



# Technology Courses

Digital Literacy, AI, & Coding Curriculum

*A collection of technology courses for  
Microsoft Office, Google Docs, AI-tools, programming, and more!*

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# Technology Scope & Sequence

TechnoKids curriculum has a gradual progression of learning. Skills and competencies scaffold within and across grades. Understanding how technology courses build upon one another can help educators structure their lessons. Whether selecting one course for a unit of study, building a module, or launching a school-wide program, the TechnoKids Scope & Sequence provides recommendations.

TechnoKids curriculum divides into categories: Primary (Grades 1-3), Junior (Grades 3-6), Intermediate (Grades 6-8), and Senior (Grades 8-12). As students advance within and across grades, the technology courses shift from simple to complex.

## Primary Technology Courses (Grades 1-3)

Primary technology courses are for beginners. They provide a foundation for learning.

Activities emphasize fundamentals. Students create artwork, write stories, make presentations, and more!

	COMPUTER APPLICATIONS & DIGITAL LITERACY			COMPUTER SCIENCE
Grades 1/2	<p><b>TechnoStart</b></p> <p>Earn a computer operator license. Engage in fun activities to learn about hardware, terminology, computer rules, and keyboarding.</p> <p><i>Paint or Drawings</i></p> <p>visual arts, graphics and computer fundamentals</p>	<p><b>TechnoStories</b></p> <p>Become an author. Use templates to plan, write, edit, and illustrate stories. Share books during story time with friends or family.</p> <p><i>Word or Docs</i></p> <p>language arts, word processing</p>	<p><b>TechnoMe</b></p> <p>Design an <i>All About Me</i> slide show. Outline personal information, accomplishments, goals, and interests in a mini biography.</p> <p><i>PowerPoint or Slides</i></p> <p>social studies, presentation</p>	<p><b>TechnoWhiz</b></p> <p>Become a programming 'whiz kid'. Build simple scripts and loops to create silly scenes, feed a pet monster, explore a magical land, and invent a racing game.</p> <p><i>Scratch Jr</i></p> <p>computer science, math, animation, coding, game development</p>
Grades 2/3	<p><b>TechnoPainter or TechnoGallery</b></p> <p>Spark creativity! Produce unique artwork using digital tools. Develop fine motor skills to paint original images and display them in a gallery.</p> <p><i>Paint or Drawings</i></p> <p>visual arts, graphics, computer fundamentals</p>	<p><b>TechnoBookmaking</b></p> <p>Publish a collection of books. Create a tiny picture book, flip flap story, unfolding riddle book, layer book of facts, bookmarks, card, and more!</p> <p><i>PowerPoint or Slides</i></p> <p>language arts, word processing</p>	<p><b>TechnoFit</b></p> <p>Join the TechnoFit Club. Inform others about the importance of a healthy lifestyle by designing a food guide, menu plan, and fitness poster. Be fit and live well!</p> <p><i>Publisher</i></p> <p>health and nutrition, desktop publishing</p>	<p><b>TechnoTales</b></p> <p>Blend coding with storytelling. Design a modern fairy tale that has a hero go on a quest. Build scripts to animate the story action.</p> <p><i>Scratch Jr</i></p> <p>computer science, language arts, math, animation, coding</p>

### Junior Technology Courses (Grades 3-6)

Junior technology courses are for elementary students. They focus upon essential skills. Activities promote the practical application of technology.

Students become responsible digital citizens, conduct research, animate graphic stories, code games, and more!

	COMPUTER APPLICATIONS & DIGITAL LITERACY				COMPUTER SCIENCE
Grades 3/4	<p><b>TechnoJournal</b></p> <p>Express ideas and describe experiences in a journal. Reflect upon an event, make a note of favorite things, and list personal wishes.</p> <p><i>Word or Docs</i></p> <p>language arts, word processing</p>	<p><b>TechnoInternet</b></p> <p>Embark on an online expedition to become a responsible digital citizen. Apply search strategies, access digital resources, and communicate safely.</p> <p><i>web browser</i></p> <p>digital citizenship, Internet</p>	<p><b>TechnoPresenter</b></p> <p>Present information effectively. Summarize facts using a slide show and organize speaker notes. Deliver a speech to an audience.</p> <p><i>PowerPoint/Word or Slides/Docs</i></p> <p>public speaking, research, presentation</p>		<p><b>TechnoArcade</b></p> <p>Design arcade games. Build <i>Jumble Tumble, Let's Jam, Mystery Island, and Lost Treasure</i>. Invite friends to an online arcade.</p> <p><i>Scratch</i></p> <p>computer science, math, coding, game development,</p>
Grades 4/5	<p><b>TechnoResearch</b></p> <p>Research to design a fact card. Apply strategies to retrieve quality information from reliable sources. Combine images and text in a one-sheet report.</p> <p><i>Word or Docs</i></p> <p>language arts, digital citizenship, word processing</p>	<p><b>TechnoCandy</b></p> <p>Devise a strategy to boost candy sales. Conduct a survey and study packaging to investigate a problem. Recommend a solution based on the evidence.</p> <p><i>Excel/PowerPoint/Word, or Sheets/Slides/Docs/ Forms</i></p> <p>math, data analysis, spreadsheets</p>	<p><b>TechnoToon</b></p> <p>Animate a graphic story. Plan the characters, setting, and plot. Divide the scenes using transitions. Time events to produce a one-of-a-kind cartoon.</p> <p><i>PowerPoint or Slides</i></p> <p>language arts, animation, presentation</p>	<p><b>TechnoSite</b></p> <p>Become a web designer. Construct a website that includes links to fun places for kids on the WWW. Will it get the <i>Kid Stamp of Approval?</i></p> <p><i>Google Sites</i></p> <p>language arts, digital citizenship, web design</p>	<p><b>TechnoRace</b></p> <p>Develop an original game. Players race to complete a mission before time is up. To win they must avoid obstacles and collect treasure. Collaborate to test game design.</p> <p><i>Scratch</i></p> <p>computer science, math, visual arts, coding, game development, graphics</p>
Grades 5/6	<p><b>TechnoEditor</b></p> <p>Edit a collection of stories. Master text, picture, and page layout formatting techniques to publish a high-quality publication.</p> <p><i>Word or Docs/Drawings</i></p> <p>language arts, word processing</p>	<p><b>TechnoSales</b></p> <p>Investigate dessert preferences. Graph and calculate data. Analyze the information to plan a bake sale. Report on fundraiser details.</p> <p><i>Excel/Word or Sheets/Docs</i></p> <p>math, data analysis, spreadsheets</p>	<p><b>TechnoTimeline</b></p> <p>Explain the significance of events by creating a unique graphic organizer that connects events along a timeline.</p> <p><i>PowerPoint or Slides</i></p> <p>history, social studies, presentation</p>	<p><b>TechnoTrivia</b></p> <p>Invent a game. Test knowledge about a topic. Set the answer key to calculate points. Analyze quiz results.</p> <p><i>Google Forms or Microsoft Forms</i></p> <p>math, social studies, data analysis</p>	<p><b>TechnoTurtle</b></p> <p>Develop and debug code to conquer mazes, paint pixel art, create a <i>Mad Lib Generator</i> and build a carnival game.</p> <p><i>IDLE Python 3</i></p> <p>computer science, math, language arts, coding, game development</p>

## Intermediate Technology Courses (Grades 6-9)

Intermediate technology courses are for middle or high school students. They develop proficiency in using technology.

Activities emphasize critical, creative, and computational thinking. Students design publications, analyze data, build web pages, program games, and more!

	COMPUTER APPLICATIONS & DIGITAL LITERACY			COMPUTER SCIENCE	
Grades 6/7	<p><b>TechnoNewsletter</b></p> <p>Publish a fan club newsletter. Write an informative article, construct a word search, and express an opinion. Format pages to lay out content attractively.</p> <p><i>Word or Docs</i></p> <p>language arts, word processing</p>	<p><b>TechnoRestaurateur</b></p> <p>Launch a business venture. Plan a restaurant, create a logo, conduct a survey, generate funds, build a floor plan, manage finances, and more!</p> <p><i>Excel/PowerPoint/Word or Sheets/Slides/Docs/ Drawings/Forms</i></p> <p>business studies, language arts, math, visual arts, data analysis, graphics, spreadsheets, word processing</p>	<p><b>TechnoTravel</b></p> <p>Promote a weekend getaway for tourists. Research the trip. Customize a slide master to create a unique marketing tool that persuades visitors to vacation.</p> <p><i>Excel/PowerPoint/Word or Sheets/Slides/Docs</i></p> <p>language arts, geography, presentation</p>	<p><b>TechnoCode</b></p> <p>Spark an interest in computer science. Design an Activity Studio for kids using Scratch. Build blocks of code to design animations, puzzles, stories, and games.</p> <p><i>Scratch</i></p> <p>computer science, math, language arts, animation, coding, game development</p>	
Grades 7/8	<p><b>TechnoBiography</b></p> <p>Celebrate a remarkable person. Format the bio using styles, graphic organizer, and artifacts table. Build a table of contents. Cite sources in a bibliography.</p> <p><i>Word or Docs/Drawings</i></p> <p>language arts, history, word processing</p>	<p><b>TechnoBudget</b></p> <p>Justify a spending plan for a shopping trip. Calculate, and graph data to form a budget. Report on financial choices and explain money management strategy.</p> <p><i>Excel/Paint/Word or Sheets/Drawings/Docs</i></p> <p>business studies, math, visual arts, data analysis, graphics, spreadsheets</p>	<p><b>TechnoMap</b></p> <p>Highlight the importance of a location by constructing an interactive map. Connect facts about an area or issue using markers and hyperlinks.</p> <p><i>PowerPoint /Word or Slides/Docs</i></p> <p>geography, history, presentation</p>	<p><b>TechnoHTML5</b></p> <p>Develop a web page using HTML and CSS. Write code to set the style of the background, text, lists, graphics, hyperlinks, and tables. Upload to the Internet.</p> <p><i>Notepad or other text editor</i></p> <p>computer science, coding, web design</p>	
Grades 8/9	<p><b>TechnoEarth or TechnoEnvironment</b></p> <p>Raise awareness of an environmental issue. Design either an infographic with Google Apps or a pamphlet with Publisher. Advocate for change.</p> <p><i>Word/Publisher or Docs/Sites/Slides/ Sheets/My Maps/Drawings</i></p> <p>geography, language arts, science, visual arts, publishing, presentation, web design</p>	<p><b>TechnoQuestionnaire</b></p> <p>Investigate a research question. Select a sample and construct a questionnaire. Conduct a pre-test to tweak the design. Analyze data to interpret findings.</p> <p><i>Google Forms</i></p> <p>math, science, data analysis, spreadsheets</p>	<p><b>TechnoDebate</b></p> <p>Collaborate with a partner to debate an issue. Create an animated conversation that presents a persuasive argument. Defend a position.</p> <p><i>PowerPoint Online or Slides</i></p> <p>language arts, presentation</p>	<p><b>TechnoPython</b></p> <p>Program a series of games using Python including Pet Monster Rescue, Guess It, and Adventure Quest. Share your favorite one in a coding presentation.</p> <p><i>IDLE Python 3</i></p> <p>computer science, math, language arts, coding, game development</p>	<p><b>TechnoBot AI</b></p> <p>Program a drone delivery system, robot pick-up service, and self-driving tour that solve real world problems using artificial intelligence.</p> <p><i>Scratch, PowerPoint or Slides</i></p> <p>computer science, science, artificial intelligence, coding, presentation</p>

### Senior Technology Courses (Grades 8-12)

Senior technology courses are for middle or high school students. They prepare students for higher learning and career readiness.

Activities emphasize real-world applications of technology. Students market products, build databases, and more!

	COMPUTER APPLICATIONS & DIGITAL LITERACY			COMPUTER SCIENCE
<p>Grades 8-12</p>	<p><b>TechnoWonderland</b></p> <p>Manage an amusement park to learn about Microsoft Office. Produce a flyer, design a map, create signs, poll customers, advertise rides, and more!</p> <p><i>Word, Excel, PowerPoint, Publisher, Access</i></p> <p>business studies, data analysis, graphics, Internet, presentation, publishing, spreadsheets, word processing</p>	<p><b>TechnoMission</b></p> <p>Manage data. Plan a simple database. Build a table and data entry form. Filter and sort records. Generate a report that summarizes information.</p> <p><i>Access, Paint</i></p> <p>science, visual arts, data analysis, graphics, photo editing</p>	<p><b>TechnoAd</b></p> <p>Become a digital marketer. Analyze data to develop a marketing strategy to target customers. Produce a persuasive video ad.</p> <p><i>Forms/Excel/Word or Forms/Sheets/Docs, Blender</i></p> <p>business studies, media arts, animation, data analysis, digital citizenship, spreadsheets, video production, word processing</p>	<p><b>TechnoFuture AI</b></p> <p>Explore the impact of artificial intelligence on society by developing a 'Choose Your Own Adventure' science fiction story using Generative AI tools.</p> <p><i>PowerPoint, Word, Excel, Scratch</i></p> <p>computer science, language arts, artificial intelligence, presentation, coding, science</p>
	<p><b>TechnoAdvertise</b></p> <p>Role-play a marketing executive. Submit a cover letter and résumé to apply for the job. Once hired, design a flyer, catalog, custom mailer, and newsletter.</p> <p><i>Word</i></p> <p>business studies, word processing</p>	<p><b>TechnoInvestor</b></p> <p>Buy and sell stocks on the TechnoStock Exchange. Track the investments and graph future earnings. Report the portfolio holdings and justify decisions.</p> <p><i>Excel, Word</i></p> <p>business studies, math, data analysis, spreadsheets</p>	<p><b>TechnoPhotoshop</b></p> <p>Edit photos to produce a digital scrapbook. Filter, retouch, crop, warp, recolor, and superimpose images. Apply design techniques to lay out pages.</p> <p><i>Adobe Photoshop</i></p> <p>media arts, graphics, photo editing</p>	<p><b>TechnoChatbot AI</b></p> <p>Build chatbots that answer questions and automate tasks. Develop AI solutions that assist event attendees, record fundraiser orders, and recruit new members.</p> <p><i>Scratch, Bot Libre</i></p> <p>business studies, computer science, artificial intelligence, coding, data analysis, digital citizenship, graphics</p>
		<p><b>TechnoPlanner</b></p> <p>Construct a database for a party planning business. Build tables, forms, queries, and reports to organize customer and event information.</p> <p><i>Word, Access</i></p> <p>business studies, data analysis, word processing</p>	<p><b>TechnoAnimate</b></p> <p>Animate drawings to make a movie. Create scenes with motion tweens, shape tweens, and motion paths. Set the action and sound on the Timeline.</p> <p><i>Adobe Animate</i></p> <p>media arts, animation, graphics</p>	

# TechnoKids Courses and Software

TechnoKids Technology Courses are available for Microsoft 365, Google Docs, Adobe, Blender, coding apps, and more.

	Microsoft Office						Office for the Web				Google						Adobe		Coding   AI								
	Paint	Word	PowerPoint	Excel	Access	Publisher	Word Online	PowerPoint Online	Excel Online	Forms Online	Web Browser	Drawings	Docs	My Maps	Slides	Sheets	Sites	Forms	Blender	Photoshop	Animate	TextEditor	Scratch Jr	Scratch	Python 3	Bot Libre	
Suggested grade levels:																											
Primary Grades 1-3																											
TechnoBookmaking			•					•							•												
TechnoFit						•																					
TechnoGallery											•																
TechnoMe			•					•							•												
TechnoPainter	•																										
TechnoStart	•										•																
TechnoStories		•					•					•															
TechnoTales																							•				
TechnoWhiz																							•				
Junior Grades 3-6																											
TechnoArcade																									•		
TechnoCandy		•	•	•			•	•	•	•		•			•	•		•									
TechnoEditor		•									•	•															
TechnoInternet										•																	
TechnoJournal		•					•					•															
TechnoPresenter		•	•				•	•							•												
TechnoRace																									•		
TechnoResearch		•					•					•															
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TechnoSite																	•										
TechnoTimeline		•	•				•	•				•			•												
TechnoToon			•					•							•												
TechnoTurtle																										•	
TechnoTrivia				•						•						•		•									
Intermediate Grades 6-9																											
TechnoBiography		•					•	•			•	•			•												
TechnoBot AI		•													•										•		
TechnoBudget	•	•		•			•		•			•	•			•											
TechnoCode																									•		
TechnoDebate							•	•				•			•												
TechnoEarth											•	•	•		•	•	•										
TechnoEnvironment		•				•																					
TechnoHTML 5																							•				
TechnoMap		•	•				•	•				•			•												
TechnoNewsletter		•					•					•															
TechnoPython																										•	
TechnoQuestionnaire																•		•									
TechnoRestaurateur		•	•	•			•	•	•	•	•	•			•	•		•									
TechnoTravel		•	•	•			•	•	•			•			•	•											
Senior Grades 8-12																											
TechnoAd		•		•						•		•			•			•	•								
TechnoAdvertise		•																									
TechnoAnimate																					•						
TechnoChatbot AI																								•		•	
TechnoFuture AI		•	•	•																					•		
TechnoInvestor		•		•																							
TechnoMission	•					•																					
TechnoPhotoshop																			•								
TechnoPlanner						•																					
TechnoSpecialist			•																								
TechnoWonderland		•	•	•	•	•																					

# Primary Technology Course Descriptions

## TechnoBookmaking

In this course, students make, print, and share books. They use inspiring templates to publish a unique collection. Each assignment teaches a new word processing skill. Lessons explain how to make a tiny picture book, flip flap story, unfolding riddle book, layer book of facts, bookmarks, and greeting card. Place the publications on a bookshelf or put a fresh twist on a Young Authors Conference. Optional activities include additional templates that offer unlimited creativity. Rethink how PowerPoint or Slides can be used in language arts. Explore the possibilities with bookmaking.



The technology course has 9 assignments that are divided into 6 Sessions:

- **Session 1 Illustrate a Picture Book**  
 In Session 1, students design a picture book for toddlers. They start by choosing a topic such as pets, cars, or toys. Using a PowerPoint or Google Slides template, they insert six images on a slide. After printing, students follow instructions to assemble a miniature book perfect for young kids. As an extra activity, they can use a similar template to craft books that fold like accordions or stand up.
- **Session 2 Have Flip Flap Fun**  
 In Session 2, students create a Flip Flap book. This style of book has a flap that hides a picture. Using a template, each slide serves as a page of the story. To start, students design a cover by adding the title and story name. Moving to the following slides, they complete the sentence, 'I hear', with a sound, such as 'Moo' or 'Meow' or 'Quack'. They then insert an image of the object. Students experiment with text formatting to make the words visually engaging. Upon finishing, they print their stories and fold down the flap on each page. This book offers a fun way to captivate young readers.
- **Session 3 Guess the Riddle**  
 In Session 3, students create an interactive riddle book. With a template, they design a story page featuring three clues, the answer, and a picture. Students explore how to format text boxes to give their riddle book a distinctive look. After finishing, they print, glue, cut, and fold to construct a riddle book with pages that unfold to reveal the object. As an additional task, students can utilize a similar template to craft an original story, like 'Guess Who is Coming to Dinner?' or 'There is a Monster Under My Bed'.
- **Session 4 Peel Back the Layers**  
 In Session 4, students create a layered book that offers a sense of discovery. As readers peel back each page they uncover facts. The fiction book might focus on topics like the seasons, Arctic animals, or community helpers. To begin, students break down their topic into four or five headings. Using a template, they add these headings to the bottom of each slide using WordArt. Then, they include a corresponding fact for each heading using a text box. Once finished, students print, fold, and slide the pages over one another to assemble the layered book. As an extra task, students can create a book where readers peel back strips from an image to reveal facts below.
- **Session 5 Design Bookmarks**  
 In Session 5, students create bookmarks. Using a template, they apply their skills to arrange images and text. By experimenting with object order, they produce one-of-a-kind designs.
- **Session 6 Publish a Storybook**  
 In Session 6, students write an original story. They begin by sketching their ideas on a storyboard. Next, using a PowerPoint or Google Slides template, students write their story. They use their skills to format text, images, text boxes, and WordArt, creating visually appealing pages. By adjusting the slide order and print settings, students produce a unique mini storybook. Once finished, students share their books.

### *Extension Activities:*

Discover Accordion Style Books, Make Flip Flap Books, Write a Story That Unfolds, Build Fast Fact Books, Get Story Ideas, Send a Greeting Card

*Technology Skills:* Word Processing

*Technology Integration:* Language Arts

*Software Applications:* PowerPoint | PowerPoint Online | Slides

## TechnoFit

In this course, students become members of the TechnoFit Club and take the "Be Fit Challenge". This challenge dares participants to eat right, be fit, and live well! To prepare for the task they learn about healthy eating and exercise. Afterwards they design a food guide and fitness poster. They then prepare for the upcoming Be Fit Challenge Event, which is a celebration that includes fun fitness activities and great tasting food. To plan for the event, students design a menu and send invitations. With the event fast approaching, certificates are created for each participant of the Be Fit Challenge to recognize their efforts to be healthy. These are then handed out at the event.



The technology course has 12 assignments that are divided into 6 Sessions:

- **Session 1 Join the TechnoFit Club**  
In session 1, students join the TechnoFit Club (TFC). The TFC's motto is "Eat Right, Be Fit, Live Well!" To become a member, students learn about being healthy by watching "The Be Fit Challenge" video. Once they are familiar with the importance of diet and exercise, they are awarded a membership card. This card includes their name, pictures, and other vital information that gains them admittance to this elite club.
- **Session 2 Eat Right!**  
In session 2, students learn about a balanced diet. To help TechnoFit Club members make healthy food choices, students watch the video Eat Right. Afterwards, they create a Be Fit Food Guide, which contains pictures of food items organized under Food Group headings. This guide is a great way to help students make healthy food choices.
- **Session 3 Be Fit!**  
In session 3, students learn about the importance of exercise. To help TechnoFit Club members "be fit" they make a poster showing all the things they do to stay active. This poster is a great way to show others how to live healthily.
- **Session 4 Be Fit Challenge Event Menu**  
In session 4, students help to plan an upcoming event. The TechnoFit Club is hosting a Be Fit Challenge Event. All TFC members will be there! Students must plan the kind of food people will eat. They create a healthy menu, being sure to include food from all the Food Groups.
- **Session 5 You Are Invited!**  
In session 5, students create an invitation to invite TechnoFit Club members to come to the Be Fit Challenge Event. To start, they view a sample file to get ideas. Afterwards, they plan the content of their own invitation. Microsoft Publisher is then used to create a side-fold card.
- **Session 6 Eat Right, Be Fit, Live Well!**  
In session 6, take part in the Be Fit Challenge Event. All TechnoFit Club members who took part in the Be Fit Challenge are to be awarded a certificate in recognition of their efforts to eat right and be fit. To prepare, students make a certificate for themselves or another TechnoFit Club member using Publisher. These awards are then handed out by the teacher to acknowledge each student's healthy lifestyle choices.

*Extension Activities:* Word Search, Food Servings, Be Fit Calendar

*Recipes:* English Muffin Pizza, Fruity Parfait, Veggie Stir Fry, Fruit Kabobs

*Technology Skills:* Graphics, Desktop Publishing, Word Processing

*Technology Integration:* Health and Nutrition

*Software Applications:* Publisher

## TechnoGallery

In this course, students produce an animated art gallery with artwork they create using Google Drawings. The fun begins with an exploration of line and shape tools. Once familiar with how to create and format objects, artists apply their creative talents to make cartoon faces and characters. Next, students transform text into a beautiful picture by formatting the style and color of letters. The final art project has students experiment with recoloring and cropping options to create stunning images. Upon completion, each piece of artwork is placed into picture frames using Google Slides. Students share their artwork and explain their artistic choices during a digital art show.



The technology course has 14 assignments that are divided into 6 Sessions:

- **Session 1 Paint Artwork with Lines**  
In Session 1, students become digital artists. They explore how to draw straight, curvy, and zigzag lines. By experimenting with color, width, and dash style students develop basic graphic design skills. These are applied to draw a unique pattern suitable for a shirt, rug, or wallpaper. Next, they draw a cartoon face that expresses emotion. This activity serves as an enjoyable exploration of various line styles!
- **Session 2 Construct Cartoons Using Shapes**  
In Session 2, students further their exploration of digital art tools. The excitement kicks off with a drawing workshop that teaches them how to draw, bend, resize, and rotate shapes. Additionally, students acquire key graphic design skills like zooming, deleting, undoing, and redoing. These skills are then used in constructing animal figures from shapes. Following this, students create new artwork that integrates both lines and shapes. An optional activity is also available, explaining how to edit points to gain greater control over an object.
- **Session 3 Design a Poster with Decorative Text**  
In Session 3, students continue to express themselves artistically by transforming words into art. They start with a workshop that encourages them to explore various text formatting options, including fonts and alignments. Next, they delve into WordArt to experiment with different ways to change the outline and fill of letters. They then use their newfound skills to design a poster featuring descriptive words. Each one is formatted to look unique.
- **Session 4 Manipulate Images to Create a Collage**  
In Session 4, students creatively manipulate images to produce a one-of-a-kind collage. The fun begins with a workshop where they learn to crop, apply styles, and adjust colors. Once they have mastered these graphic design skills, they use them to create artwork related to a personal interest or favorite thing. The collage features repeated images, each with a unique effect. An optional activity challenges students to trace a photo to create a cartoon drawing.
- **Session 5 Create an Art Exhibit**  
In Session 5, students curate a digital art gallery. To prepare, they download their previous session's artwork as JPEG images. This is a necessary step for inserting them into a slideshow. Using Google Slides, students transform the white background of a slide into a picture frame. They then insert a downloaded picture file into the frame, creating the illusion of art hanging on a digital wall. After all the artwork is framed, they add transitions between slides to complete the digital art gallery experience.
- **Session 6 Meet the Artist**  
In Session 6, students showcase their art in a digital exhibition. They share their collection with peers. To engage the audience, the student-artists ask questions such as "what lines do you see in this picture?" or "what shapes make up these animals?". An optional extension activity demonstrates how to print the slideshow as a handout, transforming the digital exhibition into a printed display of artwork.

### *Extension Activities:*

Edit Points, Trace Photo to Make a Cartoon, Print as a Handout

*Technology Skills:* Graphics, Computer Fundamentals, Presentation, Word Processing

*Technology Integration:* Visual Arts

*Software Applications:* Drawings, Slides

## TechnoPainter

In this course, students become "techno" painters. They paint beautiful artwork using digital art tools. By applying their artistic talents, students earn an Awesome Artist certificate. Each assignment blends technology with visual arts. Students develop fine motor skills while learning essential computer knowledge such as how to open and close a program, set tool options, use the keyboard, print a document, save a file, and open a saved document.



The technology course has 16 assignments that are divided into 6 Sessions:

- **Session 1 Draw It!**  
In session 1, students become "techno" painters. They learn how to use a digital pencil, eraser, and paint bucket to create artwork. To start, they are introduced to the Paint window. Next, they experiment with basic paint tools. Students practice their skills by completing a series of challenges. Once confident with their new skills they apply their artistic talents to produce a beautiful picture. It is time to draw it!
- **Session 2 Type It!**  
In session 2, students type it! To develop basic keyboarding skills, they use a worksheet to identify common keys. Next, students use the keyboard to type letters into a text box and format the letters. Once familiar with the location and function of keys, they type their name and make it look fancy. Upon completion, they print their work.
- **Session 3 Paint It!**  
In session 3, students paint it! To start they experiment with the different types of brushes. From a regular paint brush to calligraphy pens, crayons, and markers, students gain confidence with using digital art tools to create a beautiful rainbow of colors. Next, they apply their skills to paint a happy picture that includes a big smile.
- **Session 4 Shape It!**  
In session 4, students shape it! An exploration of the Shapes gallery allows students to draw colorful shapes using different outlines and fills. They learn how to adjust the size and position. Once prepared, students take the stamp challenge. They make four different shapes and arrange them on the page to produce an eye-catching masterpiece.
- **Session 5 Frame It!**  
In session 5, students frame it! To gain inspiration they study a collection of picture frames. They then apply their skills to create one of their own. Using digital paint tools, students produce an attractive design. They fill the center of the design with a white shape to produce an original frame that will hold their artwork. Students learn how to save the file so that they can use it to paint a picture in the upcoming session.
- **Session 6 Create It!**  
In session 6, students create it! They open their saved picture frame from the previous session and use it to paint a picture. To celebrate their success, students complete a checklist of their digital paint skills and then produce an award that acknowledges they are an *Awesome Artist*.

### *Extension Activities:*

Color It, Write It, Magnify It, Copy, Paste, and Flip It, Edit It, Celebrate It

*Technology Skills:* Graphics, Computer Fundamentals, Word Processing

*Technology Integration:* Visual Arts

*Software Applications:* Paint

## TechnoMe

In this course, students celebrate their own unique characteristics. They use a template to create an All About Me slideshow. The mini biography outlines personal details, accomplishments, goals, and interests. Upon completion, students share their slideshow with friends to compare how they are similar and different. This is an excellent way to enhance self-esteem, foster relationships, and develop fundamental technology skills.



The technology course has 11 assignments that are divided into 6 Sessions:

- **Session 1 I Am Special**  
 In Session 1, students begin to create an All About Me slideshow. The first task is to design a title slide using a Google Slides template. They will enter their name in a text box and customize the font by adjusting the size, style, and color. Next, students will complete a slide template that includes descriptive sentences, providing details such as their name, age, city, and favorite activity. As an optional step, students can fill out the "Fun Facts" template, sharing additional information like their favorite subject, what annoys them, and the things they enjoy reading or watching.
- **Session 2 When I Grow Up**  
 In Session 2, students complete a third slide in their All About Me slide show, which centers on a career goal. They do this by finishing the sentence, "When I grow up, I want to be a...". They insert an image representing what they aspire to be in the future. Next, they create a text box and type in the desired job title. Upon completion, students discuss their work with peers.
- **Session 3 Things I Like**  
 In Session 3, students will create the fourth slide in their "All About Me" slide show, showcasing things they enjoy. To kick off the activity, they will take a digital photo of themselves. Using a slide template with a flower shape, each petal will be filled with a clipart representing their favorite things. In the center, students will insert a cropped version of their photo. This slide can be printed for display on a class bulletin board. For an extra fun activity, students can place their photo into a puzzle template, cut out the pieces, and reassemble the image.
- **Session 4 About My Family**  
 In Session 4, students create a slide about their family. They create a graph that shows the number of adults, children, and pets in their home. Using shapes, they draw different images for each type of family member. An optional activity is available that has students construct their family tree using a cloud shape to add each person's name to a branch.
- **Session 5 Add Transitions Between Slides**  
 In Session 5, students add transitions to the All About Me slide show. They choose their preferred transition effect and then apply it to all slides. Then, they run the slide show to practice advancing to each slide. Afterwards, they use a checklist to verify that it is ready for viewers. Optional instructions are provided on how to incorporate any slides from previous skill reviews or extension activities into the current slide show. For instance, students may wish to include their learning goal, fun facts, family tree, or puzzle if they did those additional activities.
- **Session 6 Present "All About Me"**  
 In Session 6, students share their All About Me slide show with an audience. Following the presentation, they participate in a discussion to explore the similarities and differences among their classmates. They identify peers who share the same age, interests, or goals. This activity underscores both the commonalities within the group and the unique qualities of everyone.

### *Extension Activities:*

About Data Files, School Safety, Make a Puzzle from a Picture, Survey Your Friends, Insert a Slide into a Show, Make a Class Album

*Technology Skills:* Presentation

*Technology Integration:* Language Arts, Social Studies

*Software Applications:* PowerPoint | PowerPoint Online | Slides

## TechnoStart

In this course, students have fun learning computer fundamentals. This introduction provides beginners with basic knowledge such as the function of computer hardware, mouse or touch terminology, and computer rules. Activities encourage students to discover how to create with technology. By making simple paintings they develop essential skills including how to open and close a program, select tools to perform a task, save and print, open a saved file, and type using the keyboard. Upon completion, students receive a Computer Operator License that states they can use the computer competently and safely.



The technology course has 19 assignments that are divided into 6 Sessions:

- **Session 1 Be a Computer Detective**  
In Session 1, students explore computing devices. This introduction starts with an overview of various types of computers and their uses. They then identify computer hardware, including the monitor, keyboard, mouse, tower, printer, and speaker. To solidify their understanding, they solve riddles related to these components. Following this, they learn mouse and touch terminology for controlling a device. Finally, students apply their skills by assuming the role of detectives. They must click or tap on the correct parts.
- **Session 2 Follow Computer Rules**  
In Session 2, students practice proper computer care. To begin, they learn common rules and then apply their knowledge to distinguish between "do" and "don't" behaviors. Next, they open Paint or Google Drawings and explore the program features. This task encourages students to experiment with various tools to gain confidence with using their device. Upon completion, students assess their good behavior. Next, students learn about the school's procedures for printing. They make a simple drawing and print their picture, being certain to follow the rules.
- **Session 3 Type Like A Pro**  
In Session 3, students pretend to be the fastest typists in the world. They begin by identifying popular keys on the keyboard including the letters in their name, spacebar, SHIFT, and ENTER keys. Next, they type letters into a text box. They learn how to format the font, size, style, and color. Students then demonstrate their skills by typing their name with an uppercase first letter.
- **Session 4 Left Click, Right Click**  
In Session 4, students refine their mouse or touch actions by painting an artistic design. They begin by reviewing how to left or right click using their device. They use left and right click actions to draw an image. Students add their name to the picture and then print.
- **Session 5 Practice Saving Your Work**  
In Session 5, students learn the importance of saving their work. To begin, they identify the location for storing their files at school. Next, they practice assigning filenames to images making them easy to retrieve later. Afterwards, they answer questions about reasons for saving. Following this, students draw a picture and save it. They further reinforce this concept by reopening the file to make additional changes to the artwork.
- **Session 6 Earn a Computer License**  
In Session 6, students earn a Computer Operator's License. This license confirms their ability to identify computer hardware, execute mouse or touch actions, perform basic computing tasks, and use the device safely. To start, students demonstrate the importance of safeguarding their password. Next, they practice signing in and out of a device. They then complete a ten-item checklist related to proficient computer use.

### *Extension Activities:*

Play "Computer Spy", Pick Print Settings\*, Sign In and Out of Google Drive\*, Label It Input or Output, Edit Colors, Clean Up Your Files, Keep Your School Safe

*Technical Skills:* Graphics, Computer Fundamentals, Word Processing

*Technology Integration:* Visual Arts

*Software Applications:* Paint | Drawings

*\*Note:* Select extension activities are not available for all product versions.

## TechnoStories

In this course, students create storybooks. They develop basic word processing skills to plan, write, illustrate, edit, and publish stories. Upon completion, authors share their work during story time. Optional activities challenge students with keyboarding tasks, advanced word processing techniques, and the creation of a flipbook.



The technology course has 9 assignments that are divided into 6 Sessions:

- **Session 1 Format Text in a Story**  
 In Session 1, students enhance the appearance of a story about a puppy. They use a word processing template to format the text in a way that visually represents the meaning of the words. They experiment with various fonts, styles, and colors to modify words such as 'play', 'mud', 'loves', and 'funny'. An optional activity has students identify important keys on the keyboard, including the spacebar, period, delete, and arrow keys.
- **Session 2 Illustrate a Story**  
 In Session 2, students bring the story "My Day at School" to life through illustrations. Each page features a word that they must locate using an online picture gallery. The instructions provide detailed guidance on how to insert clipart and format the images to fit the content onto a single page. As an additional activity, there is a keyboarding workshop designed to teach essential skills such as typing capital letters, numbers, symbols, and spaces.
- **Session 3 Use a Story Starter**  
 In Session 3, students finish the story All About Me. The Microsoft Word or Google Docs template includes three sentences that need to be completed. The last page is left blank for students to add their own ideas. Students use their word processing skills to format the text, insert an image to accompany each page, and then print their publication. An optional activity is provided, explaining how to insert a saved photo to enhance the story's front cover.
- **Session 4 Be a Storybook Author**  
 In Session 4, students write an original storybook. They begin by using a graphic organizer to outline the events at the beginning, middle, and end of their story. Optional writing ideas are offered to inspire their creativity. Next, students use a template to create their story. Sentence starters guide students with their writing task. Upon completion, students illustrate each page.
- **Session 5 Edit the Storybook**  
 In Session 5, students get their storybook ready for publication. They run a spell check on the file and then use a checklist to review the content. An optional activity is provided to explain how to convert the file into a flipbook.
- **Session 6 Read at Storytime**  
 In Session 6, students present their storybook to an audience by either printing the file or publishing it digitally. They then read it to a reading buddy, friends, family, or the teacher. The audience members can share their appreciation for the book by writing positive comments. Finally, students reflect on their writing experience.

### *Extension Activities:*

About the Keyboard, Be a Keyboard Detective, Insert a Saved Photo or Take a Photo, Story Writing Ideas, Make a Flip Book

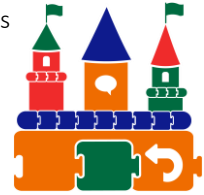
*Technology Skills:* Word Processing

*Technology Integration:* Language Arts

*Software Applications:* Word | Word Online | Docs

## TechnoTales

In this course, students make a modern fairy tale. Using Scratch Jr, they will combine coding blocks to form scripts that animate the story action. The tale will be about a character that overcomes a problem by going on a quest. To live happily ever after, they must find a hidden item and locate someone that can help. What will happen in the "Once Upon a Time" adventure?



The technology course has 21 assignments that are divided into 6 Sessions:

- **Session 1 Get to Know Scratch Jr**  
In session 1, students are introduced to programming with Scratch Jr. To start, they explore the program window to learn about commonly used tools. Afterwards, they investigate the Triggering, Motion, Looks, Sound, Control, and End blocks to discover their function. Once familiar with the coding blocks they build simple scripts to create an animated scene.
- **Session 2 Once Upon a Time**  
In session 2, students begin to create their Techno Tale. Their modern fairy tale will be told by building scripts using coding blocks in Scratch Jr. To gain inspiration they watch an example story and answer questions about the setting, characters, and plot. Next, they complete a planning sheet to organize their ideas. Students then design their first story page. It introduces the problem and shows the hero embarking on a quest to find a solution. Motion and Looks blocks are used to animate the action.
- **Session 3 Embark on a Quest**  
In session 3, students design another page in their Techno Tale. In this part of the story, the hero embarks on a quest. They travel in search of a special item. The reader will join in the hunt by tapping objects on the page. When the correct location is found, the item will reveal itself. Wait and Repeat blocks are used to control the timing of each action.
- **Session 4 Seek Help**  
In session 4, students create the third page in their Techno Tale. In this part of the story, the hero seeks help. If-then logic is used to control the animation. Scripts start only when characters bump into one another. This produces a fun sequence of events. First the hero asks for help. Then the helper goes after the villain. Finally, the bad guy does an action to show the problem is solved. To prepare to create this story page, students learn how to display the grid and count steps to direct movement.
- **Session 5 Happily Ever After**  
In session 5, students animate their final page in their Techno Tale. At the ending of the tale the characters live happily ever after. Broadcasting is used to organize the timing of events. This form of conditional logic directs scripts to start only when a message is received. It is used to trigger characters to do an action to celebrate the problem being solved.
- **Session 6 Story Time**  
In session 6, students share their Techno Tale. To prepare the project for viewers, a checklist is used to guide revisions. The story is then shown to friends and family. At the end of TechnoTale, the young coders reflect upon the learning experience.

### *Extension Activities:*

Record a Sound, How to Design a Character, Set the Speed, Explore the Kingdom, Design Your Own Quest, Animate with Coded Messages, Connect the Pages

*Technology Skills:* Programming

*Technology Integration:* Computer Science, Language Arts, Mathematics, Social Studies, Visual Arts

*Software Applications:* Scratch Jr

## TechnoWhiz

In this course, students jump into the world of coding. They learn how to sequence blocks in Scratch Jr to build simple scripts and loops. The coders design silly scenes, feed a pet monster, explore a magical land, race to the finish line, and more! This fun-filled introduction to programming will spark students' imaginations. Invite curious young minds to become whiz kids!



The technology course has 16 assignments that are divided into 6 Sessions:

- **Session 1 Become a Whiz Kid**  
 In session 1, students become programming whiz kids. Their first assignment is to sequence a series of tasks to learn about the job of a programmer. Next, they open Scratch Jr to investigate the function of many of the tools. By adding Motion blocks to the programming area, they learn how to code a character's movement. Next, they connect blocks together to form a script that sequences actions. Finally, students cause the script to loop. At the end of the session, they combine their coding skills to create a silly scene. It comes to life by combining a colorful background with moving characters.
- **Session 2 Count and Code**  
 In session 2, the programming whiz kids take the Counting Challenge. They learn to direct how many steps a character moves to reach a goal. To start, they solve puzzles to help the cat eat the cake, the dog catch the ball, and the horse reach the barn. Next, they explore how to edit the Motion coding blocks to set the number of steps. Once they have mastered this skill, students build scripts to help characters get home. Can they do it?
- **Session 3 Create a Pet Monster Game**  
 In session 3, the programming whiz kids design a game. They build code that has a player feed a pet monster. To start, they create an opening sequence to attract attention. It has the character talk, grow, shrink, and blink. The action is controlled using the Wait and Repeat blocks. Afterwards, students apply their knowledge to add food to the stage that when clicked moves to the pet monster and then disappears. What does the pet monster like to eat?
- **Session 4 Design a Magical Land**  
 In session 4, the programming whiz kids design an interactive magical land. The game invites players to explore the place to discover surprises. By clicking on objects, they can cause flowers to grow, a sun to spin, or dragons to hop. The speed of the action is controlled to make it happen slow or fast. What amazing things are hidden in the scene?
- **Session 5 Race to the Finish**  
 In session 5, the programming whiz kids build a racing game. Players watch the action and then must select the winner. If they pick correctly, the racer will do a celebration dance. Who will reach the finish line first?
- **Session 6 Game Time**  
 In session 6, the programming whiz kids invite others to play their racing game. Players rate what they liked the most about the activity. Afterwards, the young game designers answer questions about coding the Scratch Jr project.

### *Extension Activities:*

Move a Character Diagonally, Move Around Town Game, Be a Gamer, Edit a Character, Paint a Background, I am a Programmer

*Technology Skills:* programming

*Technology Integration:* Computer Science, Mathematics, Language Arts, Social Studies, Visual Arts

*Software Applications:* Scratch Jr

# Junior Technology Course Descriptions

## TechnoArcade

In this course, students become game developers. They use Scratch coding blocks to create activities for kids. These include Jumble Tumble, Let's Jam, Mystery Island, and Lost Treasure. Upon completion, gaming fans visit an online arcade to share in the fun.



The technology course has 18 assignments that are divided into 6 Sessions:

- **Session 1 Arcade Hero**  
 In session 1, students become arcade heroes. They prepare to build an online arcade for kids. To start, they register for a free Scratch account to gain access to the online coding platform. Afterwards, they explore the program to learn about common tools and terminology. By connecting blocks to make a script they discover how to control a sprite.
- **Session 2 Jumble Tumble**  
 In session 2, students build Jumble Tumble. In this game a press of a key creates a mish-mash of characters dashing and rolling across the screen. This chaotic scene uses Motion blocks to control movement. By sequencing the coding blocks, students discover how to direct and loop action. For an extra challenge, they can use if-then logic to create a silly outcome when two sprites crash.
- **Session 3 Let's Jam**  
 In session 3, students put together a band. They design a game that transforms the keyboard into a musical instrument. Players will enjoy leading a jam session as they tap away at the keys. Students wanting a personal touch can add a variable that allows the player to name the new music group.
- **Session 4 Mystery Island**  
 In session 4, students create Mystery Island. In this game, players explore an imaginary land. By tapping objects, they discover strange creatures. To build the code, Looks blocks are combined to change the appearance of sprites. Coders wanting to create an extra surprise can use random operators.
- **Session 5 Lost Treasure Part One**  
 In session 5, students begin to create the game Lost Treasure. In it, players collect items to score points. The player moves the mouse to pick up lost items and carries them to a specific spot. To start, students plan the theme of their game. Next, they insert a setting, hero, and treasure. With this complete, the game designers build code to control the movement of the hero. Sounds and Looks blocks combine to add excitement to the game play.
- **Session 6 Lost Treasure Part Two**  
 In session 6, students finish designing the game Lost Treasure. They create a variable to keep score. Using the wait until coding block, they build a script that ends the game when all hidden items are found. An optional activity has students create a timer to have players race against the clock. Upon completion, a tester plays the game.

### *Extension Activities:*

Explore the Scratch Community, Dash and Crash, Pick a Band Name, Surprise Me, Add a Game Title, Create a Timer

*Technology Skills:* Programming

*Technology Integration:* Computer Science, Mathematics

*Software Applications:* Scratch

## TechnoCandy

In this course, students develop a plan to boost candy sales. They investigate a problem by conducting a survey and researching candy packaging. A spreadsheet is used to organize, calculate, and graph data. Based on the evidence students recommend a solution in a written report. Optional activities challenge students to explore formulas, learn advanced graphing techniques, or design a candy package.



The technology course has 13 assignments that are divided into 6 Sessions:

- **Session 1 About Spreadsheets**  
In Session 1, students are introduced to spreadsheet terminology. To learn about the program, students play spreadsheet Bingo. This game has students identify cell references, navigate in a worksheet, enter data, fill cells with color, and select multiple cells. It is a fun way to learn essential spreadsheet skills.
- **Session 2 Conduct a Color Survey**  
In Session 2, students are given a problem to solve. A candy company is losing sales. Their number one candy is no longer number one. A study of the problem shows that children like the taste of the candy, but they say it is boring to eat because the colors are not fun. Students conduct a survey to learn more about what colors kids like. The survey results are entered into a spreadsheet. The data will be analyzed in upcoming sessions.
- **Session 3 Graph the Color Survey**  
In Session 3, students produce a graph of their survey results. They make a bar graph. The color of the bars, chart area, and titles are then formatted to look attractive. Upon completion, students print the worksheet so that they have a complete record of their survey results. They will use this information in upcoming sessions to develop a plan to make the candy number one again. An optional activity explains how to copy the survey worksheet and transform the data into different graphs to determine the most suitable type.
- **Session 4 Research Candy Packaging**  
In Session 4, students continue gathering information for the candy company by studying packaging. Students estimate the number of colored candies contained in the average package of a chosen candy and record their predictions in a spreadsheet. Students then count and record the actual data. Using the sorting feature, data is displayed in different views. Furthering their spreadsheet skills, students customize text within cells and add an image to create a professional looking document.
- **Session 5 Graph Packaging Results**  
In Session 5, students make a comparison chart of the candy packaging research results. Using the skills learned in previous sessions, they make a bar graph. Once it is finished, they format the bar color, background, and labels so it looks great. Students then study the graph and summarize the results. An optional extension activity explores practical applications for pie and line graphs.
- **Session 6 Write a Report**  
In Session 6, students develop a plan to make the candy number one again. They explain their idea in a report. The document summarizes the research findings and outlines a solution to the problem. If time permits an optional extension activity has students create a new package design for candy. It should attract customers' attention causing them to grab it off the store shelf.

### *Extension Activities:*

Have Fun with Cell References, Experiment with Sum, Explore Chart Types or Advanced Chart Editing, Explore Pie and Line Graphs, Draw Packaging, Conduct a Poll or Survey\*

*Technology Skills:* Spreadsheets, Word Processing, Graphics

*Technology Integration:* Language Arts, Mathematics, Visual Arts, Business Studies

*Software Applications:* Excel, PowerPoint, Word | Sheets, Slides, Docs, Forms

\*Note: Survey activity in Google version only.

## TechnoEditor

In this course, students assume the role of an editor. An editor is someone who makes changes to written material to prepare it for publication. Using Microsoft Word or Google Docs, students learn essential word processing skills that allow them to revise a collection of stories written for children. An exploration of text, picture, and page layout formatting techniques allow them to edit stories, comics, and poetry.



The technology course has 17 assignments that are divided into 6 Sessions:

- **Session 1 Edit the Front Cover**  
In session 1, students are introduced to a word processing program. They learn how to perform basic word processing tasks such as how to select, format, and delete text. They apply this knowledge to edit the front cover of the book, "A Collection of Stories Written for Children".
- **Session 2 Edit a Poem**  
In session 2, students continue to edit the book, "A Collection of Stories Written for Children". As an editor, students apply their knowledge of formatting to make the descriptive words in the poem, "A Fun Day in the Sun", look like their meaning. Afterwards, students learn how to insert a picture and format the appearance to make the poem look spectacular.
- **Session 3 Edit a Story**  
In session 3, students add interest to the story "The Unbelievable Trip to the Store". They learn how to insert and format an online picture. Then they apply these skills to illustrate remarkable events including seeing a car with an elephant on its roof, witnessing a monkey in front of the store door, and glimpsing a frog riding on the back of a bird. This "unbelievable" story will teach students picture formatting techniques.
- **Session 4 Edit a Comic**  
In session 4, students continue their job as editors. This time, they are editing the content of a comic strip. To prepare for this activity, they must first learn how to draw and format shapes and WordArt. Once students can apply their skills confidently, they create a funny comic that will make the children reading it laugh and smile.
- **Session 5 Cut, Copy, & Paste**  
In session 5, students learn how to use the cut, copy, and paste commands to edit a story. To begin, students engage in a practice exercise. Once they have mastered these basic editing commands, they apply their knowledge to edit the story titled "The Copy Cats."
- **Session 6 Final Edit**  
In session 6, students prepare the storybook "A Collection of Stories Written for Children" for publication. To begin, they edit the document to correct any spelling or grammar errors. Afterwards, they use a checklist to verify that the document is ready for publication. Last minute changes are made to the book. Once it is perfect, the document is shared with others.

### *Extension Activities:*

Get Help, Adjust Line Spacing\*, Setting Page Margins, Crop an Image\*, Adjust Color and Artistic Effects\*, Get Creative with WordArt, Even More Editing Tools\*, About the Office Clipboard\*, Insert Page Numbers

*Technology Skills:* Word Processing, Graphics

*Technology Integration:* Language Arts

*Software Applications:* Word | Docs, Drawings

*\*Note:* Select extension activities are not available for all product versions.

## TechnoInternet

In this course, students have fun exploring the Internet. This online expedition allows them to safely discover the wonders online as well as learn the importance of responsible digital citizenship. The assignments revolve around an imaginary world. Students can travel to the Visitor's Center, e-Library, e-Media Center, e-Playground, e-Mail Depot, or e-Café. Each destination is tracked by adding a marker to an Internet map. Use this course to create a foundation for future learning.



The technology course has 19 assignments that are divided into 6 Sessions:

- **Session 1 At the Visitor's Center**  
 In Session 1, students begin their e-Journey. To prepare for their trip they attend an orientation meeting. At the meeting they select the destinations where they would like to visit, plan a route, and gather their Internet map. Once they are prepared for their journey they launch a web browser. The first stop is the Visitor's Center. At the center, students have the option of visiting the Safety Booth to learn about Internet Safety, Search Engine Station to take a brief tour of the Internet using search engines, Favorites Center to learn how to return to a location using bookmarks, and the School to locate homework helper websites. Grab your Internet map. It is time to embark on an exciting e-Journey!
- **Session 2 In the e-Library**  
 In Session 2, students travel to the e-Library to acquire valuable information sources. There they wander the shelves in search of encyclopedias, atlases, dictionaries, and thesauruses. Once familiar with the location of useful reference materials they turn their attention to locating other informative websites. The sheer volume of materials requires them to learn tips for assessing if a source is trustworthy. These strategies are then used to determine if a website is a reliable source. Shush! You are entering the e-Library!
- **Session 3 In the e-Media Center**  
 In Session 3, students take an excursion to the e-Media Center. There they discover a collection of photos, videos, and maps. This assortment of media is examined to learn more about the material that can be found on the Internet. It is time to click around to discover great stuff on the Internet!
- **Session 4 In the e-Playground**  
 In Session 4, students have fun at the e-Playground. They grab some headphones to listen to their favorite song on the Sound Stage. Next, they go over to the Webcam Observatory where they view live images from around the World captured by webcams. Afterwards they venture to the Arcade to play online games. There are so many great places to have fun on the Internet. Experience the Excitement!
- **Session 5 In the e-Mail Depot**  
 In Session 5, students take a trip to the e-Mail Depot. Here they communicate with friends by sending electronic messages from the e-Mail Post Office. To prepare for this part of the e-Journey, students consider the benefits to e-mail, review e-mail guidelines, take a safety quiz, and learn about netiquette. Afterwards, students learn how to send, read, reply, forward, and delete e-mail messages. In addition, they practice sending attachments. If time permits, students can visit the Ecard Shop to send greetings to friends and family members. Exchange greetings with friends!
- **Session 6 In the e-Café**  
 In Session 6, students meet in the e-Café. This portion of the e-Journey takes them into the realm of chat and social media. Before they can start to mingle with friends online, students learn information about cyberbullying, guidelines to keep them safe, and communication tips. Once familiar with how to behave as a responsible digital citizen, they have the option of visiting either the Chat Room or Social Media Place to socialize with friends.

### *Extension Activities:*

Get Homework Help, Read News on Current Events, Survey the Map Collection, Study Online Shopping, Study Online Banking, Visit the Ecard Shop, Explore the Blogosphere

*Technology Skills:* Digital Citizenship

*Technology Integration:* Foundation for Future Learning

*Software Applications:* Web Browser

## TechnoJournal

In this course, students are introduced to word processing by creating a personal journal. They express ideas and describe experiences by writing a series of entries. Students reflect upon a recent event, make a note of favorite things, and list personal wishes. The text on each journal page is formatted and pictures are added to produce an eye-catching booklet. Reader responses to the entries are logged to celebrate the accomplishment.



The technology course has 9 assignments that are divided into 6 Sessions:

- **Session 1 Explore Word Processing**  
In Session 1, students are introduced to journaling. They examine a sample journal to identify the types of entries they will be writing. Next, they explore the program window and discover popular commands. An optional activity has students locate keys on the keyboard. This task is ideal for beginning typists.
- **Session 2 Create a Journal Cover**  
In Session 2, students apply essential word processing skills to create a simple journal cover. It will include a title, student name, and an image. This task provides an opportunity to experiment with text formatting and picture styles.
- **Session 3 Recall a Special Event**  
In Session 3, students write their first journal entry. It is about a memorable past event. Sentence starters jumpstart thinking, such as 'Yesterday I', 'A funny thing happened', or 'I was surprised'. Students learn how to filter online pictures to insert a clipart and adjust the text wrap. This page will look great!
- **Session 4 List My Favorite Things**  
In Session 4, students expand their word processing skills to write a second journal entry. It includes a bulleted list of favorite things such as sports, animals, candy, or video games. To make the information easier to read, students explore bullet styles and line spacing options. Afterwards, they insert an image for each item on the list. As an extra challenge, students format the content to fit on one page.
- **Session 5 Wish and Dream**  
In Session 5, students write their final journal entry. It is a numbered list of wishes. Sentence starters act as a source of inspiration, such as " I wish my superpower was", " I wish I could meet", or " I wish I could visit". To make the page eye-catching, students explore text effects. They also learn how to adjust object order to layer images to produce unique illustrations. If time permits, an optional activity provides suggestions for writing additional journal entries.
- **Session 6 Publish the Journal**  
In Session 6, students publish their journal. To make sure the document is error-free, they spell check the entries. Next, they use a checklist to verify all writing tasks are complete and the pages are easy to read. Afterwards, they insert page numbers and then print the file. Once published, students select a favorite entry and share it with a teacher, parent, or a friend.

### *Extension Activities:*

About the Keyboard, Journal Writing Ideas

*Technology Skills:* Word Processing

*Technology Integration:* Language Arts

*Software Applications:* Word | Word Online | Docs

*Note:* Sequence of assignments varies slightly between the Microsoft and Google versions.

## TechnoPresenter

In this course, students deliver an informative speech. To start, they study a sample slideshow to gain insight into the purpose of a presentation. Next, they apply an inquiry-based approach to generate a meaningful research question. Students then investigate their topic. Using presentation software, slides are created that apply graphic elements such as bulleted lists and tables to organize facts. To prepare for public speaking, students compose a set of notes to accompany each slide. Upon completion, they communicate their findings to an audience.



The technology course has 10 assignments that are divided into 6 Sessions:

- **Session 1 Get Ready to Public Speak**  
In Session 1, students learn about public speaking. They begin by examining the reasons people give oral presentations. Next, they take a quiz to rate their readiness to speak in public. Following this, students analyze a sample slideshow, to understand how visual aids can engage the audience, as well as support the speaker. If time allows, students can also participate in an optional activity where they work in teams to perform skits that demonstrate the impact of body language on communication.
- **Session 2 Design a Title Slide**  
In Session 2, students choose a topic of personal interest for an informative speech. They begin by selecting a question related to their chosen topic for further research. An organizer helps to record findings. Next, students create a title slide for their presentation. By applying a theme, they ensure that the visual aid maintains a professional appearance. Next, students explore text formatting and picture styles to add a personalized touch to the design. An optional activity is also available, which guides students on how to insert a short video related to their topic to enhance audience engagement.
- **Session 3 Highlight Key Points**  
In Session 3, students arrange information into a bulleted list on a slide. The content is rephrased to highlight key points and capture the audience's attention. Speaker notes containing additional details are included. Students enhance their slides by inserting images or diagrams that reinforce their message. An optional activity demonstrates how to animate text to control the presentation's flow of information.
- **Session 4 Summarize Facts in a Table**  
In Session 4, students present information to an audience by summarizing details using a table format. Speaker notes offer additional information about one intriguing or unexpected fact mentioned on the slide. To enhance readability, students format the table style and align the cells appropriately. They then explore the use of shapes and WordArt to emphasize key points. An optional activity involves creating a graphic organizer to present information concisely.
- **Session 5 Rehearse the Presentation**  
In Session 5, students get ready to deliver an informative speech with a slideshow as a visual aid. They begin by reviewing a checklist to ensure that all slides contain the necessary content. They practice the presentation, referring to either digital or printed speaker notes. An optional activity uses rehearsal groups to build students' confidence in public speaking by presenting to a small audience.
- **Session 6 Present to an Audience**  
In Session 6, students deliver an informative speech or lecture on a chosen topic. They use a slideshow to educate the audience and hold their attention. After the presentation, students engage with the audience by answering questions. Optional activities explain how to use annotation tools, such as a laser, pen, or highlighter, to emphasize key points during the presentation or how to host an online discussion.

### Extension Activities:

Body Language Skits, Insert a Video, Work as a Team\*, Animate Information, Create a Graphic Organizer, Group Presentation Rehearsal, Use Annotation Tools\*, Ask an Expert\*

*Technology Skills:* Presentation

*Technology Integration:* Language Arts, Social Studies, Science, Geography, History, Health

*Software Applications:* PowerPoint, Word | PowerPoint Online, Word Online | Slides, Docs

\*Note: Select extension activities are not available for all product versions.

## TechnoRace

In this course, students become game developers. They build an imaginary world using Scratch coding blocks. This online rescue mission has players race against time to collect points. Loops, conditionals, and variables combine to produce original game play. Upon completion, gaming fans test the story action. For coders wanting an extra challenge, they can customize animation, create flashing backdrops, or increase difficulty level.



The technology course has 21 assignments that are divided into 6 Sessions:

- **Session 1 Start from Scratch**  
In session 1, students are introduced to Scratch, an online coding platform. To start, they explore the program to learn about common tools and terminology. Once familiar with the programming environment, students compete in a racing adventure. Afterwards, they experiment with the code to alter the player's experience. This exploration provides a foundation for building their own game.
- **Session 2 Become a Game Developer**  
In session 2, students become game developers. They invent a storyline for a rescue mission. In it, the player races against time to reach a goal. Along the way they must collect treasure and avoid obstacles. Once students have a plan, they begin to build the game board. First, they insert sprites onto the stage to act as the player, treasure, obstacle, and goal. Next, they use the Paint Editor to create an imaginary world. Afterwards, they build a simple script that will play theme music throughout the game.
- **Session 3 Let's Get Moving**  
In session 3, students create game controls. The fun starts with an exploration of Motion blocks. They build a script that moves the goal sprite, so it attracts attention. Next, the game developers transfer their knowledge to build controls using the arrow keys. Once the player can move around the imaginary world, students learn how to use logic to prevent walking through objects. Students in need of a challenge can build a script that teleports or launches the player at hyper speed. It is time to get moving!
- **Session 4 Avoid Obstacles to Win**  
In session 4, students test the player's skill by restricting their movements. To begin, they code a looping script that moves a sprite on the stage so that it temporarily blocks the player. Next, the game developers design code that causes the player to slow down if it touches the obstacle. With this script complete, students apply their knowledge to stop the game when the player reaches its goal. For those wanting to add even more interest, they can switch backgrounds when two sprites collide, or the game is over.
- **Session 5 Collect Treasure**  
In session 5, students design scripts that allow the player to collect points. The first task is an exploration of the Looks blocks to change the appearance of treasure, so players take notice. Next, students learn about variables. They apply this knowledge to calculate points when a player touches an object such as a coin or jewel. To enhance the game, students can elect to use the Paint Editor to customize the animation of a sprite.
- **Session 6 Time is Up**  
In session 6, students complete the game by adding a timer to increase the difficulty level. They apply their knowledge of variables to build scripts that track time. When a limit is met the game ends. Upon completion, students invite others to test the story action and provide feedback. It is going to be a race to the finish!

### *Extension Activities:*

Digital Footprints in Scratch, Upload a Sprite, Jump to Hyper Speed, Flash a Backdrop, Paint a New Costume, Add Comments

*Technology Skills:* Programming

*Technology Integration:* Computer Science, Mathematics

*Software Applications:* Scratch

## TechnoResearch

In this course, students develop research skills as they create a Fact Card. To start, students brainstorm a topic and plan their research project. Next, they use strategies to retrieve quality information from reliable sources. The facts are then processed using paraphrasing techniques to transform an outline into a one sheet report. The publication is shared with others as a part of a Fun Fact Card Collection. Optional activities challenge students to develop skimming and scanning techniques, practice advanced research strategies, arrange facts in a table, and recognize sources of information. The goal is to teach skills that are transferable to any research project.



The technology course has 12 assignments that are divided into 6 Sessions:

- **Session 1 Select a Research Topic**  
In Session 1, students prepare to create a "Fun Fact Card", a concise one-page summary about a particular topic. To begin, students review a list of research skills and select areas of interest. They then study sample fact cards to understand how information is organized. Afterward, they brainstorm ideas for their own fact card. Using Wikipedia, they conduct initial research on their chosen topic, which serves as a starting point for narrowing their focus. An optional activity teaches skimming and scanning techniques.
- **Session 2 Build a Research Outline**  
In Session 2, students construct a research organizer. It offers a framework with three headings to categorize facts. It also includes sections for a glossary and listing sources. Suggestions for popular topics are provided to help students divide their research into manageable parts. Following this, students use an online encyclopedia to gather basic facts. They organize the facts under the appropriate headings. An optional activity explores the importance of including primary and secondary sources of data.
- **Session 3 Search for Facts**  
In Session 3, students research a topic using Google Search. They learn how to effectively use keywords and the description to choose a relevant site from the search results. They then assess the trustworthiness of the source by conducting a Trust Test. This method is employed to gather facts from two reliable sources. Additional guidance is provided on narrowing results by domain type, such as government sites, reputable publications, or research-based television shows. An optional activity offers further strategies for Google searches, while another provides tips for recording citations.
- **Session 4 Create a Fact Card**  
In Session 4, students convert their research organizer into a fact card. To begin, they duplicate the file. They then use the copy to rephrase the information into their own words. They eliminate redundant facts, condense text for clarity, and rearrange the content into a logical sequence. The emphasis is on writing sentences that are easy for children to read. The fact card will be formatted in the following session.
- **Session 5 Fact Card Design**  
In Session 5, students enhance the design of the fact card. They adjust the font, size, and style of one of the headings, then apply these changes to the remaining headings. Next, they emphasize the glossary by highlighting terms, adding bullets, adjusting line spacing, and applying shading. Information sources are indented. Following this, students improve the overall layout by adding a border, setting margins, and changing the page orientation. Students include images for visual appeal. An optional activity explains how to organize content into columns or a table.
- **Session 6 Share the Fact Card**  
In Session 6, students compile a collection of "Fun Fact Cards". They ensure the information is well-organized and easily readable using a checklist. Students then print their cards and exchange them with classmates. They explore a variety of topics by selecting cards from the collection. Finally, students reflect on their research experience, identifying skills they have acquired and those they will apply in the future.

### *Extension Activities:*

Save Time! Skim and Scan, Primary and Secondary Sources of Information, Explore Google Search, Cite Sources of Information, Arrange Fact Card with Columns and/or Tables

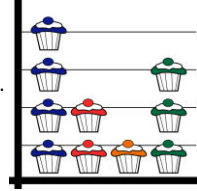
*Technology Skills:* Digital Citizenship, Word Processing

*Technology Integration:* Language Arts, Social Studies, Science, Geography, History

*Software Applications:* Word | Word Online | Docs

## TechnoSales

In this course, students plan a bake sale to raise money. This task requires them to investigate food preferences and analyze financial data to make decisions about the fundraiser. Findings are organized into a report with graphs, to show why their decisions will make the bake sale a success.



The technology course has 20 assignments that are divided into 6 Sessions:

- **Session 1 Introduction to Spreadsheets**  
In session 1, students are introduced to spreadsheet terminology. To learn basic skills, students play "You Found my X-Cell". This game has students identify cell references, navigate in a worksheet, enter data, fill cells with color, format the appearance of text, change the alignment, apply borderlines, and select multiple cells. It is a fun way to learn essential spreadsheet skills.
- **Session 2 What Desserts Do Students Prefer?**  
In session 2, students learn how to use spreadsheets to make decisions about their upcoming bake sale. To make this fundraiser a success it is essential that the dessert sold is a popular item. To answer the question "What desserts do students prefer?" students conduct a survey. The results are organized into a worksheet and then placed into a column graph. The data is then analyzed to determine the dessert item that students prefer. Will it be cupcakes, muffins, or cookies?
- **Session 3 Session 3 Are There Differences Between Desserts Girls and Boys Prefer?**  
In session 3, students continue to analyze the results of the Dessert Preference Survey. To answer the question, "Are there differences between desserts girls and boys prefer?" a double column graph is used to compare the types of desserts both like to eat. This graph will help students to select a bake sale item that everyone will enjoy. By studying the graph, they will be able to make a decision that will ensure success.
- **Session 4 What Dessert Flavors Do Students Like?**  
In session 4, students must decide the flavors of dessert to have at the bake sale. This information is important because there needs to be plenty of items that people like. They investigate "What Flavor of Dessert do Students Like?" The results are organized into a worksheet and then placed into a pie graph. The data is then analyzed to determine the flavor students should sell. Will it be chocolate, vanilla, or strawberry?
- **Session 5 How Many Desserts Do You Need?**  
In session 5, students calculate the number of desserts required for the sale. This information is important because there must be enough items to sell to raise a certain amount of money. To answer the question, "How Many Dessert Items Do You Need?" past sales are studied. The sales information is organized into a worksheet and placed into a line graph. The data is then analyzed to estimate the average money earned in previous sales. This information is used to set a financial goal. Afterwards, formulas are created to calculate a fair price, amount of baked goods needed, and the number of items each student needs to bake. By using math to collect information, students can make good decisions that are sure to make the bake sale a success!
- **Session 6 Bake Sale Report**  
In session 6, students produce a report about how to make the bake sale a success. Using Microsoft Word or Google Docs, they explain their decisions about the sale. They describe the purpose of the sale, the item to be sold, financial goal, price of each item, total number of baked goods needed, and the amount each student in the class will need to bring to the sale. Afterwards, the report is edited to correct spelling and grammar errors. Upon completion, it is sent to the printer for publication.

### *Extension Activities:*

Spreadsheets and You, Change the Sheet Tab Color, Add Pictures into a Bar Graph\*, Add Data Labels\*, Change the Chart Type, Formatting Tips for Pie Graphs, Different Formulas-Same Result, About the Sale

*Technology Skills:* Spreadsheet, Data Management

*Technology Integration:* Mathematics, Computer Science

*Software Applications:* Excel, Word | Sheets, Docs

\*Note: Select extension activities are not available for all product versions.

## TechnoSite

In this course, students become web designers. They construct a website that includes links to fun places for kids on the World Wide Web. Throughout the design process, students pay attention to the ease of navigation, overall appearance, and quality of the content. This will ensure their web pages will get the Kid Stamp of Approval.



The technology course has 22 assignments that are divided into 6 Sessions:

- **Session 1 Be a Website Critic**  
 In session 1, students become website critics. Before they can analyze web pages on the World Wide Web, they are introduced to Internet terminology. Afterwards, they examine websites and rate them according to ease of navigation, appearance, quality, and safety. They will use their knowledge of what makes a "kid-approved" website when they create their own web pages in the upcoming sessions.
- **Session 2 Develop Search Strategies**  
 In session 2, students learn various search strategies to help them find information fast on the World Wide Web. They apply this knowledge to locate a wide range of items. These skills will be applied in the upcoming session when students find high-quality websites to include on their own web pages.
- **Session 3 Become a Web Designer**  
 In session 3, students become web designers. To prepare for the task, they view an example website that has hyperlinks to interesting places on the World Wide Web for kids. Students examine the characteristics and rate the ease of navigation, appearance, quality, and safety. Next, they use the Internet to gather resources for their own website. The content of each page is planned using the Website Organizer.
- **Session 4 Design a Home Page**  
 In session 4, students start to make their website using Google Sites. They begin by constructing a Home Page that includes a banner, title, and description. They use Layouts to add blocks of information about the topics.
- **Session 5 Build Web Pages**  
 In session 5, students continue to build their website. They follow instructions to insert several web pages. Each one is about a specific topic and will contain hyperlinks to fun places for kids on the WWW. Content on the Home page is joined to each web page to make it easy for visitors to navigate.
- **Session 6 Publish a Website**  
 In session 6, the young web designers publish their websites to the World Wide Web. To prepare, students edit the content and appearance using a checklist as a guide. Next, they have a peer review their website to test each hyperlink. Once the website is ready for viewers, they publish the website and share the link with classmates.

### *Extension Activities:*

Examine Web Browser Settings, Discover Internet Resources, Add a Logo to the Header, Insert an Image Carousel, Add ALT Tags

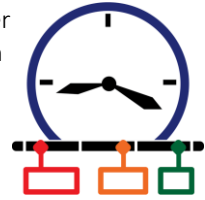
*Technology Skills:* Web Design

*Technology Integration:* Computer Science, Language Arts, Media Arts, Geography, History, Social Studies

*Software Applications:* Google Sites

## TechnoTimeline

In this course, students create a timeline that summarizes significant events. The graphic organizer will consist of information organized in chronological order. Each event will be analyzed to gain an appreciation of its historical importance on people and future events. To start, students study sample timelines for inspiration. Next, they research a topic and record findings using an organizer. Once the important moments have been pinpointed, a graphic organizer is used to create a visual display. Upon completion, the sequence of events is shared with others.



The technology course has 9 assignments that are divided into 6 Sessions:

- **Session 1 What Is a Timeline?**  
In Session 1, students step into the role of historians as they get ready to construct a timeline featuring significant events. To understand the creative possibilities, they study samples on a range of topics. These include a renowned inventor, a historic expedition, an About Me autobiography, and milestones in flight. Next, they select an idea for their own timeline. A list of suggestions aid students in identifying a personal area of interest.
- **Session 2 What Events Are Significant?**  
In Session 2, students research their topic to uncover key historical moments. These could be firsts, remarkable achievements, milestones, or events that acted as catalysts. They use an organizer to record pertinent information, including the date and a brief description of each event. An optional activity is available to assist students in determining significance.
- **Session 3 Place Events in Chronological Order**  
In Session 3, students construct a timeline using presentation software. They start by customizing the slide size, allowing for a better display of a series of events. Next, they add a title and apply a background to the slide. Then, students use a graphic to sequence dates and events on the timeline. To enhance the visual appeal, they experiment with layout and design tools. Optional activities involve connecting slides to provide additional details about a special event, or a workshop to introduce drawing tools.
- **Session 4 Highlight Key Events**  
In Session 4, students explore how to format shapes and online pictures to emphasize information in their timeline. They experiment with fill, outline, and effects to create a unique design. Optional activities guide students to save images from the Internet and insert them onto the slide to highlight important moments, or how to crop an image to highlight important moments.
- **Session 5 Gain Peer Feedback**  
In Session 5, students collaborate to enhance their timeline. They begin by evaluating their own work in terms of design, layout, and content using a checklist. After this self-assessment, they partner with a peer, who reviews the timeline. The peer editor provides feedback by posting a comment describing what they like and offering a suggestion for improvement. Comment starters are provided to help students phrase their feedback. This feedback is then used to make revisions.
- **Session 6 Discuss Historic Events**  
In Session 6, students present their timelines. To start, they print the file to create a class bulletin board. Next, they deliver the information in a slideshow format to a small audience. Rather than reading every word on the slide, they provide a summary and highlight one or two key moments in the timeline. The assignment includes topics for discussion to provide students with suggestions for their presentation.

### *Extension Activities:*

Is it Significant? Zoom to Feature a Special Event\*, Drawing Workshop\*, Highlight Events Using Saved Images\*, Crop a Picture to Illustrate an Event\*

*Technology Skills:* Presentation, Word Processing

*Technology Integration:* Geography, History, Social Studies

*Software Applications:* PowerPoint, Word | PowerPoint Online, Word Online | Slides, Docs

\*Note: Assignment titles and sequence vary slightly between the Microsoft and Google versions. Select extension activities are not available for all product versions.

## TechnoToon

In this course, students create a graphic story in the style of a cartoon or animated comic strip. To start, they learn about writing conventions and watch sample stories as a source of inspiration. Students then apply their creativity to construct their story with text boxes, images, callouts, starbursts, and WordArt. Transitions are inserted between slides to divide the scenes. Animation is applied to objects to sequence the timing of events. Upon completion, the graphic story is set to play automatically. Challenging extension activities support learning with optional assignments such as advanced animation techniques and exporting as a video.



The technology course has 9 assignments that are divided into 6 Sessions:

- **Session 1 Become a Digital Storyteller**  
In Session 1, students become digital storytellers. They explore the genre by examining how elements such as text boxes, callouts, shapes, and basic images are combined to tell a narrative. To inspire their creativity, they view sample cartoons. These include "What is It?", "My Dream", and "Super Dog". Each of these examples offers a distinct and innovative approach to digital storytelling."
- **Session 2 Plan a Digital Story**  
In Session 2, students develop a plan for their digital story. They sketch their ideas into a storyboard to arrange the sequence of events. An optional activity offers suggestions for characters, settings, and plots. Once prepared, students craft their front cover. By experimenting with background options including color, gradient fills, textures, and patterns, they discover how to create a cartoon aesthetic. Following this, they explore formatting options to produce a title with a text box featuring a unique outline and shape effect. These graphic design skills will be applied in upcoming sessions to illustrate each scene in their story.
- **Session 3 Set the Scene**  
In Session 3, students begin by introducing the story to viewers. They create a slide with a text box that describes what is happening. They select an online picture for their slide background, setting the scene for their narrative. Suggestions are provided to help them search for an ideal image. Next, they then choose their main character, who will use a callout to speak. An optional activity explains how to save a picture from the Internet to find a specific clipart for their character in the story.
- **Session 4 Illustrate the Comic Strip**  
In Session 4, students illustrate each scene in their story. To start, they learn how to arrange object order and group shapes. They apply these graphic design techniques to combine WordArt with shapes to depict sounds like splat, whoosh, thud, or ka-pow to make their cartoon look authentic. As an optional activity, students boost their picture editing skills by exploring advanced styling, rotation, and cropping features.
- **Session 5 Animate the Story Action**  
In Session 5, students animate each scene in their story. First, they apply transitions between slides to divide the action between each strip of the comic. Then students animate individual slide objects to sequence storytelling, guided by animation tips. An optional activity introduces advanced techniques, such as combining entrance, emphasis, and exit effects, as well as adjusting the order and timing of events.
- **Session 6 Share the Digital Story**  
In Session 6, students present their digital story to an audience. To prepare, they use a checklist to review the content, design, and animation. After completing revisions, students set their cartoon to play automatically. They then participate in a toon-a-thon, where the entire class watches each other's cartoons. Optional activities explain how to print the slides as a comic book and convert the file to a video.

### *Extension Activities:*

Generate a Story Idea, Use Images from the Internet, Picture Editing Workshop, Animation Workshop, Print Your Comic, Make a Video

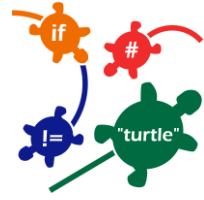
*Technology Skills:* Presentation

*Technology Integration:* Language Arts

*Software Applications:* PowerPoint | PowerPoint Online | Slides

## TechnoTurtle

In this course, students become game designers. They use Python and the Turtle library to conquer mazes, paint pixel art, create a Mad Lib Generator, and build a Carnival Game. The fun begins when students edit code to gain an understanding of the structure of Python scripts. Once familiar with basic concepts, the young programmers are introduced to debugging, loops, variables, and conditional logic. Ignite an interest in programming with meaningful activities designed for beginners.



The technology course has 30 assignments that are divided into 6 Sessions:

- **Session 1 Python, Turtles and Bugs**  
In this session, students become programmers. To start they learn how the Python programming language is used in daily life. Next, they visit the Turtle library to study the commands and make predictions about their function. They test their ideas by modifying a program to control what it draws. Once familiar with running a Python program, students add bugs to the code in order to identify and fix common errors.
- **Session 2 Conquer the Maze**  
In this session, students control the movement of a Turtle through a series of mazes. The fun begins when the young programmers write their first script. It marches a Turtle around the screen by moving forwards, backwards, and turning. Once they have mastered this set of commands, students are challenged to develop a script that will guide a Turtle through a maze. Can they solve the puzzle?
- **Session 3 Draw Pictures**  
In this session, students write code to draw pictures. To start, they learn how to plot a point on the canvas using x and y coordinates. They apply this knowledge to stamp a unique design. Next, the young programmers follow instructions to design a robot by combining lines, rectangles, circles, dots, and symbols. Once familiar with how to control the Turtle's drawing tools, students build their own program to draw a picture.
- **Session 4 Design Colorful Spirographs**  
In this session, students paint stunning artwork. To start, they learn code that repeats a set of instructions forever or for a specific number of times. Next, they complete a series of exercises to discover how to construct looping geometric shapes called spirographs. Once students are familiar with designing patterns, they use the Random library to produce colorful creations.
- **Session 5 Create a Mad Lib Generator**  
In this session, students design a word game, called a Mad Lib. It has players provide a list of words that are used to complete a silly sentence or story. To prepare for this coding task, students learn about variables by chatting with the computer. Next, they edit a Mad Lib party invitation to discover how to join variables and text together to form sentences. Once familiar with the structure of the code, they program their own wacky word game.
- **Session 6 Invent a Carnival Game**  
In this session, students become game designers. They combine Python and Turtle programming commands to produce a Carnival Game. To start, they learn about if, elif, and else. Once familiar with conditional logic they invent a game that prompts the player to pick an option to win a prize. Optional challenges enrich the design such as looping a flashing message or showing a picture of their winnings. Get ready for fun. Step right up to win a prize!

### *Extension Activities:*

Imagine Life Without Coding, Dot-to-Dot Fun, Customize the Stamp, Rain Cats and Dogs, Build a Word Game, Guess a Number

*Technology Skills:* Programming

*Technology Integration:* Math, Language Arts, Visual Arts, Social Studies

*Software Applications:* IDLE Python 3

## TechnoTrivia

In this course, students design a fun trivia quiz. Using Google or Microsoft Forms, they test their friend's knowledge about a topic. There is no need to keep score, since an automated system calculates points for each person and sends the results. Extension activities have students host a Battle of the Brains, team up to build a Trivia Game, make a Pick your Own Ending story, include a video, review a collection of fun quizzes, customize the theme, and manually mark a short answer question.



The technology course contains 15 assignments that are divided into 6 Sessions:

- **Session 1 Test Your Wits**  
In session 1, students test their wits. To jump start the fun, they are introduced to trivia quizzes by completing the Wacky Animal Quiz. Once familiar with the structure and purpose of this type of game, students rate their quizmaster type. Get ready to entertain friends and family with odd, silly, and interesting questions.
- **Session 2 Build a My Country Quiz**  
In session 2, students build a trivia quiz about their country. It will test knowledge about the capital city, flag, landmarks, facts, and national symbols. Students will learn how to pose questions, set the point value, and create an answer key. This activity provides an understanding of Forms features and the structure of a quiz.
- **Session 3 Plan Your Trivia Quiz**  
In session 3, students become quizmasters. They design a trivia quiz for their family and friends to play. To start, they brainstorm topic ideas. Once they have selected a theme, they formulate a plan. An organizer is used to record the questions, correct answers, and points. Students apply helpful tips to generate thought-provoking questions.
- **Session 4 Design a Trivia Quiz**  
In session 4, students build their trivia quiz using Google or Microsoft Forms. They follow their plan to create the questions, scoring system, and answer key. Upon completion, the quizmasters conduct tests to verify the game is working properly. They then assess the quality of the trivia quiz using a checklist to highlight areas for improvement.
- **Session 5 Host a Trivia Time Event**  
In session 5, students take part in a Trivia Time Event. Students invite others to take their quiz. They then test their knowledge by taking quizzes made by classmates. Who is a know-it-all?
- **Session 6 Study Trivia Responses**  
In session 6, students analyze players' answers to the trivia quiz. They view a summary of responses. Graphs for each question illustrate the items that players found easy and difficult. Based on their evaluation, they make recommendations on how to change the trivia quiz to make it even better.

### *Extension Activities:*

Visit Quiz Central, Ask a Short Answer Question\*, Share an Opinion\*, Pick Your Own Ending Story, Customize the Theme, Ask a Question About a Video, Collaborate to Build a Trivia Game, Battle of the Brains Quiz

*Technology Skills:* Data Management

*Technology Integration:* Language Arts, Social Studies, Science, History, Geography, Math

*Software Applications:* Google Forms, Sheets, Microsoft Forms, Excel

*\*Note:* Select extension activities are not available for all product versions.

# Intermediate Technology Course Descriptions

## TechnoBiography

In this course, students become biographers writing about a person's life story. To start, they research a notable figure who has made a difference in the world. Once familiar with events and achievements, students summarize a personal history using heading styles to organize events logically. Contributions are highlighted using a graphic organizer. To help readers connect with the person, artifacts with links to additional information are arranged in a table. Sources of information are cited using a bibliography. Upon completion, the biography is shared with readers.



The technology course has 14 assignments that are divided into 6 Sessions:

- **Session 1 Become a Biographer**  
In Session 1, students become biographers. They prepare to write about the life story of a remarkable person. To start, they view a sample biography about a famous astronaut to understand how a person's history and achievements can be summarized. Next, they brainstorm a topic for their own publication. It could be about an inventor, explorer, athlete, or artist. There are so many possibilities!
- **Session 2 Research a Hero**  
In Session 2, students research a significant person's history and accomplishments. The biography should highlight early experiences that influence the person's future, the importance of their achievements, and events that demonstrate their personality. Using tertiary, secondary, and primary sources of information students prepare to write a life story.
- **Session 3 Create Document Structure**  
In Session 3, students begin to write the biography. They gain valuable word processing skills as they create a title page. Next, they build the document structure using heading styles. There will be sections for personal history, contributions, media gallery, and a bibliography. Once the framework for the publication is complete, they use the heading styles to make a table of contents, which will allow the reader to quickly find relevant information.
- **Session 4 Explain Accomplishments**  
In Session 4, students start to write the biography. They rephrase their researched information to summarize details about the person's early life, family, education, and career. Transition words are provided to help students connect ideas. Next, they create a graphic that highlights accomplishments. To engage readers, an optional activity explains how to design a "bumper sticker" with an inspirational message associated with the person.
- **Session 5 Design a Media Gallery**  
In Session 5, students design a Media Gallery. It will include artifacts of objects from a person's life, such as a video of a performance, link to a speech, or image of a birth certificate. This will help readers form a connection to the person. A table is used to organize the information. Upon completion, students make a bibliography that summarizes their list of sources. An optional activity explains how to bookmark a location to connect information in the Personal History section to an artifact in the Media Gallery.
- **Session 6 Share Your Biography**  
In Session 6, students share their biography with readers. They select an option for publishing. It could be printed or digital. Prior to publication, an extension activity explains how to customize page layout. Students can adjust the page margins, add headers and footers, and modify line spacing. If time permits, discuss the contributions of the significant person with others. Why are they a source of inspiration?

### *Extension Activities:*

Create a School Award, Make a Bumper Sticker, Insert a Video\*, Capture a Still From a Video\*, Link Artifacts using Bookmarks, Customize Page Layout

*Technology Skills:* Word Processing, Graphics

*Technology Integration:* History, Language Arts, Social Studies

*Software Applications:* Word | Word Online | Docs, Drawings

\*Note: Select extension activities are not available for all product versions.

## TechnoBot AI

In this course, students become artificial intelligence specialists. They apply a design thinking model to imagine creative solutions to real-world problems. Using Scratch, they build prototypes of their inventions. These include a drone delivery system, robot pickup service, and self-driving tour. Afterwards, they present one of their AI prototypes as an investment opportunity. Throughout the course, they reflect upon the possibilities and limitations of AI technologies.



The technology course has 24 assignments that are divided into 6 Sessions:

- **Session 1 Introduction to AI**  
In this session, students become artificial intelligence specialists. This role requires them to solve problems using AI and Scratch. The fun begins with an exploration of AI in daily lives. Next, they register for a Scratch account and discover how to use coding blocks to create a simple animation. They will apply this knowledge in upcoming sessions to program a drone delivery system, robot pickup service, and self-driving tour.
- **Session 2 Flying Machines at School**  
In this session, students develop a prototype of a drone delivery system that uses AI. It must solve a common problem at school. Using Scratch, students build a simple program that flies a sprite-drone to collect items and then return to its original start point. They will refine the code to adjust to new delivery locations and object movement. How can students improve the lives of teachers?
- **Session 3 Robot Pickup Service**  
In this session, students invent a robot pickup service that kids can use to quickly get items from a smart locker. The locker could store food, books, or gym equipment. The process will be contactless. A user will receive a secret code to unlock a specific box. If the wrong code is entered, an error message will display. Students will use Scratch to build a model of their AI prototype. How can they improve the lives of kids?
- **Session 4 Self-Driving Tour**  
In this session, students become computer vision specialists. They design a self-driving tour. It must meet the needs of both business owners and tourists. Using Scratch, students will build a program that drives an autonomous vehicle along a route from one exhibit to another. At each stop, a robot will share interesting facts. The tour could take place at a zoo, theme park, or city center.
- **Session 5 Obstacle Detection**  
In this session, students improve the safety of their self-driving tour. They program their autonomous vehicle to avoid obstacles along the route. Afterwards, both business owners and tourists test the design to provide feedback. Once it is ready, students invite others to take a robot guided tour and provide a customer review. How does the invention enhance the lives of others?
- **Session 6 Investment Opportunity**  
In this session, students create a presentation for potential investors. They are seeking funding for one of their AI prototypes. It could be their drone delivery system, robot pickup service, or self-driving tour. Getting straight to the point they will explain their product. Using very few words and lots of visuals they will summarize how the technology works and why it improves the lives of users. Who will invest in their invention?

### *Extension Activities:*

Be a Responsible Digital Citizen, Learn About Drones and AI, Upload a Sprite, The Road to Driverless Vehicles, Organize Code Area, Print Handouts

*Technology Skills:* artificial intelligence, programming, presentation

*Technology Integration:* Computer Science, Science

*Software Applications:* Scratch | PowerPoint or Slides

## TechnoBudget

In this course, students develop financial literacy using a problem-solving model. The fun begins with a windfall and shopping spree. Students create a budget and spending plan. They use a spreadsheet to organize, calculate, and graph data. A report is written to justify financial choices and share insights about money management. Challenging enrichment activities extend learning. Students can comparison shop, use functions to analyze data, filter and sort, calculate with if-then formulas, manipulate debt repayment, build consumer awareness, and draw money idioms.



The technology course has 11 assignments that are divided into 6 Sessions:

- **Session 1 You Are Rich!**  
In Session 1, students participate in a financial literacy simulation. In it, they receive an imaginary windfall of money. They cannot spend it all in one place. Instead, they must form a spending plan that includes saving some of the funds. To start, they rate their money management style to determine if they are a spender or a saver. Next, they explore spreadsheets to discover how this tool can be used to organize information. An optional activity has students illustrate popular idioms such as "I am broke".
- **Session 2 Create a Budget**  
In Session 2, students use a spreadsheet to set a budget for their windfall. To start, they divide the money into spending categories, such as savings, clothing, entertainment, or electronics. No category can be less than 5% or more than 50%. To determine if the budget is reasonable, they graph the data to show the information as a pie chart. Based on the results, students can adjust their budget.
- **Session 3 Develop a Spending Plan**  
In Session 3, students create a spending plan that will track the things they would like to buy. Using a spreadsheet, students create a worksheet that lists items, calculates taxes, and shows a grand total. By applying conditional formatting to cells, it becomes easy to spot overspending. After testing the worksheet to make sure that it works, students delete the data to get the spreadsheet ready for the next session.
- **Session 4 Stick to the Budget**  
In Session 4, students plan a shopping spree. They visit online stores to find items they would like to purchase. The information is tracked using a worksheet. Extra money can be allocated to savings or charity. If their planned purchases go over by a few dollars in one category, they must reduce spending in another. Once the plan is complete, they analyze their data using functions. This will help them determine if they are 'on budget'. Optional activities have students become thoughtful shoppers. They can comparison shop to find the best deal or investigate corporate responsibility to determine if a company deserves their money.
- **Session 5 Graph the Spending Plan**  
In Session 5, students graph the data in their spending plan to see where their money will go. A bar graph makes it easy to compare purchases from each category. They format the data and then analyze the information to determine if they need to make changes to their plan. Optional activities focus on studying small sets of data. Instructions explain how to filter and sort data. As well, students can produce a comparison chart by calculating data from another worksheet using a formula that includes SUMIF.
- **Session 6 Summarize the Budget**  
In Session 6, students write a report that justifies their financial decisions. This document will include an explanation for their windfall, an outline of the budget, and a summary of their planned purchases. Graphs from the spreadsheet will illustrate their plan. The publication will conclude with insights into what students learned about their money management style. An optional activity about credit and debt explains how to use a spreadsheet to calculate interest and monthly payments.

### *Extension Activities:*

Have Fun with Money Idioms, Compare Purchasing Options, Build Consumer Awareness, Filter and Sort Data\*, Comparison Table and Graph, Understand Credit and Debt

*Technology Skills:* Spreadsheets, Word Processing, Graphics

*Technology Integration:* Mathematics, Language Arts, Business Studies

*Software Applications:* Excel, Paint, Word | or Excel Online, Word Online | Sheets, Drawings, Docs

\*Note: Select extension activities are not available for all product versions.

## TechnoCode

In this course, students become coders that design a fun Activity Studio for kids using Scratch. Through discovery and exploration, they learn how to create a series of hands-on activities that children will enjoy playing. The young programmers apply computational thinking to build algorithms that sequence commands, events, loops, and conditions. They learn how to construct scripts to develop animated scenes, mazes, interactive stories, and games. Additional challenges extend coding skills to create artwork, compose music, produce a diorama, and more!



The technology course has 32 assignments that are divided into 6 Sessions:

- **Session 1 Become a Programmer**  
In this session, students are introduced to programming. They design animated scenes using Scratch. To start, they consider the importance of technology in daily life. Afterwards, students study the Scratch interface to label the parts. Once familiar with the environment, they discover how to stack blocks of code together to form a script that makes a character talk. Once they have mastered some of the basics, they explore the Scratch libraries to make a scene of two friends having fun.
- **Session 2 Build an Aquarium**  
In this session, students create their first project for the Activity Studio. It is an animated aquarium. To start, they explore Scratch Motion blocks to discover how they can be used to make sprites move across the stage. Next, students use forever and if then blocks to control the fish swimming. Afterwards, they learn how to use the Paint Editor to design a fish tank that has a custom backdrop. To practice coding skills, a list of challenges provides a creative spark. Upon completion, the project is prepared for viewers. Students are then given the option to share the file with the Scratch community and classmates.
- **Session 3 Design a Maze**  
In this session, students create their second project for the Activity Studio. It is a maze game. This activity provides an opportunity for students to practice coding skills from Session 2 to solidify their learning. To start, they complete a planning sheet to organize their ideas. Next, they use Scratch to create a puzzle that has players help a character find a way to the end of a path using arrow keys. To make the project unique, a list of challenges helps to make a one-of-a-kind maze. Upon completion, the game is prepared for players.
- **Session 4 Broadcast a Story**  
In this session, students create their third project for the Activity Studio. It is an animated story about a magical place. To start, they explore the Looks blocks to discover how they change the appearance of the main character and setting. Next, they enhance storytelling by triggering actions to occur when there is a switch in the backdrop. Afterwards, they direct the timing of events by sending messages to sprites using the Broadcast blocks. To practice coding skills, a list of challenges provides a creative spark.
- **Session 5 Engineer a Game**  
In this session, students create their final project for the Activity Studio. They apply their coding skills to develop a game. To start, they use planning sheets to determine the objective, scoring system, timing, and coding structure. Next, they discuss their design with a partner to assess if it is suitable for young children. Afterwards, students follow instructions to build and test the code. Challenges are included to foster originality. Upon completion, the project is prepared for players.
- **Session 6 Curate an Activity Studio**  
In this session, students build an Activity Studio for kids. It will have a collection of Scratch projects including an animated scene, maze, story, and game. To gain player feedback a link to the studio will be shared. Based on observation and questioning, students make recommendations for improving their Activity Studio.

### *Extension Activities:*

Edit Your Scratch Public Profile, Draw Artwork with the Pen, Invent an Instrument, Record a Sound Clip, Organize Scripts with Broadcast, Chat with a Sprite, Remix a Scratch Project

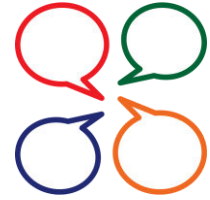
*Technology Skills:* programming

*Technology Integration:* Computer Science, Mathematics, Language Arts, Science, Social Studies

*Software Applications:* Scratch

## TechnoDebate

In this course, students collaborate with a partner to create an animated debate. Using clip art characters and callout bubbles, each side states their resolution, presents a constructive speech, delivers a counter argument in a rebuttal, and summarizes their position. Cross-examination is done at the end of the debate by audience members using the commenting feature. Extension activities are included for participants to cross-examine opponents and for a judge to select a winner.



The technology course has 12 assignments that are divided into 6 Sessions:

- Session 1 What Is a Debate?**  
In Session 1, students explore the practical applications of debates. They review a sample digital debate to understand how a slideshow can be structured to present both sides of a controversial issue. They then collaborate with a peer to choose a topic for their own debate. It could be a school policy, an environmental issue, or even a lighter topic such as the superiority of cats or dogs as pets. An optional activity is available to help students brainstorm debate ideas.
- Session 2 Research a Controversial Issue**  
In Session 2, students conduct research on their chosen side of a controversial topic. They use an organizer to gather evidence that supports three key points of their argument. If needed, a supplementary activity offers tips for conducting research. Following this, students open presentation software and share the file with their partner. Together, they develop a title slide to practice collaborating online.
- Session 3 Argue Your Position**  
In Session 3, students collaborate with a partner to design an animated debate. Each side, representing either the pros or cons of the topic, selects a character to present their arguments. They can refer to an optional activity for guidance on saving a suitable image from the Internet to represent the debater. Next, students create a slide stating their 'resolution', with a callout offering a brief statement summarizing their position. Following this, each side delivers a 'constructive speech' consisting of three slides that argue their viewpoint, using evidence to persuade the audience.
- Session 4 Rebut Your Opponent's Viewpoint**  
In Session 4, students counter their opponent's position in the debate. To prepare, they review each of their partner's slides to identify any weaknesses in the arguments presented. Next, they conduct online research to find a fact that contradicts one of their opponent's key points. This information is used to construct a rebuttal slide. Sentence starters assist in framing their response. Following this, they create their final slide, which serves as a summary and a persuasive appeal to the audience. An optional activity involves students digitally cross-examining their opponent by posing a question that must be answered.
- Session 5 Animate the Debate**  
In Session 5, students animate the dialogue to simulate a lifelike debate. They add an entrance effect to the speech bubbles to control when a character speaks. After both partners have finished, students reorganize the slide order to control the sequence. If time allows, they can also include transitions between slides to indicate which side is speaking. Once completed, students use a checklist to review the debate and make any needed revisions.
- Session 6 Host a Public Debate**  
In Session 6, students deliver their arguments to an audience. They share the digital file with a small group of peers who watch the debate and engage in cross-examination afterward. Using the commenting feature, audience members can pose questions to which the debaters respond. An optional activity involves audience members acting as judges to determine the winner of the debate.

### *Extension Activities:*

Debate Topics, Research and Cite the Source, Insert a Character Workshop, Cross Examine your Opponent, Judge Debate

*Technology Skills:* Presentation, Word Processing

*Technology Integration:* History, Language Arts, Science, Social Studies

*Software Applications:* PowerPoint Online, Word Online | Slides, Docs

## TechnoEarth

In this course, students become environmental stewards. They design an interactive infographic that informs the public about an important issue. The web-based publication will outline the cause, harmful effects, and solutions. It will also include a rotating slide deck that summarizes the stakeholders and highlights interesting facts. To engage viewers, a thematic map will pinpoint where the problem is happening. Upon completion, students will inspire others to get involved by sharing their findings at an Earth Keeper's Conference.



The technology course has 20 assignments that are divided into 6 Sessions:

- **Session 1 Become an Earth Keeper**  
In this session, students become environmental stewards. They prepare to create an infographic that informs the public about an important issue. To start, they study example publications to gain an understanding of the content and design elements. Next, they research a topic including cause, effects, interesting facts, location, stakeholders, and solutions. A reference list tracks sources of information. By the end of the session, students complete a checklist to verify they are ready to design their infographic.
- **Session 2 Warn Others of the Issue**  
In this session, students begin to build their infographic using Google Sites. They introduce the environmental issue, describe the cause, and illustrate harmful effects. An emphasis is placed upon conveying information concisely using catchy headings and simple clip art. Instructions direct students to chunk their data into sections using color and dividers.
- **Session 3 Highlight the Facts**  
In this session, students create a rotating slide deck using Google Slides. It will emphasize interesting facts and outline stakeholders. To start, students use a big number to highlight the scale of the problem. Next, they point out an important detail using colorful word art. Afterwards, they construct a diagram that summarizes who has a stake. Upon completion, the slide deck is inserted into the infographic and set to automatically play. Instantly the viewer should be able to grasp the scope of the environmental issue.
- **Session 4 Pinpoint the Problem**  
In this session, students produce a thematic map using Google My Maps. It will pinpoint locations where the environmental issue is happening. The places could be worst offenders, best stewards, disaster sites, at-risk regions, successful conservation projects, or legally protected areas. Each marker will display an interesting fact and a photo. The map will be inserted into the infographic allowing viewers to explore and learn about the topic.
- **Session 5 Tackle the Challenge**  
In this session, students illustrate solutions to the environmental issues by designing their own icons using Google Drawings. Each image will be a simple representation made by combining shapes, word art, and cropped images. The original artwork will be inserted into the infographic with an explanation. A link to an advocacy group will invite viewers to get involved.
- **Session 6 Let's Get Involved!**  
In this session, students raise awareness about an environmental issue. They publish their infographic using Google Sites. Afterwards, they share their infographic at an Earth Keeper's Conference.

### *Extension Activities:*

Recognize Bias, Assess Trustworthiness of a Site, Photo Gallery of Harmful Effects, Inform with a Pictograph, Keep Score, Make a Collapsible Source List

*Technology Skills:* Publishing, Digital Citizenship, Graphics, Internet, Presentation, Web Design, Word Processing

*Technology Integration:* Geography, Language Arts, Science, Social Studies

*Software Applications:* Docs, Sites, Slides, My Maps, Drawings, Sheets

## TechnoEnvironment

In this course, students become Earth Keepers. They raise environmental awareness about a current issue. To start, they use the Internet to research facts and organize the information under headings in a Microsoft Word document. Next, they learn how to use the tools in Microsoft Publisher to create a postcard and a poster as a call to action. To inform people further about the importance of this issue, students use Microsoft Publisher to produce a pamphlet that describes the harmful effects and offers solutions. Optional activities have students prepare for an Environmental Conference by creating a calendar, banners, and invitation to the event.



The technology course has 14 assignments that are divided into 6 Sessions:

- **Session 1 Research the Topic**  
In this session, students research an environmental issue. To start, they learn about the importance of stewardship. Next, they select a topic and then design an outline in Microsoft Word with headings to organize facts. The Internet is used to locate information about the issue, including effects on the environment and solutions to the problem. Students record the source and gather pictures related to the topic. This research will provide the content for the publications they create in the following sessions.
- **Session 2 Postcards from the Edge**  
In this session, send a postcard asking a friend to become involved in protecting Earth. To prepare for this task, they are introduced to MS Publisher. Once familiar with the parts of the window, a template is opened in the program. Students learn how to format a shape to create a background for the front of the postcard. Next, they include a catchy title using a text box. To attract attention to the issue, a picture illustrating damage to the environment is inserted with a caption. A message is then written on the back of the postcard.
- **Session 3 Help Wanted!**  
In this session, students create a Help Wanted poster to explain what people can do to protect Earth. To start, students insert a saved picture that illustrates the harmful effects of an environmental issue and apply their formatting skills. Next, they add an image from an online source and arrange it by adjusting the object order, alignment, grouping, and orientation. Afterwards, they use a Page Part to describe the problem and a solution that is achievable by students. A border is then inserted and an advertisement building block is used to request help. To complete the poster, a WordArt title is used to attract attention to the publication.
- **Session 4 Educate the Public**  
In this session, students begin to create a pamphlet to educate the public about an environmental issue. Using a template, students apply design elements including frames to accent each panel, a Page Part to create an attractive front cover, and text boxes to hold information. Once the layout of the pamphlet has been established, students apply their knowledge to produce the first panel in the publication.
- **Session 5 Solve the Problem**  
In this session, students continue working on the pamphlet by proposing solutions to the environmental issue. The three panels of the second page of the pamphlet are completed using bulleted text, pictures, captions, and predesigned attention getters. On the third panel, students learn to add and format a table to compare the advantages and disadvantages of a solution to the environmental problem.
- **Session 6 Take an Environmental Quiz**  
In this session, students complete the pamphlet. To inspire active involvement, the back of the pamphlet has a quiz. As viewers read the questions and answer them, they will remember information about the environmental issue and possibly even read the facts over again. The pamphlet will have achieved its aim of informing others and gathering support to face a very important challenge for Earth.

### *Extension Activities:*

Environmental Map, Save the Earth Calendar, Create a Banner, Invite Guests to a "TED" Talk, Plan an Environmental Conference or "TED" Talk

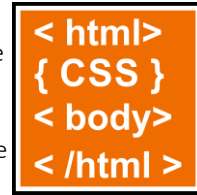
*Technology Skills:* Publishing, Graphics, Internet, Word Processing

*Technology Integration:* Geography, Language Arts, Science, Social Studies, Visual Arts

*Software Applications:* Publisher

## TechnoHTML5

In this course, students become web designers using HTML and CSS. Students are introduced to the history of the Internet and HTML language. Next, they manipulate source code to discover the function of common tags and CSS attributes. This knowledge is applied to construct a web page. Throughout the design process instructions explain how to style text, graphics, and hyperlinks to produce an informative web page. For those in need of a challenge, extension activities encourage students to create a list, apply a picture background, customize hyperlinks, employ CSS classes, insert animations, and build tables. Upon completion, the files are uploaded to the Internet.



The technology course has 18 assignments that are divided into 6 Sessions:

- **Session 1 Seeking the Source**  
In this session, students gain an understanding of the Internet and HTML. To begin they learn some basic terminology and consider the importance of the Internet in their lives. Afterwards, they read about key events in the development of this amazing technology. Once familiar with the history, students learn about the WWW and use a web browser to view web pages. They are introduced to HTML and its importance in the world today. Afterwards, they view the source code for web pages and decode the meaning. Upon completion of this session, students should have a basic understanding of Internet terminology and HTML.
- **Session 2 Cracking the Code**  
In this session, students learn about the function of HTML tags and CSS attributes. To start, they open a web page and edit coding for the title, headings, paragraph, line break, horizontal rule, image, and hyperlink. Once familiar with basic elements, they explore how to format a web page. They edit CSS to alter color, width, font, font size, line height, alignment, and padding. Once students understand the structure of an HTML document, they plan the design of their web page. They search the Internet for information, pictures, and hyperlinks. This provides them with the material they need to start building their web page in the next session.
- **Session 3 Begin Web Page Building**  
In this session, students begin to construct their web page. To start, they form the structure of the HTML document. They then add the title, heading, several paragraphs, and a horizontal rule. Upon completion the web page is saved as index.html. Next, students format each element using CSS. They set the color, width, position, font family, font size, text alignment, padding, and line height. Tips are offered to help students improve the appearance of their web page.
- **Session 4 Add Images and Hyperlinks**  
In this session, students continue to design their web page. To start, they study their saved pictures to make sure they are appropriately named and resized. Once their images are prepared, students use HTML to insert the pictures and format the style using CSS. Next, students create hyperlinks to three websites. Additional styling challenges are included in the extension activities.
- **Session 5 Meta Tags**  
Students are introduced to meta tags. They explore how search engines and social media services use this information. Description and keyword meta tags are inserted into their HTML document. Next, students examine their web page using a checklist to highlight areas that require improvement. If time permits, additional challenges are in the extension activities including how to insert animations and tables.
- **Session 6 Upload the Web Page**  
In this session, students register for a free website account with a web hosting service. Then they upload the web page that they created and the associated image files. Finally, the class has an HTML Developers Conference in which they view each other's web pages and write compliments about the sites.

### *Extension Activities:*

Analyzing Websites, Format Lists, Add a Background Image, Format the Hyperlink Style, Create a Class, Add Animated Text and Images, Create a Table, Submit Your Site to a Search Engine

*Technology Skills:* Programming, Web Design

*Technology Integration:* Computer Science

*Software Applications:* Text Editor

## TechnoMap

In this course, students create an interactive map that demonstrates how human and physical geography intersect. The topic can be global, national, provincial, state, regional, or local. The map will have markers that, when clicked, provide facts about a location. This is a great way to explore and learn about an area or issue. To start, students study maps. Next, using an inquiry-based approach they select a question to investigate. Students are guided through creating slides and adjusting the flow of information to make a clickable map. Upon completion, their interactive map is shared with others.



The technology course has 8 assignments that are divided into 6 Sessions:

- In Session 1, students develop a concept for an interactive map. An interactive map contains markers that, when clicked, explain facts about the location. It allows people to explore and learn. The map could be of historical landmarks, current events, environmental hotspots, or tourism sites. To prepare for the task, students study three unique interactive maps to discover the possibilities. Afterwards, they select a research question that connects to a geographic region. For example, it could be 'What impact has an event or industry had on the environment?', 'What types of agriculture are done in a particular area?' or 'What places should a tourist visit?'. The question will become the topic of their interactive map, with the map markers providing the answers.
- In Session 2, students research the topic for their interactive map. Using an organizer, they collect facts for three locations. They record the position of the location for future placement of a map marker. In the following session, students will insert a map onto a presentation slide using an online picture. An optional activity explains how to collect an image of a city or street map.
- In Session 3, students begin to create their interactive map. To start, they apply computing skills to build a simple slide. It will include a title, image of a map, and viewer instructions. To produce a unique design, students explore WordArt, picture, and shape style options. They also learn how to customize the color, transparency, or image on a slide background. This is an excellent way to attract attention.
- In Session 4, students create an information slide for each map marker. Each one describes the significance of a location on the map. To make the information easy to read, students apply a custom bulleted list. An optional activity explains how to save an image from the Internet. This task includes keyword suggestions to make sure the image is ideal for a background.
- In Session 5, students make the map interactive. They create a connection from the map to each information slide using map markers. Controls are added to allow the viewer to return to the map. Slide advancement is adjusted to manage the transitions. Multiple tests are conducted to make certain it is easy to explore and learn. An optional activity shows how to organize information using a table. This is a great way to summarize facts and figures about a topic. An additional activity explains how to insert a link to an interesting article on the Internet to prompt the viewer to discover even more about the topic.
- In Session 6, students share their interactive map with viewers. To start, they complete a checklist to verify the navigation, content, and design. Editing tips help resolve common issues related to map markers or connections. An optional extension activity explains how to add a video to a slide. Upon completion, students select how to publish their map. One choice has a person sit at their device and take a virtual trip. Another choice is a map exhibit that courses a file onto a screen for a larger audience. Alternatively, or in addition to the other ideas, a third choice is to print the slides and connect them together using string to produce a unique bulletin board. All three options make it fun and easy to explore the world!

### *Extension Activities:*

Snip/Screen Capture a Map\*, Working with Pictures\*, Image Workshop\*, Organize Facts using a Table, Insert a Link\*, Add Hotspots\*, Add a Video

*Technology Skills:* Presentation, Word Processing

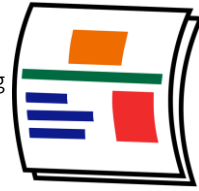
*Technology Integration:* Geography, History, Social Studies

*Software Applications:* PowerPoint, Word | PowerPoint Online, Word Online | Slides, Docs

\*Note: Select extension activities are not available for all product versions.

## TechnoNewsletter

In this course, students create a fan club newsletter. They design a professional-looking publication. Students learn valuable word processing skills such as formatting text, arranging objects, adjusting page layout, working with tables, referencing information sources, and inserting headers or footers. Challenging enrichment activities support learning with optional assignments that include how to create a collage, co-author an article, or engage in an online discussion.



The technology course has 11 assignments that are divided into 6 Sessions:

- **Session 1 Create a Fan Club**  
In Session 1, students organize a Fan Club. It might be for a sport team, musician, video game, or actor. They will design a newsletter that connects with fans. For inspiration, they study a sample newsletter. Next, they use a planning sheet to organize their ideas for each article. Afterwards, they gather resources such as links and images. What do fans want to know?
- **Session 2 Design a Newsletter Cover**  
In Session 2, students begin to create their Fan Club newsletter. To start, they apply word processing skills to design a front cover. It should include eye-catching text, a large image, and hyperlink to an official site. When complete, students use a checklist to examine the content and layout.
- **Session 3 Top Reasons to be a Fan**  
In Session 3, students write the first article for their Fan Club newsletter. It will include a numbered list of interesting facts or insights fans want to know. It should have an attention-grabbing headline such as Top 3 Reasons, 8 Secrets, or 4 Fun Facts. By adjusting the line and paragraph spacing students will format the text to make it easy to read. A task checklist guides revisions.
- **Session 4 Build a Word Search**  
In Session 4, students design a word search. It will use terminology that is familiar to fans. Using a table, words are hidden into the cells either horizontally, vertically, or diagonally. The newsletter will include an answer key to the puzzle. If time permits, refer to the extension activity for additional article or content ideas. For example, students could use their word processing skills to create an ad, write a product review, or promote a contest that fans will love.
- **Session 5 Write an Opinion Piece**  
In Session 5, students persuade others to become fans. They write a newsletter article that explains the strong connection fans have with the team, group, or topic. It must include evidence about why they are so great, such as quotes from a song, book, interview, or testimonial. Using footnotes, students learn how to cite the source. To make the article stand out, an optional extension activity explains how to make a collage.
- **Session 6 Publish the Newsletter**  
In Session 6, students share their newsletter with fans. Before they publish, they make final revisions to the document. This includes customizing the header and footer to include the name and issue number. Next, they determine how they will connect with readers. The file can either be printed or exported as a PDF. An optional activity explains how to share the file digitally to have fans add comments to the articles.

### *Extension Activities:*

How to Save Pictures, Guest Writer\*, Keep Writing, Create a Collage, Digital Citizenship and Comments

*Technology Skills:* Word Processing

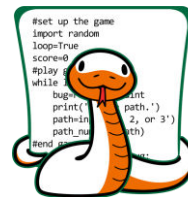
*Technology Integration:* Language Arts, History, Social Studies, Science

*Software Applications:* Word | Word Online | Docs

*\*Note:* Select extension activities are not available for all product versions.

## TechnoPython

In this course, students are introduced to Python. They complete coding missions to develop the characteristics most valued in a programmer. To start, they ignite their curiosity by exploring scripts to discover how they are put together. Next, they create games including Pet Monster Rescue, Guess It, and Adventure Quest. These foster logical thinking, persistence, and creativity, and are ideal for beginners. Upon completion, students share their favorite program in a coding presentation. Have your students develop original code using loops, functions, and conditionals.



The technology course has 24 assignments that are divided into 6 Sessions:

- **Session 1 Into the Coding Jungle**  
 In this session, students explore the Coding Jungle. The goal of this mission is to learn about Python. To start, the explorers are introduced to terminology by experimenting with code. Once familiar with the role of a programmer, they play a Python Hunt game and then edit the program to discover how it works. Afterwards, they break code in the Catch the Bugs game to develop essential debugging skills. Successful completion of the four-part mission requires curiosity, which is a highly valued trait in a programmer.
- **Session 2 Pet Monster Rescue**  
 In this session, students create a program for the Pet Monster Rescue, which is a group that finds loving homes for monsters. To prepare for the programming mission, students learn about strings, integers, and variables. They apply this knowledge to personalize the adoption process. To pair a pet owner to their monster, the programmers write code that ask questions. The answers are used to match people to their ideal pet. This is done by combining logical operators, if and else statements, and a variable that changes from True to False. Throughout the four-part mission, an emphasis is placed upon thinking logically.
- **Session 3 Guess It Game**  
 In this session, design a guessing game in which the player must correctly pick a number before they run out of chances. Clues tell them if their answer is too high or low. This programming mission has six parts. To prepare, students first explore how to code while and for loops. Once familiar with how to repeat a set of instructions, they start to build Guess It. To guide development, the Python programmers sequence steps into algorithms. These flowcharts provide a framework for constructing each part of the program. Fun challenges encourage students to build a unique game. Interwoven throughout all tasks is a focus upon being methodical. This skill helps programmers test different cases to solve problems within the code.
- **Session 4 Adventure Quest Part 1**  
 In this session, students develop a text-based adventure game. It is a quest that has players overcome challenges to earn rewards. To prepare for this programming mission, students learn techniques to standardize data entry. Next, they apply these skills to build the first part of their game. It will allow players to pick a direction to explore. It will also include a challenge whereby the player can win coins when they travel North. To complete the task, students must be persistent. What will happen in this strange land?
- **Session 5 Adventure Quest Part 2**  
 In this session, students complete their text-based adventure game. They develop a treasure hunt that has players travel East to collect objects. They must avoid danger, or risk losing it all! To prepare for this part of the programming mission, students learn about lists. They add, remove, sort, and count items. Once this skill is mastered, they apply it to their quest. Throughout the activities, an emphasis is placed upon creativity. This trait is essential as it allows programmers to design original programs.
- **Session 6 Coding Presentation**  
 In this session, students share their favorite Python program in a coding presentation. They demonstrate how the game works and explain the code. This provides an opportunity to develop strong communication skills, which help programmers do their job.

### *Extension Activities:*

Coding Reflections, Find and Fix the Bugs, Open a Pet Monster Picture, Keep Score, Toss a Rare Coins, Game Test the User Experience, Earn a Reward, Create a Map

*Technology Skills:* programming

*Technology Integration:* Computer Science, Mathematics, Language Arts, Social Studies

*Software Applications:* IDLE Python 3

## TechnoQuestionnaire

In this course, students become researchers. They conduct a questionnaire to research an important issue. To begin, students gain an understanding about the purpose of surveys by completing a Reading Habits questionnaire. Next, they design their own School Spirit survey to learn how to use Google Forms. Once familiar with this method of data collection, they develop their own research question, select a sample, and design a questionnaire. A pre-test is used to improve the design. The questionnaire is then administered to the sample group. Once the data is collected it is analyzed. Research findings are shared with a jury of peers in an oral presentation.



The technology course has 11 assignments that are divided into 6 Sessions:

- **Session 1 What Is a Survey Questionnaire?**  
In Session 1, students learn how survey questionnaires are used to help people solve problems. They examine how this tool is used by professionals to make informed decisions. To deepen their understanding, the students participate in a "Reading Habits" questionnaire. Afterwards, they analyze the results to interpret respondents' book preferences. An optional activity examines sample bias.
- **Session 2 Research School Spirit**  
In Session 2, students create a "School Spirit" survey to familiarize themselves with Google Forms. They practice designing various question types and setting answer options to control data entry and minimize errors. After completing the survey, students test it and review the results. This experience will be valuable as they transition into researchers in future sessions, where they will develop their own survey questionnaires. An optional activity examines question bias.
- **Session 3 Design a Survey Questionnaire**  
In Session 3, students take on the role of researchers. They choose a research question, select a sample group, and decide on a method for collecting data. An optional brainstorming activity is available to inspire and support learners in this process. Next, students outline the survey's content, ensuring it includes five to ten questions of various types such as multiple choice, rating scale, and short answer. They then utilize their skills to construct a survey questionnaire using Google Forms. Finally, they conduct a pre-test to refine the design.
- **Session 4 Collect Survey Data**  
In Session 4, students administer their survey. They begin by clearing the pre-test data from the questionnaire. Next, they choose a method for data collection, such as using a mobile device, sending via email, or posting a link. After respondents have filled out the form, students review the survey responses. They organize the raw data in Google Sheets to adjust how the results are presented in the automatically generated report.
- **Session 5 Interpret Survey Results**  
In Session 5, students interpret the data gathered from the survey. They answer questions about the research design and then proceed to analyze the results to draw conclusions. They reflect on the practical implications of the findings and identify areas where the questionnaire could be improved. Optional extension activities are available to demonstrate how to compare subgroups by creating a pivot table and pivot chart.
- **Session 6 Present Research Findings**  
In Session 6, students present their research to a panel of peers in an oral presentation. To prepare, they develop a script to practice their speech. They then break into small groups, with each member taking turns to discuss the survey's objectives and present the results. They use the Google Forms report as a visual aid to reinforce their conclusions.

### *Extension Activities:*

What Is Sample Bias? What Is Question Bias? Brainstorm Survey Ideas, Compare Results with a Pivot Table or Chart

*Technology Skills:* Spreadsheet, Data Management

*Technology Integration:* Math

*Software Applications:* Google Forms, Sheets

## TechnoRestaurateur

In this course, students launch a successful restaurant venture. They apply critical and creative thinking to develop a unique business concept. To start, students conduct a survey and interpret the results to make decisions about their restaurant. Next, they create a company logo and write a professional letter to raise seed money. With the funding secured, students design a floor plan. Once the restaurant had operated for a year, financial earnings are analyzed. The business is then advertised using a newsletter to potential investors as a franchise opportunity.



The technology course has 13 assignments that are divided into 6 Sessions:

- **Session 1 Become a Restaurateur**  
In Session 1, students become restaurateurs. They will launch an imaginary restaurant venture. To start, they explore spreadsheets to learn basic skills including terminology, data entry, and simple cell formatting.
- **Session 2 Conduct a Business Survey**  
In Session 2, students formulate a plan for their business venture. They survey their classmates to determine the type of cuisine to serve. With this data, students chart the results using a spreadsheet. By interpreting the survey results, students select the type of restaurant they would like to operate. They form a business plan that outlines the cuisine, company name, main menu items, and the target customer.
- **Session 3 Request Investment Money**  
In Session 3, students generate start-up funds from investors for their business venture. To start, they design a company logo using drawing tools in presentation software. This is exported as a picture file. If your students require an extra challenge, teach the optional extension activity first, as it contains advanced graphics techniques that can be used to produce a unique design. Afterwards, students use a word processor to create a letterhead that includes the company logo. They write a professional letter explaining their business concept. It will include the graph from the survey to demonstrate their rationale for targeting a particular cuisine. Investors are sure to want to fund such an exciting venture!
- **Session 4 Design a Floor Plan**  
In Session 4, students apply the drawing tools of Microsoft PowerPoint or Google Slides to design the floor plan of their restaurant. Students consider their clientele and the type of dining experience they are expecting. Shortcuts to complete the project are introduced as students design seating arrangements that can be easily grouped and duplicated to place elsewhere in the layout. They create a well-designed restaurant with a focus on functionality. If time permits, an optional extension activity can be used to create an electronic bulletin board that displays special offers or upcoming events to customers.
- **Session 5 Calculate Business Earnings**  
In Session 5, students learn advanced spreadsheet skills by designing a worksheet to calculate their monthly, quarterly, and yearly earnings. Students use the Fill Series option to easily create a table that holds financial information. Calculations such as Sum and Average give students a clear overview of their earnings. This information is then displayed in chart format with a trendline that predicts future growth.
- **Session 6 Promote a Business Opportunity**  
In Session 6, students create a newsletter for aspiring restaurateurs interested in joining a restaurant chain. The publication's aims are to persuade them to become part of the team and open their own restaurant. It will include the same company logo, offer identical menu items, and showcase a similar floor plan. Additionally, the newsletter will highlight potential earnings and outline the benefits of participating in the business venture. Can you convince others to join the team?

### *Extension Activities:*

Advanced Drawing Techniques\*, Review a Business Proposal\*, Advertise a Deal, Analyze Earnings with Functions, Share Files with Investors\*, Create an Opinion Survey/Rate Opinions in Forms

*Technology Skills:* Spreadsheet, Word Processing, Graphics, Presentation, Data Management

*Technology Integration:* Math, Language Arts, Visual Arts

*Software Applications:* Excel, PowerPoint, Word, | Excel Online, Forms for Excel, PowerPoint Online, Word Online | Sheets, Slides, Docs, Drawings, Forms

\*Note: Select extension activities are not available for all product versions.

## TechnoTravel

In this course, students become travel agents. They create a travel advertisement for a weekend getaway. To start, students use the Internet to research the destination. Afterwards, they personalize a slide master to create a unique marketing tool that persuades visitors to take the trip. The vacation is then promoted to customers in the form of a slideshow and brochure.



The technology course has 21 assignments that are divided into 6 Sessions:

- **Session 1 Select a Travel Destination**  
In Session 1, students become travel agents. They plan a weekend getaway. To start, students consider how travel has changed the way people live and work. Next, they study a sample travel advertisement to get ideas for their trip. Afterwards, students use the Internet to research facts about the location. This information is organized under headings in a word processing document. Finally, students use the Internet to save pictures and a map of the travel destination. At the end of the session, students should have the information they need to create a travel advertisement for the weekend getaway.
- **Session 2 Create a Travel Advertisement**  
In Session 2, students begin to create their travel advertisement for a weekend getaway. To start, they are introduced to the presentation software environment. Once familiar with the location of commonly used commands, students learn how to customize the slide master to make a unique design for their advertisement. Upon completion, students use the slide master to create a title and introduction slide.
- **Session 3 Build a Travel Itinerary**  
In Session 3, students create a travel itinerary that outlines the activities, site seeing trips, and events planned for the weekend getaway. Using a table, students organize the activities for each day. The table is formatted to look great.
- **Session 4 Promote Places to Visit**  
In Session 4, students create slides to describe each event or site that tourists will see on the weekend getaway. At the end of the session, each activity in the travel itinerary should have a slide in the travel advertisement.
- **Session 5 Highlight Points of Interest**  
In Session 5, students complete the content of the travel advertisement. To start, they insert a map of the destination on a slide and use shapes to highlight the city. Afterwards, students create a slide that contains hyperlinks to websites on the Internet that tourists will find helpful.
- **Session 6 Advertise the Weekend Getaway**  
In Session 6, students promote the weekend getaway to tourists. To begin they edit the content and layout of each slide. Using spelling tools, students identify and correct spelling errors. Afterwards, they adjust the order of the slides. Next, students release the travel advertisement in various formats that are suitable for advertising purposes. The slideshow is prepared for a kiosk and a handout is printed. The travel advertisement is shared with viewers to entice tourists to go on a weekend getaway.

### *Extension Activities:*

Book Flight or Accommodations, Create a Fancy WordArt Style\*, Import a Theme to Make a Poster\*, Calculate Travel Costs, Animate the Travel Advertisement, Design an Interactive Street Map, Make a Video Clip

*Technology Skills:* Presentation, Word Processing

*Technology Integration:* Social Studies, Geography, Language Arts, Travel and Tourism

*Software Applications:* PowerPoint, Word, Excel | Slides, Docs, Sheets

\*Note: Select extension activities are not available for all product versions.

# Senior Technology Course Descriptions

## TechnoAd

In this course, students gain essential media literacy skills by becoming digital marketers. They produce a video ad to sell a new product. Their campaign begins with an analysis of selling tactics used in media messages. Next, they investigate how their target customer interacts with online advertising. To further prepare for the task, students explore video production techniques. Once aware of how companies manipulate viewers, they team up to create an advertisement using Blender. Upon completion, they summarize their marketing campaign in professional report.



The technology course has 15 assignments that are divided into 6 Sessions:

- **Session 1 Analyze Online Advertising**  
In this session, students investigate their exposure to online advertisers. To start, they consider consumption of media messages. Next, they critically think about how selling tactics, hidden messages, and stereotypes in video ads might influence their behavior or thinking. Afterwards, they build a questionnaire using Forms to discover how people interact with online advertising. These metrics will not only raise media awareness but will also inform placement of their video ad in upcoming sessions. An optional challenge explains how to create a pivot table in Microsoft Excel or Google Sheets to compare groups of data to notice differences in gender or age.
- **Session 2 Apply Camera Techniques**  
In this session, students become videographers. To start, they analyze video ads to notice how shots, angles, and movement convey a message. Next, they experiment with a video camera to capture wide, medium, and tight shots. Also, they explore how zoom, pan, and tilt control viewer attention. These operational techniques will be used later to produce their own video ad.
- **Session 3 Explore Video Editing Tools**  
In this session, students discover how to use Blender tools to create an ad. First, students customize the program window for video editing. Next, they import clips and explore how to arrange media in channels. They trim, split, and overlay strips to produce a 15 second video that will captivate customer interest. These production techniques will be applied in the upcoming sessions to advertise a new product.
- **Session 4 Advertise a Product**  
In this session, students design a video ad concept. Working as part of a creative team, they develop an advertisement for a new product. They write a script and storyboard for each shot. Upon completion, they apply their knowledge of marketing and video production techniques to capture the footage.
- **Session 5 Create Video Ad**  
In this session, students become video editors. They produce their own unique video ad using the footage captured from the previous session. To start, they import media into Blender. They then apply their editing skills to produce a fifteen-second advertisement. Upon completion, they prepare to write a Marketing Campaign report by exporting the video in different file formats.
- **Session 6 Report Marketing Strategy**  
In this session, students summarize their marketing campaign. Using either Microsoft Word or Google Docs they explain how their video targets a specific audience. Based on survey data, they recommend the best time of day and digital channel for the ad. To create a professional-looking document they format the layout to include a table of contents, headings, page numbering, and more.

### *Extension Activities:*

Control Ads, Apply the Rule of Thirds, Animate Text with Keyframes, Slogans and Catchphrases, Download a Soundtrack, Add an Image from the Internet, Paste Graphs into Report

*Technology Skills:* Animation, Data Management, Digital Citizenship, Spreadsheet, Video Production, Word Processing

*Technology Integration:* Language Arts, Business Studies, Media Arts

*Software Applications:* Microsoft Forms, Excel, Word | Google Forms, Sheets, Docs | Blender

## TechnoAdvertise

In this course, students design advertisements using Microsoft Word. To start, students create a cover letter and résumé to apply for a job at TechnoAd Agency. Once hired, students receive their first assignment to design a flyer. Next, students develop a product catalog that includes styles, table of contents, and an index. Afterwards, they learn how to complete a mail merge to produce a personalized invitation to promote an upcoming event. Finally, students combine their skills to publish a newsletter. Interwoven throughout the course are business-related activities.



The technology course has 20 assignments that are divided into 6 Sessions:

- **Session 1 Job Search**  
In this session, students apply for a job at TechnoAd Agency. To prepare for this task, students review cover letters and résumés and then answer questions to determine their qualifications. Once they have a list of their characteristics, skills, and experiences that make them a perfect match for the position, they open Word to gain familiarity with the program. Next, they follow instructions to write a cover letter and résumé. These well-formatted business documents are sure to draw the attention of TechnoAd Agency!
- **Session 2 Create a Flyer**  
In this session, students begin work for TechnoAd Agency. Their first task is to design a flyer for TechnoTeen Company. They have requested a flyer to promote their Summer Heat sales event. To prepare for this task, students answer questions to learn about the commands on the Insert tab. Once familiar with the range of options, they follow instructions to produce an eye-catching ad using pictures, shapes, and more! The flyer is sure to draw attention with a SmartArt Graphic highlighting sales items, colorful header and footer that lists store details, text box with discounts, and a catchy phrase written using WordArt.
- **Session 3 Design a Catalog – Phase 1**  
In this session, students are responsible for creating a catalog. To complete this publication, the task is divided into two phases. In Phase 1, students explore the commands on the Layout tab. Next, they select the products to include in the catalog using an organizer. With a plan in place, students start construction of the catalog. They use their skills to divide a document into sections. Using Layout commands, they add headers and footers to each section, produce a cover page, apply a watermark to the table of contents, and arrange a company message. Students then build a table to produce an order form and product pages.
- **Session 4 Design a Catalog – Phase 2**  
In this session, students complete their catalog by inserting page references. To prepare for this task, students explore the function of commands on the References tab. They edit a document so that it includes a table of contents, footnotes, endnotes, citation, bibliography, caption, and an index. Afterwards, students apply their skills to add references to their catalog to permit customers to find information fast. Upon completion, they use a checklist to verify that their document is ready for publication.
- **Session 5 Send a Custom Form Letter**  
In this session, students invite customers to a shopping event using mail merge. Mail merge places unique information into a document that has placeholders. Using the Mail Merge Wizard, students produce a personalized invitation. Afterwards, they generate mailing labels using commands on the Mailings tab.
- **Session 6 Produce a Newsletter**  
In this session, students produce a newsletter. It will include a news article, special appreciation section, upcoming events, reminders, tips, and a calendar. The goal is to have students apply their word processing skills to create the publication. For example, they will use their knowledge of Microsoft Word to format text, modify styles, insert objects, adjust page layout, and create a table of contents. Upon completion students will use commands on the Review and View tabs to improve the content, design, and layout.

### *Extension Activities:*

The Interview, Prepare a Summary Report, Create a Catalog Organizer, Edit a Document to Cite the Source, Mail Merge Using Excel, Commands on the Review Tab

*Technology Skills:* Word Processing, Desktop Publishing, Graphics

*Technology Integration:* Language Arts, Business Studies, Marketing

*Software Applications:* Word

## TechnoAnimate

In this course, students become animators. They learn animation techniques by creating scenes for a graphic story in Animate CC. By completing a series of activities, they discover how to produce realistic movement using frame by frame, motion tweens, shape tweens, Asset Warp Tool, Bone Tool, motion paths, and classic tweens. Once they have mastered the basics of animation, they apply their skills to design a unique project such as a graphic novel, electronic greeting card, or advertisement.



The technology course has 34 assignments that are divided into 7 Sessions:

- **Session 1 Out of This World**  
In this session, students are introduced to Animate CC. To begin, they view an example called "Out of this World" to gain an understanding of types of animation. Afterwards, they open Animate to learn about the program environment. Once familiar with common tools they practice drawing. With these skills mastered, they apply their knowledge to create the first scene in a space adventure.
- **Session 2 On an Alien Planet**  
In this session, students continue animating their space adventure. They create two scenes using frame by frame animation. To start, they create the planet surface that shows grass growing and a flower blooming. Afterwards, they apply their new skills to make a hover craft drive over bumpy terrain. The session ends with students selecting an Animation Challenge and creating it using Frame by Frame Animation.
- **Session 3 Blast Off Into Out Space**  
In this session, students continue to create scenes for their animated space adventure. This time they have their character blast off into space and fly the ship across the galaxy using motion tweens. The fun begins when students learn how to move an object across the stage and transform the image by changing the scale and orientation. Once these skills are mastered, students animate the ship flying across the sky. The session ends with students selecting an Animation Challenge and creating it using a Motion Tween.
- **Session 4 A Strange Planet**  
In this session, students animate the adventures that happen on a strange planet. Using shape tweens, they transform an oval into a rectangle to illustrate the unusual moon in the sky. Afterwards they apply shape tweening to show an alien life form talking. The session ends with students selecting an Animation Challenge and creating it using a Shape Tween.
- **Session 5 Coming Home**  
In this session, students create the final scenes in their space adventure. In these scenes, the alien returns home. Using the Asset Warp Tool (Animate 2022) or Bone Tool (Animate 2017-2019), students animate a going away party. In the remaining scenes, a motion path for the spaceship is made to look like it is blasting off from the surface, and then it does a loop in the sky before landing back on the home planet. The session ends with students selecting an Animation Challenge and creating it using a motion path and classic tween.
- **Session 6 Add Sound, Export the Movie**  
In this session, students complete their movie. To start, sound clips are imported into the library. These sounds are then added to the Timeline to make the hover craft hum, spaceship zoom, and alien talk. Afterwards, the document is reviewed using a checklist to ensure it is finished. Upon completion, the file is exported into a movie file and shared with others.
- **Session 7 Make Your Own Movie**  
In this session, students apply their knowledge to make their own movie. To start, they select an idea. The production can be an animated scene, short story, or electronic greeting card. Once complete it is exported as a movie file and shared with others.

### *Extension Activities:*

Flip and Align Objects, Using Layers, Create a Movie Clip, Working with Scenes, Keyboard Shortcuts, Export as a Video

*Technology Skills:* Animation, Graphics

*Technology Integration:* Visual Arts, Media Arts

*Software Applications:* Adobe Animate CC

## TechnoChatbot AI

In this course, students become chatbot developers. They use both Scratch coding and a free bot-builder to design chatbots that improve the lives of others. To start they explore the practical applications of this AI technology and how it eliminates mundane, repetitive tasks. Once familiar with the possibilities of natural language processing, they design their own bots. Optional challenges explore the history of chatbots, large language models such as ChatGPT, and chatbot analytics.



The technology course has 20 assignments that are divided into 6 Sessions:

- **Session 1 Introduction to Chatbots**  
In this session, students explore the practical applications of chatbots. They chat with real business bots to critically examine strengths and limitations. Later, they prepare to create their own chatbots by registering for a Scratch account. This will be used in upcoming Sessions to build an event and order chatbot. To extend learning, an optional activity provides insight into key historical moments in chatbot development.
- **Session 2 Design an Event Chatbot**  
In this session, students build a chatbot for an upcoming school event using Scratch coding. It could be a prom, school dance, spirit day, talent show, or retirement party. The chatbot will answer attendees' questions. To make the bot appear intelligent, it uses if-then logic and keyword matching. Upon completion, students evaluate their chatbots' limitations. An optional activity about artificial intelligence expands students' knowledge of large language models.
- **Session 3 Create an Order Chatbot**  
In this session, students create an order chatbot using Scratch coding. It is a transactional chatbot, which can do one action. It will simplify the task of taking school fundraiser orders for items such as hats, cookies, or flowers. Just like a real salesperson, the bot will ask questions to help the customer make purchasing decisions. It will store their answers in a list. At the end of the conversation, the customer will be able to edit and then submit their order. This task expands students' knowledge of the practical applications of chatbots. In addition, it also introduces the use of lists, if-else logic, and broadcasting. An optional activity for using a chatbot to create a support ticket develops a deeper understanding of how this technology can be used to automate tasks.
- **Session 4 Design a Virtual Agent**  
In this session, students use the bot-builder app, Bot Libre, to design a virtual agent for a school or an organization. It will provide help to a new student or member. The chatbot will use natural language processing to answer common questions, provide directions, connect a user to information sources, and more. To start, they select a topic such as a local drama club, sports team, or art class. Next, they create a bot and then chat with it to discover what it does and does not know. Afterwards, they select a voice that will appeal to users. An extension activity emphasizes the need to be a responsible digital citizen by examining the Bot Libre terms of use and privacy policy.
- **Session 5 Train the Virtual Agent**  
In this session, students train their virtual agent to increase its intelligence. To start, they view pre-programmed responses to verify the chatbot's existing knowledge base. Next, they add a new greeting and modify default responses to make the bot friendly and helpful. The training continues by adding questions and answers for common requests such as directions and contact information. Students then share their chatbot with a friend to test the design. They analyze the conversation to improve responses.
- **Session 6 Deploy the Virtual Agent**  
In this session, students deploy their virtual agent. To prepare they use a checklist to verify that the chatbot can complete essential tasks. Once they are certain it is ready to use, they share their bot. This allows new members or students to get the information they need about an organization.

### *Extension Activities:*

History of Chatbots, AI Chatbots and You, Insert a Saved Image as a Sprite, Export and Print the Order List, Be a Responsible Digital Citizen

*Technology Skills:* Artificial Intelligence, Coding, Data Analysis, Digital Citizenship, Graphics

*Technology Integration:* Business Studies, Computer Science

*Software Applications:* Scratch, Bot Libre

## TechnoFuture AI

In this course, students create an interactive 'Choose Your Own Adventure' story set in a world shaped by artificial intelligence. They start by researching emerging technologies. Students transform these facts into science fiction that imagines the future. To bring this reality to life, students use AI tools to generate images, 3D models, and music. They also program a virtual tutor in Scratch that invites reader participation. Through TechnoFuture AI, students explore the applications of AI and reflect on ethical questions.



The technology course has 32 assignments that are divided into 6 Sessions:

- **Session 1 Become a Futurist**  
In this session, students take on the role of futurists, imagining tomorrow. They begin by exploring artificial intelligence and discovering how it is already part of their everyday lives. Then they watch a future-themed video that brings the possibilities to life. Using an AI-powered research tool, students investigate emerging innovations and record their discoveries. Finally, they team up with classmates to build a bubble map packed with creative inventions for homes, schools, and workplaces of the future.
- **Session 2 Illustrate the Home of the Future**  
In this session, students kick off their 'Choose Your Own Adventure' sci-fi story by inventing a futuristic gadget designed to help teens get ready for school. They begin by imagining the purpose, appearance, and user interface of the device. Then, they bring their invention to life using an AI Image Generator, crafting visual representations through descriptive text prompts. After creating their gadget, students write the opening scene of their story, which starts with the reader waking up in a high-tech home of the future. An optional extension activity has students explore ethics related to the use of AI-generated artwork.
- **Session 3 Model Futuristic Transportation**  
In this session, students offer readers two unique ways to travel to school. They start by designing a futuristic vehicle such as a hover scooter or teleporting bubble based upon an image found online that has a Creative Commons license. Using a 3D AI modeling tool, they transform the flat image into a 3D object. Next, they create a slide that illustrates the journey from home to school using their invention. During a gallery walk, classmates explore each other's creations and select a second futuristic vehicle to include in their story. By sharing 3D models and slide content, students give readers engaging, imaginative choices. As an optional extension, students explore AI cybersecurity systems that could protect school data.
- **Session 4 Code a Virtual Tutor**  
In this session, students imagine schools in the future. They investigate how computer vision and artificial intelligence could transform learning. Next, students design a school day itinerary and incorporate it into their story, featuring high-tech activities. To simulate an AI-powered testing environment, students use Scratch to create a True or False quiz. The program allows users to respond by swiping their hands over virtual buttons, mimicking gesture-based input. The quiz provides real-time feedback by automatically checking answers and displaying results. Once complete, students add a link to the quiz in their interactive itinerary so readers can take the test as part of the story. As an optional extension, students can watch a TED Talk on extended reality or create an animated 3D population map, generated with the help of AI tools.
- **Session 5 Envision the Future of Fun and Work**  
In this session, students finish their story. As the school day ends, the reader faces another choice: head to work or join friends. For the 'Work in the Future' path, students design a graphic that outlines a futuristic task list. For the 'Entertainment in the Future' path, students use a Generative AI tool to create an original background song that captures the scene's mood. Once both options are complete, students write an ending. As an optional extension, students can analyze a TED Talk on AI and creativity.
- **Session 6 Imagine Tomorrow**  
In this session, students unveil their imaginative, futuristic worlds to readers. They begin by testing the story's flow, ensuring that each choice leads to the correct slide. Next, they enhance the storytelling experience by applying advanced animation techniques. Once their interactive story is complete, students share their 'Choose Your Own Adventure'. They then read a classmate's sci-fi story and leave a comment highlighting their favorite part. To wrap up the course, students reflect on their creative journey.

*Extension Activities:* Risks of Artificial Intelligence; Discuss the Ethics of AI Artwork; Cybersecurity in the Future; Explore Extended Reality; Generate a 3D Map; AI, Creativity, and Voice Cloning; Improve Accessibility; Create a Printed Book

*Technology Skills:* Artificial Intelligence, Presentation, Coding, Word Processing, Spreadsheet

*Technology Integration:* Computer Science, Language Arts, Science

*Software Applications:* Generative AI Tools, PowerPoint, Word, Excel, Scratch

## TechnoInvestor

In this course, students play the role of a stockbroker working at the investment firm TechnoInvest. They learn how the stock market functions by purchasing shares in companies listed on the TechnoStock Exchange (TSE). Students keep track of their investment portfolio using Excel. The spreadsheet program allows them to organize their purchases and calculate the current value. Students then manipulate this information to create graphs that summarize stock values, display trendlines, and report earnings. Upon completion, students produce an investor's report.



The technology course has 21 assignments that are divided into 6 Sessions:

- **Session 1 The Stock Exchange**  
In this session, students become stockbrokers buying shares in companies listed on the TechnoStock Exchange (TSE). They begin by learning about how the stock market functions. Once familiar with this method of earning money, students study company profiles to determine those that look to be a good investment. They then buy shares in these companies receiving a stock certificate as proof of the purchase. Using Excel, students create a table that contains information about their stocks, the amount purchased, and their current market value. This electronic portfolio is updated each session, to help students manage their investments.
- **Session 2 Calculate Value of Stock Holdings**  
In this session, students continue to make their investment portfolio grow by trading stocks. To begin, they read the first issue of Money and Markets, a newspaper that reports on business. Applying this information students buy and sell shares. Once their financial transactions are complete, they enter the data into their electronic investment portfolio. To make tracking their stock holdings easier they enter mathematical formulas so that the total share values and total investment portfolio values are calculated automatically.
- **Session 3 Are You Making or Losing Money?**  
In this session, students continue to invest in stocks listed on the TSE. To begin, they read the second issue of Money and Markets. They team up with their investment group to determine which stocks to buy and sell, recording their purchases in the Investment Record Trade 3 worksheet. Investors return to Excel to apply conditional formatting to the Total Investment Portfolio Value cell, thus highlighting any value over the initial investment of 400 Technodollars. Afterwards, they apply their knowledge to copy and paste the table, clear the contents, and update the worksheet with the latest trading information.
- **Session 4 The Rise and Fall of Stock Values**  
In this session, students trade on the TSE. They return to their investment groups and read the third issue of Money and Markets. Investors discuss current events and how they affect stock values. The Investment Record Trade 4 worksheet is used to record financial decisions. Students apply their skills to update their portfolio in Excel. They then graph the rise and fall of one stock and forecast its future value using a trendline.
- **Session 5 History of Earnings**  
In this session, students make their final stock trade. They create a graph to summarize their earning history. They begin by joining their investment groups and reading the fourth issue of Money and Markets. Groups then discuss the current events that have occurred and the impact they have had on the companies listed on the TSE. Students decide on their final trade of this simulation and record their trades in the Investment Record Trade 5 assignment. Students ready their investment portfolio to include their latest transactions. They then create a graph that summarizes the earning history of their investment portfolio.
- **Session 6 Investor Report**  
In this session, students write a report to summarize the value of their investment portfolio. This report includes an explanation of earnings, current stock holdings, and recommendations for financial growth.

### *Extension Activities:*

Track the Stock Market on the Internet, Closing Market Summary, Data Bars and Icon Sets, Bearish or Bullish? Are the Risks Worth It? Gross Profit Margin

*Technology Skills:* Spreadsheet, Word Processing, Desktop Publishing

*Technology Integration:* Math, Business Studies, Financial Literacy

*Software Applications:* Excel, Word

## TechnoMission

In this course, students learn database skills. To start, they work on an existing database to view and filter records. Next, students edit photographs of themselves to place their head into space suit. This image and their personal information are entered into a database form. Once students learn the basics, they begin construction of a database. They design a table, data entry form, and generate a report using Access.



The technology course has 15 assignments that are divided into 6 Sessions:

- **Session 1 Space Exploration**  
In this session, students learn about the history of space exploration. To start, students examine a timeline of historic events. Afterwards, students open a database that contains information about space missions. They view records in the database to learn about important events such as when man landed on the moon, deployed the Hubble Space Telescope, or lived on the International Space Station. By filtering records, students can read about the space program from its early beginnings in the 1960's to today.
- **Session 2 Join TechnoNASA**  
In this session, students become astronauts. Using Microsoft Paint, students edit a photograph to place their head into a spacesuit. Upon completion, students join the prestigious team at TechnoNASA. The edited photograph, as well as other personal information is entered into the Space Exploration database.
- **Session 3 Cyberspace Mission**  
In this session, students blast into cyberspace. Their mission is to collect items from the World Wide Web and store the information in a database. To prepare for this mission, students complete a planning sheet. This organizer helps them pick a topic and the fields of information that will be in the database. Afterwards, students use the Internet to search for information. Facts are recorded in an organizer and pictures are collected of each item. This information will be added to a database that students will construct in upcoming sessions.
- **Session 4 Build a Table**  
In this session, students begin construction of a database to catalogue items discovered on their mission into cyberspace. To start, students create a table in the database that includes fields such as item name, description, date, and category. The properties on each field are adjusted to make data entry consistent.
- **Session 5 Design a Form**  
In this session, students design a simple data entry form. To start, they open their database and select the table. Using the Form Wizard students quickly make a form with a standard layout. With the commands in Design View students change the style of the form and resize the controls. Afterwards, data for each object collected on the cyberspace mission is entered into the database using the form.
- **Session 6 Generate a Report**  
In this session, students generate a simple report. To start, they open their database and select the table. Using the Report command, students quickly make a report with a standard layout. Using the commands in Layout View students change the style, orientation, and controls on the report. Once the report looks great, it is printed. Now students have an attractive printout that summarizes their cyberspace mission.  
MISSION COMPLETE!

### *Extension Activities:*

Sort and Find Records, Make a Mission Patch, Alien Life, Format a Datasheet, Customize a Form, Customize a Report

*Technology Skills:* Database, Photo Editing, Graphics

*Technology Integration:* Language Arts, Math, Visual Arts, Science

*Software Applications:* Microsoft Access, Paint

## TechnoPhotoshop

In this course, students create a digital scrapbook. To start, students learn how to use a camera to take high-quality photographs. Once a library of images has been established, the program Photoshop is used to transform the pictures into scrapbook pages. Ranging from whimsical to wacky, each page is a creative expression of the artist.



The technology course has 21 assignments that are divided into 7 Sessions:

- **Session 1 Digital Photographs**  
In this session, students learn about digital photography starting with the history of the camera and its connection to artists. Next, they study the parts of a digital camera and consider its benefits when taking photos. Once familiar with a digital camera, they learn how to use it to take high-quality photographs. Students are then introduced to the idea of making a digital scrapbook. They study sample scrapbooks to notice their content and layout. Afterwards, students gather photographs to use in their own scrapbook.
- **Session 2 Filtering Fun**  
In this session, students are introduced to Photoshop. To start, they learn about the program environment. Afterwards, they open a photo and experiment with filter effects. Once familiar with this editing technique, they apply different filters to the same image and save each version. These files are then arranged to produce a scrapbook page using Free Transform and Warp modes. Text is then added to describe the images.
- **Session 3 Classic Touch-Ups**  
In this session, students are introduced to retouching tools that can be used to make an imperfect photo perfect! To start, they work with the image touchup to trim the edges, remove red eye, hide blemishes, and recolor the picture. Afterwards, they apply this knowledge to one of their own pictures using at least two retouching techniques to make the photo look better. When this is complete, students create another scrapbook page. This time they learn how to add styles to each layer to create an eye-catching design.
- **Session 4 Recolor the World**  
In this session, students learn how to use the Adjustment commands to recolor a photo of their choice. Although, these commands are commonly used to correct poor color quality in a picture, they can also be used to create fabulous artistic effects. Using the transformed photo, students make a third scrapbook page. This time, they learn how to use the Brush Tool to add flair.
- **Session 5 I Cannot Believe My Eyes**  
In this session, students combine pictures to create an unbelievable scene that looks real. To start, they combine two photos to make it appear that a person is walking through a door into a tropical paradise. This activity has students experiment with techniques to remove parts of the picture by using the Magic Wand Tool, Rectangular Marquee Tool, Polygonal Lasso Tool, and Magnetic Lasso Tool. Once familiar with each tool they apply their knowledge to create their own unbelievable scene. Using the transformed photo, students make a fourth scrapbook page. This time, they learn how to use Custom Shapes to make the page look super.
- **Session 6 Be Creative**  
In this session, students apply their photo editing skills. They now know how to warp a picture, format text, apply filter effects, retouch imperfections, enhance color, change the layer style, paint with the brush, draw shapes, and superimpose images. These techniques are combined to create a final scrapbook page.
- **Session 7 Digital Scrapbook**  
In this session, students transform their scrapbook pages into a Contact Sheet, PDF Presentation, or Web Photo Gallery. Their digital scrapbook can then be shared with family and friends.

### *Extension Activities:*

Types of Photography, Blurring the Background, Advanced Cropping Techniques, Color Part of a Grayscale Picture, Discover the Lost City of Atlantis, Wrap Text into a Custom Shape

*Technology Skills:* Photo Editing, Graphics

*Technology Integration:* Visual Arts, Media Arts

*Software Applications:* Adobe Photoshop

## TechnoPlanner

In this course, students become event planners. They own a company that plans special occasions such as weddings, birthday parties, reunions, or proms. They must create a database to help them organize client and event information. This database will ensure that they can offer top quality service as no detail will be forgotten.



The technology course has 21 assignments that are divided into 6 Sessions:

- **Session 1 About Databases**  
In this session, students use Microsoft Access to study the TechnoPlanner database. It organizes customer and event information for an event planning company. Students study the table, form, query, and report to gain an understanding of the purpose and structure of a database.
- **Session 2 Build Tables**  
In this session, students become event planners. To make business operations run smoothly they begin construction of a database to store customer and event details. Students complete a planning sheet to organize the content of their database. Afterwards, they create the Customers table by adding the fields and setting the field properties. Next, students use their skills to build the Events table. Upon completion, students create a relationship between the tables to allow the event planner to connect customers to their booked events.
- **Session 3 Create Data Entry Forms**  
In this session, students produce forms that allow for easy data entry. To begin, they create a Customers form using the Form Wizard. The layout of the form is modified to create a customized design. Afterwards an Events form is made in Design View. Upon completion, the forms are combined so that when a customer record is displayed, any events that are related to that client are also displayed. This is a great way to not only enter data but also easily look up client history.
- **Session 4 Enter, Sort, and Find Data**  
In this session, students add records to their database. They then learn how to organize data by sorting it alphabetically, numerically, and chronologically. Next students retrieve information from their database using the Search Box, Selection, and Find features. Afterwards, they consider how an event planner would use each search method to find information FAST!
- **Session 5 Confirmation of the Event**  
In this session, students follow up on potential leads. They have several clients who have contacted them to plan an event but have not yet confirmed. Event planners design a query by combining data from the Customers and Events tables. This allows them to locate only customers who have not yet confirmed the event. Students produce a report that displays a printout of clients and their telephone numbers. Now event planners can call potential customers to confirm the possibility of working together.
- **Session 6 View Upcoming Events**  
In this session, students create a report that summarizes upcoming events. To start, they produce a query in Design View that filters the records to list only those that are scheduled for the upcoming month. This information is summarized in a report created in Design View. This professional document can be used at a staff meeting to discuss job duties, as a guide when booking other events, or as a reference document for scheduling services.

### *Extension Activities:*

Database Designer, Format a Datasheet, Create a Form Using AutoForm, Spell Check, Mailing Labels, Mail Merge

*Technology Skills:* Database, Word Processing

*Technology Integration:* Business Studies

*Software Applications:* Word, Access

## TechnoSpecialist

In this course, students become IT specialists who work for a company that manufactures and sells computers. The business has launched an initiative called "Your Computer, Your Way". To help the customer pick the hardware to suit their needs, students create an information package using PowerPoint. The package explains the aspects to consider when selecting components using bulleted lists, tables, graphic organizers, clip art, picture files, video, and sound clips. The information package is transformed into a presentation, interactive tutorial, video, and handout.



The technology course has 25 assignments that are divided into 6 Sessions:

- **Session 1 Introduction to the Computer**  
In this session, students become Information Technology Specialists. Their job is to help customers purchase computer hardware by creating an information package that explains computer parts in simple terms. To prepare for this task, students learn about different types of computers, input devices, and output devices. Afterwards, they use Microsoft PowerPoint to customize the slide master to make a unique design for their information package. Upon completion, students use the slide master to create a title and introduction slide.
- **Session 2 Storage Devices**  
In this session, students learn about the importance of data storage. To start, they consider the reasons a computer needs to store data and are introduced to terminology used to measure storage capacity. Next, they learn about storage devices including a flash drive, hard drive, and cloud storage. They apply their knowledge to create slides about each device to educate consumers. Next, students compare the storage capacity of each device and create a slide that contains a comparison chart.
- **Session 3 Types of Memory**  
In this session, students learn about the two types of memory, RAM and ROM. They read information to discover why the computer needs memory and how it affects performance. Afterwards, students summarize the facts about RAM and ROM using a graphic organizer. This new slide in the information package will help customers gain an understanding of what to consider when purchasing a computer.
- **Session 4 The Microprocessor**  
In this session, students become familiar with the microprocessor. To understand why this computer part is the main factor in computer speed and efficiency, the history, function, and operation are studied. Afterwards a slide is constructed that explains to customers, in a simple way, the importance of the microprocessor and what should be considered when making a purchasing decision.
- **Session 5 Sight and Sound**  
In this session, students learn about the monitor, graphics card, and sound card. To start they study the attributes that affect picture quality, such as contrast ratio, pixel pitch, and resolution. They summarize this information in a table. Next, students gain an understanding about how the computer produces sound. Afterwards, they write a simple explanation about the sound card and place a recorded clip onto the slide.
- **Session 6 Your Computer, Your Way!**  
In this session, students prepare to launch the company initiative, "Your Computer, Your Way". To start, they edit the spelling and add speaker notes to each slide. Students then practice sharing the information package with customers by presenting the slide show to an audience, using the recently created speaker notes and pen to illustrate important points. Next, they save the information package with a new filename to create an interactive tutorial that uses hyperlinks and action buttons to allow customers to access the information at a kiosk. Afterwards, they save the presentation as a video so that it can be viewed on any computer, emailed, or posted to the Internet. Finally, students print the information package as a handout. Customers will now be able to select computer components.

### *Extension Activities:*

More About Computers, More About Data Storage, More About Memory, More About the CPU, Move, Hide, and Delete Slides, Apply Animations and Transitions

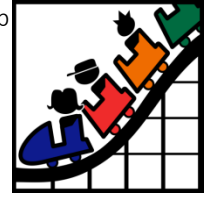
*Technology Skills:* Presentation

*Technology Integration:* Business Studies, Computer Studies

*Software Applications:* PowerPoint

## TechnoWonderland

In this course, students become marketing executives for an amusement park. This challenging job has them use Office to complete a wide range of job duties. To start, they create a poster in Microsoft Word advertising the thrilling rides and spectacular shows guests can experience. The fun continues when Internet research is conducted for an animal exhibit to develop placards for the enclosure. Their next task has students become involved in selecting a new attraction by graphing survey data using Microsoft Excel. This exciting new addition is promoted by creating a video using Microsoft PowerPoint. To generate a buzz about the attraction, season ticket holders are rewarded for their loyalty with an invitation created using Microsoft Publisher to an exclusive event. With the year ending, amusement park data is analyzed using a Microsoft Access database with the goal to improve customer satisfaction in the future.



The technology course has 24 assignments that are divided into 6 Sessions:

- **Session 1 Create an Amusement Park**  
In this session, students create an amusement park. To start, they select the thrill rides, exhibits, shows, and other services available to guests. Once a plan has been developed, they use Microsoft Word to promote this exciting tourist attraction. Using text, clip art, pictures, and more, students develop the word processing skills necessary to create an attention-grabbing poster.
- **Session 2 Research an Animal Exhibit**  
In this session, students conduct Internet research to prepare placards for an animal exhibit. To start, they are introduced to basic search strategies. They apply these skills to locate facts about the animal that visitors will find interesting. Afterwards, students expand their word processing skills to create information signs using Microsoft Word that are posted around the attraction. They learn how to adjust page orientation, set the margin, apply a page border, and more!
- **Session 3 Survey a New Attraction**  
In this session, students must develop a solution to increase visitor traffic. Conduct a survey to learn about the types of attractions that appeal to a particular age group. Organize the data in a worksheet and chart the results using Microsoft Excel. Afterwards, analyze the information to determine what needs to be added to the amusement park to attract a particular visitor.
- **Session 4 Advertise a New Attraction**  
In this session, students create a video advertisement to publicize an attraction. This marketing promotion will run on electronic billboards throughout the park. Using Microsoft PowerPoint, students create a series of eye-catching slides using text boxes, pictures, and WordArt. Transitions and simple animation are applied to the presentation. Upon completion, the advertisement is saved as a video.
- **Session 5 Invite Guests to an Event**  
In this session, students invite guests to the opening of an exciting new attraction. Only amusement park season ticket holders can attend this exclusive event. Using Microsoft Publisher, students create an invitation that encourages people to visit the park and join in the celebration.
- **Session 6 Analyze Amusement Park Data**  
In this session, students examine amusement park data. To start, they are introduced to Microsoft Access and database terminology. Afterwards, they view a summary of the attractions available to guests. By filtering the records, students learn about the popularity of rides, aging exhibits, and location of essential services. Once familiar with how to use a database, they enter a record of the latest addition to the park.

### *Extension Activities:*

Amusement Park Map, View the Animal Exhibit, Calculate Monthly Food Vendor Earnings, Park Attractions Photo Album, Generate a Calendar, Use a Query to Report Height Restrictions

*Technology Skills:* Word Processing, Spreadsheet, Presentation, Desktop Publishing, Graphics, Databases

*Technology Integration:* Business Studies, Language Arts, Science, Math

*Software Applications:* Word, Excel, PowerPoint, Publisher, Access

## Contact Information

TechnoKids Inc. offers free curriculum support.

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We want to be your partner in computer education. If you have any comments or questions regarding our instructional materials, please contact our Head Office.

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