Universal Design for Learning Guidelines and TechnoKids Course Materials

Below is a summary of how TechnoKids course materials apply the [Universal Design for Learning](#) guidelines.

Multiple means of **Engagement** | *The WHY of Learning*	Multiple means of **Representation** | *The WHAT of Learning*	Multiple means of **Action & Expression** | *The HOW of Learning*
GOAL: Students are purposeful and motivated.	**GOAL: Students are resourceful and knowledgeable.**	**GOAL: Students are strategic and goal oriented.**
Access | Welcoming Interests & Identities	Access | Perception	Access | Interaction
• Courses provide open-ended tasks allowing students the freedom to choose their topic of study based on personal interest. • Tasks introduce digital tools and then students apply skills to creatively express their own ideas. (e.g., select color, design) • Courses apply a project-based approach and emphasize hands-on learning to solve real-world problems that are relevant to kids. • Fun activities engage learners by sparking their imaginations. • Teacher guide includes questions for whole class or small group discussions to hook students' interest. • Introductory assignments encourage risk taking with experimentation of software commands to discover their function. • Final projects are shared with an authentic audience. • Lessons include self-reflection with questions about the learning experience, feelings, values, and insights.	• Assignments include step-by-step instructions, supported by visuals such as illustrations, diagrams, flowcharts, graphs, screenshots, and tool icons. • Sample files of a completed project are in multiple formats such as a document, spreadsheet, slide show, web page, or video. • Digital student assignments and worksheets are zoomable and can be read aloud using Text-to-Speech. • Essential images include ALT text or captions for screen readers. • Course slides offer customized ways to display instructions and perceive information.	• Instructions provide alternative keyboard commands for mouse actions. • Courses use software such as Microsoft Office and Google Docs that work with keyboard alternatives. For example, students can use speech-to-text to add content. • Bookmarking of instructional materials optimizes navigation and access. • Lab feature is intentionally designed to enhance technology and tool access. Students work in an interactive space that combines instructions and a workspace in a single, seamless learning environment.
Support | Sustaining Effort & Persistence	Support | Language & Symbols	Support | Expression & Communication
• Goal setting often includes a planning sheet, that is referred to throughout the course to maintain students' focus. • Courses provide a task list that students can use to track progress and remain focused on the goal. • Assignments begin with a bulleted list that explicitly states what students will do. • Students can select from challenges that have varying degrees of difficulty. • Activities build a learning community with peer interactions. Students act as co-creators, reviewers, or an audience. • Materials support collaboration with commenting guidelines, defined roles, or group assessment tools. • Courses include questions throughout a lesson to check students' comprehension, with a quiz at the end of each unit to provide feedback about mastery of skills and knowledge. • Assessment tools are customizable allowing the teacher to modify the criteria to meet the needs of learners.	• Teacher Guide includes a list of vocabulary, software tools, or coding blocks to pre-teach. • Teacher Guide includes a glossary of terms. • Instructions include both the tool name with icon to help students identify the command in the program. • Graphics illustrate terminology or concepts to clarify meaning. • Assignments include definitions of new terms. • Introductory assignments label the software window to recognize parts of the environment. • All student assignments, worksheets, and resources can be read aloud using Text-to-Speech. • Flashcards of software tools act as visual cues. • Resources supplement student assignments. They can include multiple media such as videos, illustrations, diagrams, or examples of a completed project.	• The curriculum provides choice. Teachers can select a course based on the topic, technology skill, product, or student interest. • Courses offer teachers flexibility. The Teacher Guide provides suggestions for selecting activities to teach. • Tasks require students to apply their computing skills to create original products. • Tasks include role-playing and real-world simulations that relate to students' experiences and interests. • Projects include multiple ways of expressing ideas related to a task such as producing a graph to illustrate data, interpreting results in a written report, or giving an oral presentation to present findings. • Courses include multiple examples of a completed project to demonstrate the range of solutions. • Planning sheets such as storyboards, research organizers, concept maps, and flowcharts outline ideas. • Instructions explain how to use spelling and grammar checkers to edit content. • Assignments include sentence starters or fill-in-the-blank sentences to support writers. • Assignments include challenges with varying degrees of difficulty to differentiate learning. • Skill reviews support learners that require additional practice. • Extension activities are optional assignments for enrichment. • Extension activities allow students to explore multiple ways to enhance their work with either images, audio files, or a software-related technique. • Peer review, pair groups, small group activities, and teacher assessment offer different types of feedback to students.

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Executive Function | Emotional Capacity	Executive Function | Building Knowledge	Executive Function | Strategy Development
• Courses include checklists, tracking sheets, reflections, and various self-assessment tools to self-regulate learning.	• Courses are divided into Sessions. Each Session is further divided into assignments to chunk learning. • Assignments progress from simple to complex tasks, offering opportunities to revisit key ideas and previously learned skills. • Introductory assignments pose questions about existing knowledge to form connections to new content. • Screenshots illustrate instructional steps with labels that highlight essential information. • Hints and tips support learners to apply new skills or solve problems. • Sample files can be used by the teacher to demonstrate a task and introduce a concept. • Examples of complete projects are accompanied by questions that draw attention to critical features. • Templates support the acquisition of new skills and scaffold learning. • Skill reviews include activities to consolidate learning and transfer knowledge to a new task. • Resources include graphic organizers such as tables, flowcharts, concept maps, or storyboards to aid in planning. • Teacher Guide includes suggestions for technology integration to form cross-curricular connections. • Interactive standards for assignments foster skills advancement, building connections to prior knowledge, and transfer to new learning situations.	• Courses include tracking sheets and checklists to assist with goal setting and task completion. • Assignments include questions that have students consider the next steps or the results of an action. • Courses include celebrations at the end of a unit whereby students show and explain their work. This can be a presentation, art gallery, TED talk, young author's conference, debate, and more. • Assignments gradually guide students from their goal to completion. • Self-assessment includes open-ended questions, rating scales, peer feedback, and commenting. • Courses offer both formative and summative assessments. This includes quizzes, marking sheets, rating scales, and rubrics. All are customizable to allow teachers to add, delete, or edit criteria.