

Lesson 1: Hello World

Section	Details
Powerful Ideas of Computer Science	Hardware/Software
Powerful Ideas of Literacy	Tools of Communication, Language
PTD	Communication, Community Building
Palette of Virtues	Curiosity, Open-Mindedness
Children will be able to...	• Define language as a structured method of communication. • Identify programming languages as languages used to communicate with computers.
Vocabulary	• <u>Programming languages</u>: language used by computers • <u>Code</u>: text written in a programming language to tell a computer what to do • <u>Languages</u>: rule-based methods for communicating information and ideas • <u>ScratchJr</u>: programming language with pictures
Teacher Preparation	☐ Read lesson plan ☐ Have a physical copy of Amy Wu and the Warm Welcome by Kat Zhang OR the digital read-aloud open and ready to play ☐ Have the Hello Around the World video open and ready to play ☐ Print one set of the Hello Speech Bubble slides or be ready to project them on a new tab ☐ Teacher Project: Create a simple project ahead of time with no more than one character and 4 blocks (You can create a project unplugged only, or demonstrate on the app) ☐ Print the Goodbye Translation List and practice pronunciations beforehand

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Warm Up: Hello World	• Read aloud the book Amy Wu and the Warm Welcome by Kat Zhang (or use digital read aloud). • Discuss why Lin couldn't understand Amy at the start of the story. • Explain that Lin and Amy needed to speak the same language to understand each other. • Ask children to share other languages they know. Create a list on the whiteboard. • Have children take turns saying "hello" in different languages they know. Executive Function Support: Working Memory: Ask children to remember and repeat the "hello" words in different languages. Inhibitory Control: Have children raise their hand and wait to be called on before sharing their language. In Practice Strategy: Use visual cues (like pictures or gestures) along with the verbal "hello" to help children remember and associate the words with their meanings.
Opening Tech Circle: What is Language?	• Discuss what a language is, why we need it and what happens when you don't speak the same language. Refer back to <i>Amy Wu and the Warm Welcome</i> to help explain the importance of language. ◦ Discuss what would happen if we didn't have languages. How would we ask friends for help? How would we say hello to our families? ◦ Emphasize that language is the main way humans communicate with one another! • Discuss that computers also use languages.

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	○ What languages do computers use? Computers use a language called programming languages, and different computers use different programming languages. ○ Ask children if they have heard of any programming languages before. If so, which ones (C, JAVA, etc.)? Executive Function Support: Cognitive Flexibility: Encourage children to think about different ways people can communicate (speaking, signing, writing). Sustained Attention: Use engaging gestures and voice modulation to keep children focused during the discussion. In-Practice Strategy: Break the discussion into shorter segments, using movement or songs between segments to help children maintain focus. Possible activity: Using images of devices/apps/websites have students stand up when they see one they use. Use an if/then statement IF you have used this device/app/website THEN stand up. IF I say “Next” THEN everyone should sit down. Reinforce classroom routines in this context as well: IF I ring the bell, THEN you freeze
Word Time: Hello Around the World	● Use prepared index cards with “hello” written in different languages. ● Hold up each card and read it aloud. ● Have children guess which language each “hello” is from. ● After guessing, flip the card to reveal the correct language. Executive Function Support: Working Memory: After showing a few cards, ask children to recall previous “hello” words.

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	Cognitive Flexibility: Discuss how the same word can sound different in various languages. In-Practice Strategy: Play a memory game where children match the "hello" word to the corresponding country or language, using visual aids to support learning (add an image of the country, the flag, or some other image that represents that country) .
Unplugged Programming: A New Language	• Share that you know one programming language called "ScratchJr." • We are going to be the computers and "read" the code. • Share your ScratchJr project with the class. (Adapt this part if you are demonstrating Scratch Jr. on a device, or only using the blocks). ◦ Explain that the blocks they see all together are called a code. In ScratchJr, blocks are like the words of the language. When we put them together we make sentences, or codes, which basically tell a computer what to do. • Ask children guiding questions about how to explore the app: ◦ Select a Start Block and an Action Block: Why are some blocks shaped differently than others? ◦ Select two different motion Blocks: Do you have any guesses as to what the pictures on these blocks mean? • Explain that next time children will use the ScratchJr. coding blocks. Executive Function Support: Working Memory: Have children remember and follow a simple sequence of colored blocks (e.g., yellow-blue-red). Inhibitory Control: Play a "freeze" game where children stop arranging blocks IF I say "stop" (or ring the bell, or whatever

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	classroom routine you want to reinforce) THEN stop arranging blocks; IF I say "go" THEN continue arranging the blocks. Reinforce classroom routines as earlier. Cognitive Flexibility: Challenge children to create different "programs" using the same set of blocks. In-Practice Strategy: Provide visual step-by-step instructions for creating a simple "program" with the blocks, allowing children to refer to it as they work independently.
Closing Tech Circle: Goodbye Around the World	• Go back the list of all the different languages you made at the beginning of class. • Add ScratchJr to the bottom of the list if you haven't done so already. • As a group, choose one language that you want to say goodbye in and teach the children how to say goodbye in that language using the Goodbye Translation List provided! Executive Function Support: Working Memory: Ask children to recall and share their favorite "hello" or "goodbye" word from the lesson. Sustained Attention: End with a calm, focused activity where children take turns saying goodbye in their chosen language or in the language you chose together.
Extensions	• Create a "coding wall" where children can display their paper block programs. Executive Function: Encourage children to plan their programs before placing them on the wall (planning and organization skills). • Have children design their own symbols for different actions and create new "programming blocks." Executive Function: Challenge children to switch between using their own symbols and the original ones (cognitive flexibility).

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	• Play "Simon Says" using the programming blocks, where children follow the sequence of blocks held up by the teacher. Executive Function: Gradually increase the complexity of the sequences to challenge working memory and attention.
General Executive Function Support	• Provide clear, consistent routines throughout the lesson to support children's self-regulation and attention. • Use visual schedules to help children understand and anticipate the lesson structure. • Offer fidget tools or alternative seating options for children who need support with sustained attention. • Incorporate short movement breaks between activities to help children reset their focus. • Praise children's efforts in using executive function skills, not just correct answers.
AI Source	https://claude.site/artifacts/a075ad2a-0f9c-41d2-bfec-762668b2a514