

# Introduction to Digital Technology

## SHORT TERM PROJECT

Course Title: Introduction to Digital Technology

Project Name: Coding with CS First Google

Time: 90 Minutes

### Objectives:

- Events-Students will refine programs by changing data and using event blocks to achieve a desired action.
- Sequencing-Students will complete complex programming tasks using block-based program flows to sequence the desired end result.
- Loops-Students produce an action based on two or more conditions in a logical relationship by combining multiple Control blocks.

### CSTA Standards:

2-DA-09: Refine computational models based on the data they have generated

2-AP-10: Use flowcharts and/or pseudocode to address complex problems as algorithms.

2-AP-12: Design and iteratively develop programs that combine control structures, including nested loops and compound conditionals.

### Materials Needed:

- Computers
- Headphones
- Google CS First class code

### Resources needed:

- Internet

### Interdisciplinary Involvement:

- Art/Algebra

Tasks:

1. Students will sign in at <https://csfirst.withgoogle.com/s/en/home>
2. Watch instructional video for each activity.
3. Use Scratch to complete unit coding activity
4. Test coding by clicking the start button.
5. Correct errors and retest.
6. Take survey

# Student Work Samples

The screenshot shows a Google for Education dashboard for a course titled "SOLS Digital Information Technology > CS First Unplugged". The "Projects submitted" tab is active, displaying a list of students on the left and two project thumbnails for Antwon Brown. The first thumbnail, titled "Untitled-4", shows a simple line drawing of a house with a pencil pointing to it. The second thumbnail, titled "Untitled-3", shows a pencil pointing to a checkered board. The interface includes a "My dashboard" button, a "Teacher" profile, and navigation links for "Videos watched", "Projects submitted", and "Survey results".

The screenshot shows the same Google for Education dashboard, but the "Projects submitted" tab now displays work for Kiyima Wayne. The student list on the left includes Antwon Brown, Zion Finch, Kayden Grey, Alex Lewton, Jarod Mincey, JaLonnie Smith, and Kiyima Wayne. A single project thumbnail titled "Untitled-5" is shown, featuring a pencil pointing to a checkered board. The interface elements, including the course title and navigation tabs, are consistent with the previous screenshot.

cs first - Bing | Class details - CS First | <https://csfirst.withgoogle.com/course/d2p4mn#student-details>

Google for Education


CS First Curriculum Resources About My dashboard Teacher

My classes > SOLS Digital Information Technology > Alex Lewton > Class code: d2p4mn < 0/7 students signed in

Projects

Projects by Alex Lewton

CLASS PROJECTS



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cs first - Bing | Class details - CS First | <https://csfirst.withgoogle.com/course/d2p4mn#student-details>

Google for Education


CS First Curriculum Resources About My dashboard Teacher

Technology >

Projects

Projects by JaLonnie Smith

CLASS PROJECTS



Copy of Copy of Untitled-1 | Copy of Untitled-1 | Untitled-1

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cs first - Bing | Class details - CS First | Scratch for CS First - CS First

https://csfirst.withgoogle.com/project/06cfd7639ee24e58834d3abeb521fa97/editor

Scratch for CS First | File | Edit | Copy of Copy of Untitled-1 | View only. Edits not saved. To save changes, make a copy | My dashboard | Teacher

Code | Costumes | Sounds

Motion

- move 16 steps
- turn 15 degrees
- turn 15 degrees
- turn 15 degrees
- go to random position
- go to x: -95 y: 68
- glide 1 secs to random position
- glide 1 secs to x: -95 y: 68
- point in direction 90
- point towards mouse pointer
- change x by 10

when green flag clicked

- say Hello for 2 seconds
- say Is anybody home for 2 seconds
- turn 15 degrees

Sprite: Heroes | x: -95 | y: 68 | Stage | Backdrops: 2

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cs first - Bing | Class details - CS First | Scratch for CS First - CS First

https://csfirst.withgoogle.com/project/181ebe2d1095448ba5346f525cbea994/editor

Scratch for CS First | File | Edit | Untitled-5 | View only. Edits not saved. To save changes, make a copy | My dashboard | Teacher

Code | Costumes | Sounds

Motion

- move 16 steps
- turn 15 degrees
- turn 15 degrees
- turn 15 degrees
- go to random position
- go to x: 0 y: 0
- glide 1 secs to random position
- glide 1 secs to x: 0 y: 0
- point in direction 90
- point towards mouse pointer
- change x by 10

when green flag clicked

- hide

encoding

1	8
2	3,2,3
3	2,1,2,1,2
4	1,1,4,1,1
5	1,1,4,1,1
6	2,1,2,1,2
7	3,2,3
8	8

length 8

Enter Your Encoding

Sprite: Information | x: 0 | y: 0 | Stage | Backdrops: 1

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