

Coding Instruction at KSSB

Most schools today include instruction on some form of coding with kids from preschool through high school. It has been acknowledged by many educators that it teaches children how to communicate and helps build logical thinking. It's a language that strengthens both verbal and and written skills. For students with low vision and Blindness it has the same benefits although access to the materials needs to be considered at all age levels. "Block Coding" is one example of an inaccessible tool that is often used in schools to teach coding, and training at KSSB will provide accessible alternatives to their coding experience.

At the Kansas School for the Blind, students have an opportunity to learn coding during weekly technology club activities and other scheduled events events sponsored by KSSB such as the Braille Challenge and Girls/Boys weekends. It is also now included in KSSB's ESY summer program.

Introduction to Coding

For younger or beginning students to help learn directionality, sequencing a variety of "hands on" tools are used such as the coding mouse (buttons on top of mouse for directionality); or, coding tiles and a robot. Maze activities help the students learn the concepts of directions and sequencing.



Blue-Bot Blue
(Coding Mouse)



Cubetto
(Tiles direction Robot)



TacTile Reader
(Reader works with)

Building on varied coding experiences

For students that have experience with tablets, basic touch gestures and keyboarding, coding is taught within Apple's Swift Playgrounds in two ways: using the standard Apple playground coding lessons with the build-in two dimensional games or with customized coding activities (with sample coding starters) to control external robots such as "Spheros", the Wonder Workshop robots "Dash" or "Cue", Parrot drones "PARROT AIRBORNE CARGO" or "The Mini Spider".



Standard Swift Playground
Coding Lessons



Customized Coding
Lessons with Robots

Coding Instruction at KSSB

Swift Playgrounds and Robots



Sphero Robot
Activities: Bounce Back,
Draw a Square



Dash Robot
Activities: Push the Ball over
the goal; Move through a
maze, Drawing



Parrot Drone
Activities: Lift off/Landing;
Plan a short trip



Skoog
Activities: Play a note or
two; Follow the leader

Coding Instruction at KSSB

Building on communication and logical thinking

Coding experiences require organization, understanding how materials in their environment can interact with each other, and utilize communication to complete the 20 projects. Using the APH “Snap Circuit Kit”, students will work individually and in small groups to complete projects by following instructions; assemble parts by snapping them together.

Instructions given in large print, Braille, and a picture of the finished project.

Example of projects:

Turn on a fan

Activate an auditory buzzer

Shoot a propeller into the air

Play a tune

