.	Ongoing throughout coding unit

Unit of Study Terminology

Appendices: All Appendices and supporting material can be found in this course's shell course in the District's Learning Management System.

Assessment Leveling Guide: A tool to use when writing assessments in order to maintain the appropriate level of rigor that matches the standard.

Big Ideas/Enduring Understandings: Foundational understandings teachers want students to be able to discover and state in their own words by the end of the unit of study. These are answers to the essential questions.

Engaging Experience: Each topic is broken into a list of engaging experiences for students. These experiences are aligned to priority and supporting standards, thus stating what students should be able to do. An example of an engaging experience is provided in the description, but a teacher has the autonomy to substitute one of their own that aligns to the level of rigor stated in the standards.

Engaging Scenario: This is a culminating activity in which students are given a role, situation, challenge, audience, and a product or performance is specified. Each unit contains an example of an engaging scenario, but a teacher has the ability to substitute with the same intent in mind.

Essential Questions: Engaging, open-ended questions that teachers can use to engage students in the learning.

Priority Standards: What every student should know and be able to do. These were chosen because of their necessity for success in the next course, the state assessment, and life.

Supporting Standards: Additional standards that support the learning within the unit.

Topic: These are the main teaching points for the unit. Units can have anywhere from one topic to many, depending on the depth of the unit.

Unit of Study: Series of learning experiences/related assessments based on designated priority standards and related supporting standards.

Unit Vocabulary: Words students will encounter within the unit that are essential to understanding. Academic Cross-Curricular words (also called Tier 2 words) are those that can be found in multiple content areas, not just this one. Content/Domain Specific vocabulary words are those found specifically within the content.