{CODEHOP} from CodeHS

Utah Kindergarten Interdisciplinary Computer Science

Lesson Key

- CS Skill Lesson
- Multi-Day Lesson
- Unplugged
- Quiz

Lessons in each column are presented in descending order of difficulty, but do not need to be completed in any specific order.

Getting Started with Coding

- Welcome to CodeHop!
- Scout Adventures 1: Introducing Scout
- Scout Adventures 2: Scout Starts Exploring
- Scout Adventures 3: Scout Meets a Friend
- Scout Adventures 4: Scout Explores the Forest
- Scout Adventures 5: Scout and Bluebird Help
- Scout Adventures 6: Scout Celebrates with Friends
- Getting Started with Coding Quiz

Coding in Math

- Counting and Sequences
- Counting with Mazes
- Decompose Numbers Up to 10
- Greater Than and Less Than: Single-Digit Numbers
- Story Problems: Add and Subtract within 10
- Finding an Unknown in a Word Problem
- Creating Shapes

Coding in Science

- Living and Nonliving
- Comparing Organisms
- Needs of Plants
- How Living Things Survive
- Types of Motion
- Weather and Seasons

Coding in ELA

- Phonics: Letter Sounds
- Draw and Tell
- Storytelling Animations
- Careers in CS: Spacecraft Design

Coding in Social Studies

- Who Keeps Us Safe?
- Cardinal Directions

More Coding Lessons & Projects

- Coding Card Game: Sequences
- Coding Card Game: Sequences 2
- Drawing Tools: Fairy Tale Painting
- Introduction to the Design Process
- Introduction to Grow and Shrink Blocks
- Introduction to Show and Hide Blocks
- Introduction to Pages
- Loops: Frog and Rabbit
- Forever Loops: Fireworks
- All About Me!
- Create a Chicken Crossing Game

Digital Literacy

- Computer Basics: Introduction
- Mouse Practice
- Keyboard Introduction
- What Can Data Tell Us?
- Using Networks to Connect
- Introduction to Research
- Digital Literacy Quiz

Artificial Intelligence

- What is AI?
- Sorting with Decision Trees
- Artificial Intelligence Quiz

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Lesson Key

- CS Skill Lesson
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- Quiz

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Utah 1st Grade Interdisciplinary Computer Science

Getting Started with Coding

- Welcome to CodeHop!
- Introduction to ScratchJr
- Events
- Sequences: Digital Responsibilities
- Getting Started with Coding Quiz

Coding in Math

- Place Value: Ones and Tens
- Grid: Solving Mazes
- Place Value: Adding Up to 20
- Greater Than and Less Than: Two-Digit Numbers
- Story Problems: Add and Subtract within 20
- Algebraic Thinking: Find an Unknown Number Up to 10 in a Number Story
- Patterns and Music
- Telling Time
- Combining Shapes
- Divide Shapes into Equal Parts

Coding in Science

- Light and Shadows
- Sound and Pitch
- Sun and Moon, Day and Night
- Phases of the Moon
- Adaptations and Survival: Camouflage
- Animal Life Cycles

Coding in ELA

- Phonics: Digraphs
- Build a Sentence
- Original Story Animations - Personal Story
- Careers in CS: Litter Free Communities

Coding in Social Studies

- Our Responsibilities
- Create a Map
- Economic Choices

More Coding Lessons & Projects

- Practicing the Design Process
- Hide and Seek Game
- Grow and Shrink Blocks in Motion
- Introduction to Repeat Loops
- Loops: Predator and Prey
- Forever Loop Dance Party
- Message Events: Simon Says
- Debugging
- Variables: Storing Data with Symbols
- Basic Data and Programming
- Seasonal Project (Summer): Pop the Balloons

Digital Literacy

- Computer Basics: Exploration
- Keeping Information Safe
- Responsible Digital Citizens
- Data Storage and Files Practice
- Guided Research
- Digital Literacy Quiz

Artificial Intelligence

- How AI Helps Us
- Sorting with Charts
- Machine Learning: What is a Blorg?
- Artificial Intelligence Quiz

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Utah 2nd Grade Interdisciplinary Computer Science

Lesson Key

- CS Skill Lesson
- Multi-Day Lesson
- Unplugged
- Quiz

Lessons in each column are presented in descending order of difficulty, but do not need to be completed in any specific order.

Getting Started with Coding

- Welcome to CodeHop!
- Introduction to Programming
- Debugging: Events and Sequences
- Getting Started with Coding Quiz

Coding in Math

- Adding within 20 and Sequences
- Place Value: Ones, Tens, and Hundreds
- Greater Than and Less Than: Three-Digit Numbers
- Math Story Problems: Add and Subtract within 100
- Algebraic Thinking: Finding a Two-Digit Unknown
- Events and Money
- Identify Shapes by Attributes
- 3D Shapes
- Create Your Own Story Problem

Coding in Science

- Changing Landforms
- Changes in the Environment
- Preventing Erosion
- Seed Dispersal
- Designing Solutions from Nature
- Properties of Matter

Coding in ELA

- Storytelling Animations Part 2
- Punctuation: Write a great sentence!
- Original Story Animations - Fiction Story
- Careers in CS: Fashion Retail

Coding in Social Studies

- Communities Modify Their Environment
- Impacts of Computing: Changing World

More Coding Lessons & Projects

- Exploring the Design Process
- Two-Step Dance & Feedback
- Tap-a-Mole Game
- Message Events: Scout Plays in the Forest
- Pages: Scout's Travels
- Loops: Follow the Path
- Debugging: Message Events and Loops
- Design an Adventure Game
- Moving Targets Game
- Variables: Keeping Score
- Seasonal Project (Fall): Gathering Apples Game
- Digital Greeting Card Project
- Seasonal Project (Spring): Create a Chase Game

Digital Literacy

- Computer Basics: Connections
- Password Protectors
- Managing Data Storage and Files
- Exploring Computer Networks
- Data Patterns and Predictions
- Data Explorers
- Choice Research
- Digital Literacy Quiz

Artificial Intelligence

- What Can AI Do?
- Machine Learning: AutoDraw
- Ethical AI: The Good and Bad
- Artificial Intelligence Quiz

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Utah 3rd Grade Interdisciplinary Computer Science

Lesson Key

- CS Skill Lesson
- Multi-Day Lesson
- Unplugged
- Quiz

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Getting Started with Coding

- Welcome to CodeHop!
- Scout's Expedition Part 1
- Scout's Expedition Part 2
- Scout's Expedition Part 3
- Scout's Expedition Part 4
- Getting Started with Coding Quiz

Coding in Science

- Balanced and Unbalanced Forces
- Exploring Adaptations
- Modeling Life Cycles
- Weather and Climate
- Effects of Pollution
- Nutrition Maze

Coding in Social Studies

- Communities Modify Their Environment
- Choose Your Own Adventure: Elements of Culture

Cross-Curricular

- Digital Flashcards
- Digital Venn Diagram
- Cause and Effect

More Coding Lessons & Projects

- Events
- Loops
- Costumes, Backdrops, and Animations
- Drawing Tools
- Sequences: Parallel Programming
- Broadcast Messages: Marco Polo
- Debugging: Events and Loops
- Introduction to Conditionals
- Variables
- Remixing Programs
- Pair Programming: Create a Band
- Functions Dance Project
- Seasonal Project (Summer): Pop The Balloons

Digital Literacy

- Introduction to Computing Systems
- Impacts of Computing: Introduction
- Data Detectives
- Cybersecurity Introduction
- Digital Responsibility: Introduction
- Modeling Network Connections
- What Can I Use Online?
- Digital Literacy Quiz

Coding in Math

- Multiplication and Conditionals
- Animating Sprites with Multiplication
- Multiplication Quiz Game
- Fractions and Variables
- Animating Unit Fractions
- Measuring Lengths
- Classifying Shapes by Category
- Adding with Loops

Coding in ELA

- Word Analysis: Prefixes and Suffixes
- Animating Poetry
- Grammar Quiz Game
- Parts of Speech: Random Sentence Generator
- Careers in CS: Health and Fitness
- Creative Storytelling

Artificial Intelligence

- Introduction to Training AI
- Creating Smart Machines
- Ask AI Better Questions
- Artificial Intelligence Quiz

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Utah 4th Grade Interdisciplinary Computer Science

Lesson Key

- CS Skill Lesson
- Multi-Day Lesson
- Unplugged
- Quiz

Lessons in each column are presented in descending order of difficulty, but do not need to be completed in any specific order.

Optional Review + Getting Started with Coding

- Welcome to CodeHop!
- Events: Dot in Space
- Loops: Catch the Ball
- Scout's Quest Conditionals
- Getting Started with Coding Quiz

Coding in Math

- Naming Numbers Game
- Adding with Loops
- Animating Sprites with Factors
- Division and Conditionals
- Multiplying Fractions by Whole Numbers
- Decimal Multiplication and Conditionals
- Unit Converter
- Classifying Shapes Using Lines and Angles
- Programming and Data Project
- House Design with Area and Perimeter

Coding in Science

- Sensing and Responding to the Environment
- Animal Classification
- Plant and Animal Cells
- Fossils and Past Environments
- Sound Frequency & Amplitude
- Wave Generator
- How We See: Light Reflection
- Exploring Heat
- Classifying Rocks

Coding in ELA

- Nonfiction Animated Recordings
- Screen Time: Protecting Relationships
- Exploring Point of View
- Grammar Quiz Game
- Mad Libs Project
- Careers in CS: Major League Baseball
- Creative Storytelling

Coding in Social Studies

- State Project
- Rights and Responsibilities
- Utah Timeline with the BBC micro:bit

Cross-Curricular

- Digital Flashcards
- Digital Venn Diagram
- Cause and Effect
- Computational Thinking: Design a School

More Coding Lessons & Projects

- Introduction to Design Thinking
- Creating Algorithms
- Debugging: Mazes
- Conditionals: Color Sense
- The Coordinate Plane
- Complex Conditionals: Chase the Star
- Scout's Quest Variables
- Platform Game Design
- Pong Game
- Create a Drawing App
- Digital Greeting Card Project
- Seasonal Project (Spring): Create a Chase Game

Digital Literacy

- Exploring Computing Systems
- Impacts of Computing: Exploration
- Data Investigators
- Networks, Packets, and the Internet
- Give Credit When You Use It
- Digital Literacy Quiz

Artificial Intelligence

- How Machines Learn
- Machine Learning: Training
- AI Chatbots
- Ethical and Responsible Use of Generative AI
- Artificial Intelligence Quiz

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Lesson Key

- CS Skill Lesson
- Multi-Day Lesson
- Unplugged
- Quiz

Lessons in each column are presented in descending order of difficulty, but do not need to be completed in any specific order.

Utah 5th Grade Interdisciplinary Computer Science

Getting Started with Coding

- Welcome to CodeHop!
- Introduction to Programming
- Creating Algorithms
- Creating Turtle Graphics
- Conditionals: Underwater Adventure
- Getting Started with Coding Quiz

Coding in Math

- Multi-digit Multiplication and Conditionals
- Animating Sprites with Division
- Decimal Division and Conditionals
- Add and Subtract Fractions
- Multiplying and Dividing Fractions
- Area of a Rectangle with Tiles
- Classifying Quadrilaterals in a Hierarchy

Coding in Science

- Constructive and Destructive Processes
- Earth Systems
- Exploring Ecosystems
- Cycle of Matter
- Exploring the Water Cycle
- Day and Night
- Physical Changes

Coding in ELA

- Punctuation Game
- Punctuate a Title
- Connecting Ideas in Informational Texts
- Screen Time: Academics and Evidence
- Careers in CS: Mobile Apps
- Creative Storytelling

Coding in Social Studies

- The US Government
- Revolutionary War Timeline
- Interactive Map of the 13 Colonies

Cross-Curricular

- Digital Flashcards
- Digital Venn Diagram
- Cause and Effect

More Coding Lessons & Projects

- Snake Game
- Animation Loop Project
- Debugging: Make a Pizza
- Variables in Dance
- Operators: Coin Flip
- Game Mechanics with Comparison Operators
- Contitionals: Mazes
- Game Effects
- Designing Solutions for Accessibility
- Plan a Quest
- Pinball Game Project
- Seasonal Project (Fall): Gathering Apples Game
- Compare and Refine Algorithms
- Giving Credit Through Attributions

Digital Literacy

- Practicing with Computing Systems
- Impacts of Computing: Innovation
- File Management and Data Exploration
- Data Analysis
- Networks and Protocols
- Use and Search the Right Way
- Digital Literacy Quiz

Artificial Intelligence

- Humans Vs. Machines
- Machine Learning: Analyzing
- AI Products: Ethical and Responsible Choices
- Design Thinking: AI Chatbots
- Artificial Intelligence Quiz

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Utah 6th Grade Interdisciplinary Computer Science

Lesson Key

- CS Skill Lesson
- Multi-Day Lesson
- Unplugged
- Quiz

Lessons in each column are presented in descending order of difficulty, but do not need to be completed in any specific order.

Optional Review

- Welcome to CodeHop!
- Introduction to Computer Science
- Creating Algorithms
- Conditionals: Underwater Adventure
- Debugging: Make a Pizza
- Coding Review Quiz

Coding in Math

- Rates and Unit Rates
- Evaluate Algebraic Equations
- Positive and Negative Numbers

Coding in Science

- Day and Night
- Scale of Planets in the Solar System
- Atoms and Molecules
- Balanced Ecosystems
- Physical Changes

Coding in ELA

- Connecting Ideas in Informational Texts
- Multimedia Book Report
- Creative Storytelling

Coding in Social Studies

- Geographic Effects on Early Civilizations

Cross-Curricular

- Digital Flashcards
- Digital Venn Diagram
- Cause and Effect

More Coding Lessons & Projects

- Clones in Games
- Functions: About Me
- Functions: Paint by Numbers
- Flower Garden Functions Project
- Classes and Objects in Games
- Digital Pet Project
- Game Design Project
- Design an App

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