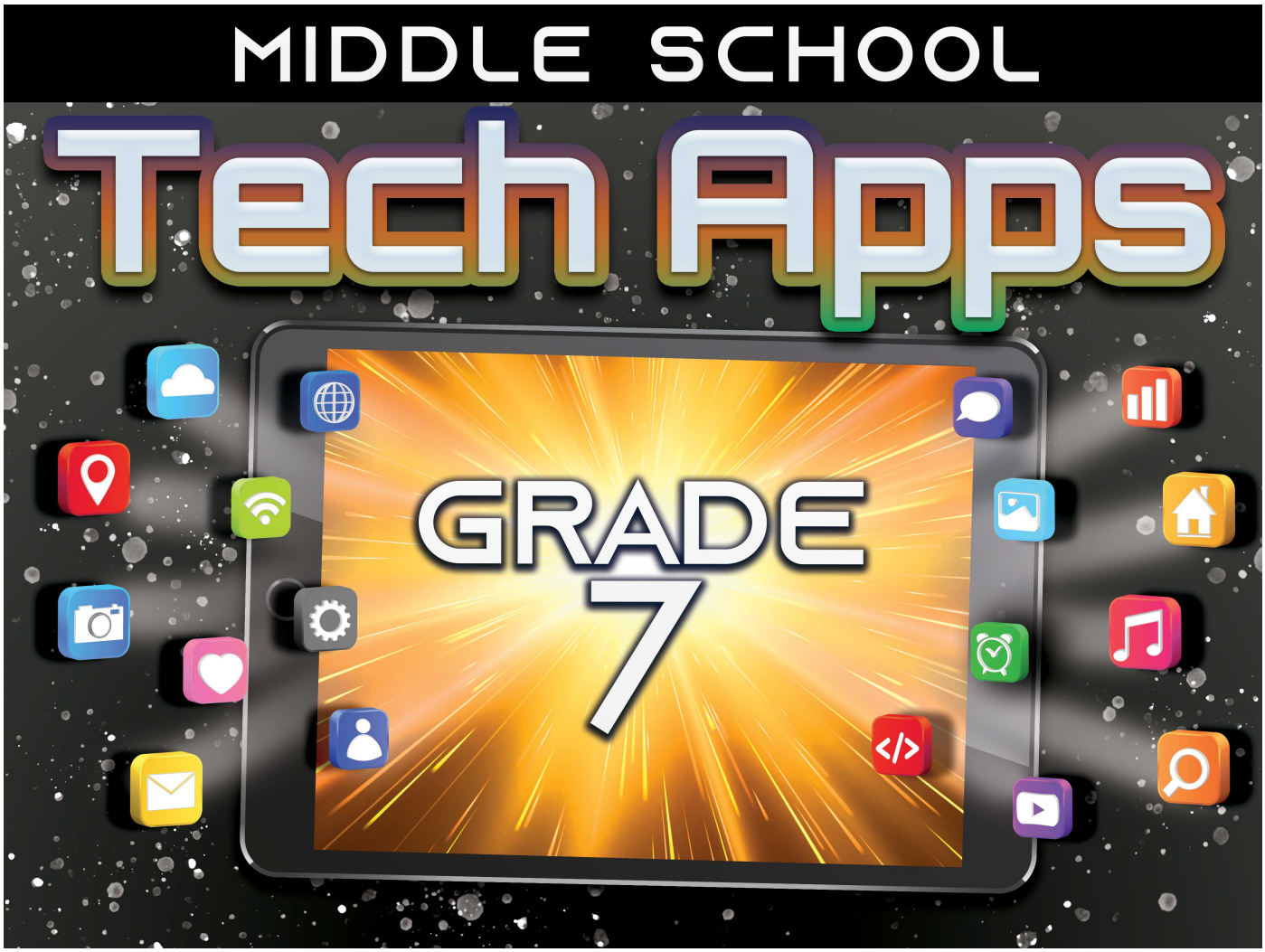
Course Syllabus

What you will learn in this course



Middle School Tech Apps: Grade 7

You learned some tech app basics, and now it's time to explore new software that will help you with content creation. In this course, you will practice being a member of a team- listening to other's ideas and advocating for your own- and learn how to break a problem into steps represented with a flowchart. With the steps defined, you'll put your ideas into action coding a robot in Scratch and a Rock, Paper, Scissors game. Finally, you'll look at various content creation methods like Google apps, blogs, podcasts, and videos, and think about who your audiences might be. Let's move beyond the basics and into the ever-expanding world of tech apps.

Unit 1: Where Do Your Footprints Lead?

Navigating the internet is fun! There's so much information out there to discover. The internet is a place where influencers and business people can get noticed and make money. But before you jump online and start scrolling, there are some important things to consider. Your choices and interactions online affect your digital footprint. Knowing the risks and rewards of life online will help you build a strong reputation and keep you safe.

What will you learn in this unit?

After studying this unit, you will be able to:

1. Describe how your behavior is tracked online and what you can do to maintain a positive digital footprint
2. Identify three ways to respond to haters
3. Analyze media for its use of facts or misinformation
4. Use keywords and Booleans to your advantage while searching online
5. List and explain the potential weak points of online usage
6. Explain why a password manager is a helpful tool

Unit 1 Assignments

Assignment	Type
Lesson 01: Step Out Confidently	Lesson
Lesson 02: Analyze Your Digital Footprint	Lesson
Lesson 03: Find the Answers You Need	Lesson
Lesson 04: Improve Your Searching Strategies	Lesson
Lesson 05: Cyber Attacks	Lesson
Lesson 06: Lock Down Your Accounts	Lesson
Critical Thinking Questions	Submission
Activity 1: What Do I Want to Learn?	Submission
Activity 2: How Can I Boost My Footprint's Positivity?	Submission
Activity 3: Which News is Exaggerated?	Submission
Unit 1 Discussion 1	Submission
Unit 1 Discussion 2	Submission
Unit 1 Quiz	Multiple Choice

Unit 2: Developing Your Toolkit

Now that we know how to stay safe online, we can start exploring and creating! Let's learn about traditional skills and tools used to explore and create content. We'll cover where to look when you need help learning a new skill or new software. Improving your typing speed will make you faster and more productive at your day-to-day tasks. Finally, we'll explore how tools and technology have advanced in recent years and how these tools can help us create new and exciting types of content.

What will you learn in this unit?

After studying this unit, you will be able to:

1. Describe the difference between a software program, app, and web app and give examples of each
2. Identify useful tools on Windows, macOS, and Chromebook devices
3. Locate online resources that help a user learn new software
4. Give examples of how technological advancements have changed some industries
5. Explain some of the global trends in technology

Unit 2 Assignments	
Assignments	**Type**
Lesson 01: What Tools Are Available?	Lesson
Lesson 02: Dust Off the Tools You Have	Lesson
Lesson 03: Get the Help You Need	Lesson
Lesson 04: How Have Tools Changed?	Lesson
Lesson 05: Global Trends in Technology	Lesson
Critical Thinking Questions	Submission
Activity 1: How Fast Can You Type?	Submission
Activity 2: How Do You Draw Using a Graphic Design App?	Submission
Activity 3: How Have Emerging Technologies Impacted the World?	Submission
Unit 2 Discussion 1	Discussion
Unit 2 Discussion 2	Discussion
Unit 2 Quiz	Multiple Choice

Unit 3: Go with the Flow

Have you ever wondered how companies can make products that work so well? There's so much amazing stuff out there: software that edits photos with ease, vehicles that drive themselves, games that seem to let you do almost anything, and even rockets that travel to distant planets and land safely back on Earth.

Before these products worked as they do now, designers had to spend hours trying things out and making their designs better. We can use the same design process that builds rockets in our own problem-solving challenges!

What will you learn in this unit?

After studying this unit, you will be able to:

1. Describe the design process and how it applies to team-based projects
2. Identify the qualities team members, including leaders, must possess
3. Use flowcharts to decompose problems
4. Create a flowchart to assist in goal-setting
5. Create spreadsheets to manage data

Unit 3 Assignments	
Assignment	**Type**
Lesson 01: The Design Process	Lesson
Lesson 02: How to Be Part of a Team	Lesson
Lesson 03: Flowcharts	Lesson
Lesson 04: How to Analyze a Flowchart	Lesson
Lesson 05: Data Dump	Lesson
Critical Thinking Questions	Submission
Activity 1: How Do I Solve a Problem with a Series of Steps?	Submission
Activity 2: How Can I Use a Flowchart to Show a Series of Events?	Submission
Activity 3: What Have I Learned So Far?	Submission
Unit 3 Discussion 1	Discussion
Unit 3 Discussion 2	Discussion
Unit 3 Quiz	Multiple Choice

Midterm Exam

1. Review information acquired and mastered from this course up to this point.
2. Take a course exam based on material from the **first half** of the course (**Note:** You will be able to open this exam only one time.)

Midterm Exam Assignments	
Assignment	**Type**
Midterm Exam	Multiple Choice
Midterm Discussion	Discussion

Unit 4: Think Like a Computer

Code and algorithms exist for all the tasks we do on our devices. Something as simple as taking a photo with our phone requires an algorithm. As you press the photo button, an algorithm checks the quality settings, adjusts lighting and focus, takes the photo, plays the shutter sound, applies effects, saves the photo to a location, and names the image based on date and time! In this unit, we'll try our hand at visual and text-based coding as we learn all about algorithms, how we can identify them, and how we can use them in our day-to-day lives.

What will you learn in this unit?

After studying this unit, you will be able to:

1. Describe how if statements are used in code and everyday life
2. Identify the parts of an algorithm
3. Use loops to improve a script
4. Explain the main uses of various programming languages
5. Script and debug a game using textual programming

Unit 4 Assignments	
Assignment	**Type**
Lesson 01: Visual Coding	Lesson
Lesson 02: Interpreting Algorithms	Lesson
Lesson 03: Creating Algorithms (with Robots!)	Lesson
Lesson 04: Text-Based Coding	Lesson
Lesson 05: Let's Code a Game!	Lesson
Critical Thinking Questions	Submission
Activity 1: How Can I Read Data in Binary?	Submission
Activity 2: How Can We Teach Our Robot to Avoid Obstacles?	Submission
Unit 4 Discussion 1	Discussion
Unit 4 Discussion 2	Discussion
Unit 4 Quiz	Multiple Choice

Unit 5: Collaborating with Confidence

Group work. People usually have strong reactions: we like it or hate it. But no matter our feelings, we need to know how to be productive team members. Let's learn about the most simple and effective method for structuring teams. Then, we'll explore some strategies that team players use to better communicate and collaborate with one another. Finally, we'll explore ways and tools that teams function in the modern digital world. By mastering these skills, you may soon discover that teams everywhere are looking for a member just like you!

What will you learn in this unit?

After studying this unit, you will be able to:

1. Define the underlying hierarchy and structure of a team
2. Communicate effectively as part of a team
3. Identify different types of content ownership and copyright applications
4. Use advanced collaboration techniques to share and work on files with others

Unit 5 Assignments	
Assignment	**Type**
Lesson 01: What Makes a Team Work?	Lesson
Lesson 02: Putting Teamwork to the Test	Lesson
Lesson 03: Handling Content from Others	Lesson
Lesson 04: Storing and Sharing Files	Lesson
Critical Thinking Questions	Submission
Activity 1: How Can I Cite a Source Using Digital Tools?	Submission
Activity 2: How Can I Best Use Cloud Storage?	Submission
Unit 5 Discussion 1	Discussion
Unit 5 Discussion 2	Discussion
Unit 5 Quiz	Multiple Choice

Unit 6: Connect with Your Audience

We've analyzed our digital footprints and thought about how to contribute positively to online interactions. We've used some new software and discovered that even with new software we are likely to find familiar processes. We've discussed problem-solving and collaborative strategies. Now we're ready to promote content online! Let's look at how to prepare content for its launch into the real world.

What will you learn in this unit?

After studying this unit, you will be able to:

1. Reach your intended audience when posting content online
2. Edit content for maximum effect on distinct social media platforms
3. Identify different tools designed to increase your influence and productivity
4. Describe how collaboration can help with both personal and team projects

Unit 6 Assignments	
Assignment	**Type**
Lesson 01: May I Have Your Attention, Please?	Lesson
Lesson 02: The Medium is the Message	Lesson
Lesson 03: Let's Talk Video Editing Tools	Lesson
Lesson 04: Tools That Assist Collaboration	Lesson
Critical Thinking Questions	Submission
Activity 1: How Can I Create a Digital Artifact?	Submission
Activity 2: How Can I be More Efficient When Using Productivity Tools?	Submission
Activity 3: What Did I Get from This Course?	Submission
Unit 6 Discussion 1	Discussion
Unit 6 Discussion 2	Discussion
Unit 6 Quiz	Multiple Choice

Final Exam

1. Review information acquired and mastered from this course up to this point.
2. Take a course exam based on material from **all units** in this course. (**Note:** You will be able to open this exam only one time.)

Final Exam Assignments	
Assignment	**Type**
Final Exam	Multiple Choice
Final Discussion	Discussion