Scratch Game Studio

Ages 10-12 | Digital Explorers

Plan, build, and test a small original game in Scratch.

How to use this guide

Read each section, complete its four lab steps, then answer the questions in the online course. The online progress bar advances only after four correct answers.

Section 1: Sequences

LEARNING GOAL: Sequences. Your finished work should demonstrate: A character that follows your planned sequence.

EXPLAIN THE CONCEPT: A sequence tells a character what to do in order. In Scratch, connected blocks run from top to bottom. Think about where you might use this skill in a real or imaginary project. Describe the problem it helps you solve and how you would recognize a successful result.

ORIGINAL PROJECT LAB: 1. Open a new Scratch project with a character. 2. Add a green-flag event and two movement blocks. 3. Run the sequence and observe the path. 4. Change the order of the blocks and compare the result. Finished result: A character that follows your planned sequence.

FOLLOW THE RUNNING ORDER: Connected Scratch blocks describe a sequence. An event such as clicking the green flag starts the connected script. Movement depends on the sprite’s current position and direction, so reset those conditions before comparing runs. A program that sometimes appears correct may simply have started in a different place.

TRACE TWO SEQUENCES: Start at x = 0, y = 0, facing right. Sequence A moves 40 steps and then turns clockwise 90 degrees: it ends at x = 40, y = 0, facing down. Reset the start. Sequence B turns first and then moves 40: it ends at x = 0, y = -40. The same blocks in another order produce a different path.

PREDICT BEFORE RUNNING: Draw both paths on paper. Build one sequence, run it, and compare the observed endpoint with your prediction. If the result differs, check the starting direction and whether the blocks are connected to the event. Change one condition and rerun from the same start.

CHECK YOUR REASONING: Why is resetting important? Without the same starting position and direction, you cannot tell whether the changed order caused the new endpoint.

GO DEEPER: Identify an assumption, test a safe alternative, and explain the trade-off. Keep a short before-and-after record that someone else could follow.
SAFETY CHECK: Use unique passphrases, recognize scams, protect privacy, behave respectfully, and pause before sharing. Use pretend data, never real passwords or private information. Stop and ask a trusted adult if anything seems unsafe.
REVIEW QUESTIONS: What is the main idea? Why does the first step matter? How would you detect a mistake? What evidence proves the result? What would you improve? Answer in your own words before taking the quiz.
PORTFOLIO REFLECTION: Save a drawing, sanitized screenshot, or short note describing the goal, your approach, your evidence, and one lesson learned. Expected result: A character that follows your planned sequence.

Investigate with pictures and choices

A sprite must move then say hello.
Which script follows that plan?
1. Move, then say hello
2. Say hello, then move
3. Only say hello

Worked reasoning

Answer: Move, then say hello. Execution order affects when the action happens.

Try a changed example

Swap the blocks and describe the changed observation.

Picture and meaning matches

Sequence: Runs actions in order
Loop: Repeats instructions
Debug: Tests a specific cause

Ways to respond

Choose, point, draw, demonstrate, type, speak or use your usual communication tool.
A helper can operate the controls while you choose.

Counting support if useful

Use zero to ten counters or dots. Touch each once. The last count names the quantity. Rearrange the same set and check whether anything was added or removed.

Choose this foundation practice only when it fits the learner goal.

My notes: _____

Hands-on lab

1. Open a new Scratch project with a character.
2. Add a green-flag event and two movement blocks.
3. Run the sequence and observe the path.
4. Change the order of the blocks and compare the result.

Finished result: A character that follows your planned sequence.

Check your understanding

1. Which idea best describes Sequences?

A. A sequence tells a character what to do in order.

B. Debugging means finding why a program acts differently from your plan, then changing one thing and testing again.

C. It has no purpose in this project.

D. A loop repeats actions without copying the same blocks many times.

2. What is the first step in this lab?

A. Run the sequence and observe the path.

B. Open a new Scratch project with a character.

C. Change the order of the blocks and compare the result.

D. Add a green-flag event and two movement blocks.

3. What should you do after step two?

A. Change the order of the blocks and compare the result.

B. Open a new Scratch project with a character.

C. Run the sequence and observe the path.

D. Add a green-flag event and two movement blocks.

4. Which result shows that your lab is finished?

A. A copied answer without checking it

B. A skipped lab

C. A blank page with no work

D. A character that follows your planned sequence.

Answer review

1. A. A sequence tells a character what to do in order.
2. B. Start with: Open a new Scratch project with a character.
3. C. Step three is: Run the sequence and observe the path.
4. D. The goal is: A character that follows your planned sequence.

Section 2: Loops

LEARNING GOAL: Loops. Your finished work should demonstrate: A repeatable movement pattern.

EXPLAIN THE CONCEPT: A loop repeats actions without copying the same blocks many times. Choose a repeat count that fits the game. Think about where you might use this skill in a real or imaginary project. Describe the problem it helps you solve and how you would recognize a successful result.

ORIGINAL PROJECT LAB: 1. Add a repeat block around movement blocks. 2. Set the count to four. 3. Run the project and note how far the character travels. 4. Change the count and test again. Finished result: A repeatable movement pattern.

UNDERSTAND THE LOOP BODY: A repeat block runs the blocks inside it the selected number of times. Blocks outside it run according to their own place in the sequence. A loop reduces copying, but you still need to decide exactly what repeats. Include a turn only if every repetition should turn the sprite.

TRACE A SQUARE: Begin at x = 0, y = 0, facing right. Repeat four times: move 40 steps, then turn clockwise 90 degrees. The endpoints are (40,0), (40,-40), (0,-40), and (0,0). Four equal sides and four right turns return the sprite to its starting position and direction.

COMPARE ANOTHER BODY: Now repeat only move 40 steps four times, with the turn after the loop. The sprite travels 160 steps in one direction before turning. It does not draw a square. Restore the intended body and use a smaller distance if needed to keep the path visible.

CHECK YOUR REASONING: Would repeating three square sides return to the start? No. Trace the three endpoints to show where the fourth side is missing instead of guessing from the repeat number.

GO DEEPER: Identify an assumption, test a safe alternative, and explain the trade-off. Keep a short before-and-after record that someone else could follow.

SAFETY CHECK: Use unique passphrases, recognize scams, protect privacy, behave respectfully, and pause before sharing. Use pretend data, never real passwords or private information. Stop and ask a trusted adult if anything seems unsafe.

REVIEW QUESTIONS: What is the main idea? Why does the first step matter? How would you detect a mistake? What evidence proves the result? What would you improve? Answer in your own words before taking the quiz.

PORTFOLIO REFLECTION: Save a drawing, sanitized screenshot, or short note describing the goal, your approach, your evidence, and one lesson learned. Expected result: A repeatable movement pattern.

Investigate with pictures and choices

A loop moves 10 steps three times.

How far does it move in the same direction?

1. 13 steps
2. 10 steps
3. 30 steps

Worked reasoning

Answer: 30 steps. Three repetitions of 10 give 10 + 10 + 10 = 30.

Try a changed example

Change repetitions to four and predict before running.

Picture and meaning matches

Sequence: Runs actions in order

Loop: Repeats instructions

Debug: Tests a specific cause

Ways to respond

Choose, point, draw, demonstrate, type, speak or use your usual communication tool.

A helper can operate the controls while you choose.

Counting support if useful

Use zero to ten counters or dots. Touch each once. The last count names the quantity. Rearrange the same set and check whether anything was added or removed.

Choose this foundation practice only when it fits the learner goal.

My notes: _____

Hands-on lab

1. Add a repeat block around movement blocks.
2. Set the count to four.
3. Run the project and note how far the character travels.
4. Change the count and test again.

Finished result: A repeatable movement pattern.

Check your understanding

1. Which idea best describes Loops?

A. A loop repeats actions without copying the same blocks many times.

B. Debugging means finding why a program acts differently from your plan, then changing one thing and testing again.

C. It has no purpose in this project.

D. A sequence tells a character what to do in order.

2. What is the first step in this lab?

A. Run the project and note how far the character travels.

B. Add a repeat block around movement blocks.

C. Change the count and test again.

D. Set the count to four.

3. What should you do after step two?

A. Change the count and test again.

B. Add a repeat block around movement blocks.

C. Run the project and note how far the character travels.

D. Set the count to four.

4. Which result shows that your lab is finished?

A. A copied answer without checking it

B. A skipped lab

C. A blank page with no work

D. A repeatable movement pattern.

Answer review

1. A. A loop repeats actions without copying the same blocks many times.

2. B. Start with: Add a repeat block around movement blocks.

3. C. Step three is: Run the project and note how far the character travels.

4. D. The goal is: A repeatable movement pattern.

Section 3: Debugging

LEARNING GOAL: Debugging. Your finished work should demonstrate: A tested game and one documented fix.

EXPLAIN THE CONCEPT: Debugging means finding why a program acts differently from your plan, then changing one thing and testing again. Think about where you might use this skill in a real or imaginary project. Describe the problem it helps you solve and how you would recognize a successful result.

ORIGINAL PROJECT LAB: 1. Write down what the game should do. 2. Run it and spot one difference. 3. Change only one block or value. 4. Run it again and record whether the change helped. Finished result: A tested game and one documented fix.
A BUG IS A DIFFERENCE TO INVESTIGATE: Debugging begins with an expected result and an observed result. It is easier to investigate one short script than several changes at once. A test should state the start, the action, and the expected output. Keep a note of the original result so you can tell whether your change helped.
WORKED WRONG TURN: A square script repeats move 40 and turn 90, but the repeat count is three. Expect a closed square; observe an open path ending at (0,-40) from our standard start. Predict that changing only the repeat count to four closes the path. Reset, change the count, and test. The last side returns to (0,0).
TEST THE EDGE OF A RULE: For a pretend score rule, compare score > 5 with score >= 5 on paper. At score 5, only the second includes the boundary. At scores 4 and 6, both rules agree. Testing the exact boundary reveals a mistake that easy cases can hide.
WRITE A BUG NOTE: Record expected result, observed result, one change, and retest result. A useful note explains the cause; changed some blocks is not enough for someone else to reproduce your fix.
GO DEEPER: Identify an assumption, test a safe alternative, and explain the trade-off. Keep a short before-and-after record that someone else could follow.
SAFETY CHECK: Use unique passphrases, recognize scams, protect privacy, behave respectfully, and pause before sharing. Use pretend data, never real passwords or private information. Stop and ask a trusted adult if anything seems unsafe.
REVIEW QUESTIONS: What is the main idea? Why does the first step matter? How would you detect a mistake? What evidence proves the result? What would you improve? Answer in your own words before taking the quiz.
PORTFOLIO REFLECTION: Save a drawing, sanitized screenshot, or short note describing the goal, your approach, your evidence, and one lesson learned. Expected result: A tested game and one documented fix.

Investigate with pictures and choices

A sprite starts in a different position on the second test.

What makes tests comparable?

1. Ignore the starting position
2. Reset the starting position

3. Change all blocks at once

Worked reasoning

Answer: Reset the starting position. A consistent initial state lets you compare behavior meaningfully.

Try a changed example

Record the start and end coordinates for two runs.

Picture and meaning matches

Sequence: Runs actions in order

Loop: Repeats instructions

Debug: Tests a specific cause

Ways to respond

Choose, point, draw, demonstrate, type, speak or use your usual communication tool.

A helper can operate the controls while you choose.

Counting support if useful

Use zero to ten counters or dots. Touch each once. The last count names the quantity. Rearrange the same set and check whether anything was added or removed.

Choose this foundation practice only when it fits the learner goal.

My notes: _____

Hands-on lab

1. Write down what the game should do.
2. Run it and spot one difference.
3. Change only one block or value.
4. Run it again and record whether the change helped.

Finished result: A tested game and one documented fix.

Check your understanding

1. Which idea best describes Debugging?

A. Debugging means finding why a program acts differently from your plan, then changing one thing and testing again.

B. A loop repeats actions without copying the same blocks many times.

C. It has no purpose in this project.

D. A sequence tells a character what to do in order.

2. What is the first step in this lab?

A. Change only one block or value.

B. Write down what the game should do.

C. Run it again and record whether the change helped.

D. Run it and spot one difference.

3. What should you do after step two?

A. Run it again and record whether the change helped.

B. Write down what the game should do.

C. Change only one block or value.

D. Run it and spot one difference.

4. Which result shows that your lab is finished?

A. A copied answer without checking it

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D. A tested game and one documented fix.

Answer review

1. A. Debugging means finding why a program acts differently from your plan, then changing one thing and testing again.

2. B. Start with: Write down what the game should do.

3. C. Step three is: Change only one block or value.

4. D. The goal is: A tested game and one documented fix.

Section 4: Guided Project & Worked Examples

COURSE INVESTIGATION: A collision should count once

YOUR PRACTICE INPUT: On paper, a Scratch-like game checks every frame whether a character touches a coin. It adds one point each time the condition is true.

WHY IT WORKS: If contact lasts three frames, the naive rule adds three points for one coin. The problem is repeated detection, not arithmetic.

PLAN BEFORE YOU ACT: Draw or write the starting state, the question you need to answer, and the evidence you expect to see. A paper trace is acceptable; label it as a prediction unless you actually run a test.

WORK THE CASE: Trace three touching frames, then one non-touching frame. Compare scores before and after the state change.

COMPARE WITH THE EXPECTED RESULT: The repaired game awards one point for the coin and can award another point for a different coin or a new round.

EXPLAIN YOUR REASONING: Show the connection between the supplied input, each

decision, and your result. If a number, label, or observation differs, return to the first differing step rather than changing several things together.

KEEP YOUR EVIDENCE: Save the initial plan, a drawing or sanitized output, and one explanation of what the result does and does not prove. Use pointing, speech, drawing, typing, or your usual communication method.

LEARNING GOAL: Guided Project & Worked Examples. Your finished work should demonstrate: A completed guided project with documented evidence: Game plan, Playable project, Test notes, Before/after debugging evidence.

EXPLAIN THE CONCEPT: Review the course concepts through two applied examples. Trace a sprite sequence and predict its final position before running it. Replace repeated movement blocks with a loop and compare the programs. Guided project: Build a small original game with goal, controls, scoring, feedback, and a win/lose state. Work with synthetic or fictional information and ask an adult for help when appropriate. Think about where you might use this skill in a real or imaginary project. Describe the problem it helps you solve and how you would recognize a successful result.

ORIGINAL PROJECT LAB: 1. Read both worked examples and explain the reasoning. 2. Build a small original game with goal, controls, scoring, feedback, and a win/lose state. 3. Record the steps you completed and the result you observed. 4. Compare your result to the goal and correct one issue. Finished result: A completed guided project with documented evidence: Game plan, Playable project, Test notes, Before/after debugging evidence.

BUILD A PREDICTABLE MINI GAME: Design a sprite route with a green-flag reset, a repeated movement pattern, and a clear finish. First build the route without extra sounds or scenery. Write the starting coordinates and direction beside the project plan. Add one feature only after the movement test works.

WORKED BUILD AND REPAIR: Use the four-side square from Loops as a movement challenge. Ask a helper to predict the final point. Introduce a repeat count of three in a practice copy. Trace the open route, restore four, and test again from (0,0). Keep the working project separate from the deliberate bug copy.

COMPARE A SECOND DESIGN: Change each side to 30 steps while keeping four turns of 90 degrees. Predict a smaller square that still returns to its start. Run the test and explain which number changes the size and which numbers control closure.

SHOW THE CAUSE: Present the script, a path drawing, and a bug note. Explain why the

loop body must contain both movement and turning for this design.
GO DEEPER: Identify an assumption, test a safe alternative, and explain the trade-off. Keep a short before-and-after record that someone else could follow.
SAFETY CHECK: Use unique passphrases, recognize scams, protect privacy, behave respectfully, and pause before sharing. Use pretend data, never real passwords or private information. Stop and ask a trusted adult if anything seems unsafe.
REVIEW QUESTIONS: What is the main idea? Why does the first step matter? How would you detect a mistake? What evidence proves the result? What would you improve? Answer in your own words before taking the quiz.
PORTFOLIO REFLECTION: Save a drawing, sanitized screenshot, or short note describing the goal, your approach, your evidence, and one lesson learned. Expected result: A completed guided project with documented evidence: Game plan, Playable project, Test notes, Before/after debugging evidence.

Investigate with pictures and choices

Your game ends immediately when started.
What should you inspect first?
1. The start state and end-condition logic
2. Only the character color
3. Whether to add random blocks

Worked reasoning

Answer: The start state and end-condition logic. Trace the condition from an explicit start to locate the unexpected branch.

Try a changed example

Change one condition and record whether the bug is fixed.

Picture and meaning matches

Sequence: Runs actions in order
Loop: Repeats instructions
Debug: Tests a specific cause

Ways to respond

Choose, point, draw, demonstrate, type, speak or use your usual communication tool.
A helper can operate the controls while you choose.

Counting support if useful

Use zero to ten counters or dots. Touch each once. The last count names the quantity. Rearrange the same set and check whether anything was added or removed. Choose this foundation practice only when it fits the learner goal.

My notes: _____

Hands-on lab

1. Read both worked examples and explain the reasoning.
2. Build a small original game with goal, controls, scoring, feedback, and a win/lose state.
3. Record the steps you completed and the result you observed.
4. Compare your result to the goal and correct one issue.

Finished result: A completed guided project with documented evidence: Game plan, Playable project, Test notes, Before/after debugging evidence.

Check your understanding

1. Which idea best describes Guided Project & Worked Examples?

A. A sequence tells a character what to do in order.

B. Review the course concepts through two applied examples.

C. A loop repeats actions without copying the same blocks many times.

D. It has no purpose in this project.

2. What is the first step in this lab?

A. Build a small original game with goal, controls, scoring, feedback, and a win/lose state.

B. Record the steps you completed and the result you observed.

C. Read both worked examples and explain the reasoning.

D. Compare your result to the goal and correct one issue.

3. What should you do after step two?

A. Build a small original game with goal, controls, scoring, feedback, and a win/lose state.

B. Compare your result to the goal and correct one issue.

C. Read both worked examples and explain the reasoning.

D. Record the steps you completed and the result you observed.

4. Which result shows that your lab is finished?

A. A completed guided project with documented evidence: Game plan, Playable project, Test notes, Before/after debugging evidence.

B. A copied answer without checking it

C. A skipped lab

D. A blank page with no work

Answer review

1. B. Review the course concepts through two applied examples.

2. C. Start with: Read both worked examples and explain the reasoning.

3. D. Step three is: Record the steps you completed and the result you observed.

4. A. The goal is: A completed guided project with documented evidence: Game plan, Playable project, Test notes, Before/after debugging evidence.

Section 5: Independent Challenge & Mastery

INDEPENDENT TRANSFER CASE: A collision should count once

KEEP THE ORIGINAL BASELINE: On paper, a Scratch-like game checks every frame whether a character touches a coin. It adds one point each time the condition is true.

CHANGE ONE CONDITION: Add a collected state or hide the coin after the first valid contact. Reset this state only when a new round starts.

YOUR TASK: Trace three touching frames, then one non-touching frame. Compare scores before and after the state change.

PREDICT, THEN CHECK: State which part of your original reasoning should remain true and which part must be recalculated or retested. Keep the original and changed results side by side.

REVIEW CRITERIA: The repaired game awards one point for the coin and can award another point for a different coin or a new round.

MENTOR DISCUSSION: Explain why the changed condition matters. Identify a tempting wrong conclusion, show the observation that would challenge it, and choose one next test. A statement of uncertainty is better than inventing a result.

PORTFOLIO NOTE: Keep your baseline, changed input, prediction, observed or paper-traced result, explanation, and one improvement. These practice prompts do not replace the course’s existing quiz or final assessment.

LEARNING GOAL: Independent Challenge & Mastery. Your finished work should demonstrate: An independent demonstration with evidence: Game plan, Playable project, Test notes, Before/after debugging evidence.

EXPLAIN THE CONCEPT: Apply what you learned without copying the guided solution. Independent challenge: Give the game to another learner, record one usability bug and one logic bug, then fix both. Safety and responsibility: Share only through parent/teacher-approved settings; do not expose real name, school, location, or

contact information. Reflect on your work: What did you build or discover? What did you test or change after feedback? What safe or responsible choice did you make? Think about where you might use this skill in a real or imaginary project. Describe the problem it helps you solve and how you would recognize a successful result.
ORIGINAL PROJECT LAB: 1. Explain the challenge and make a short plan. 2. Give the game to another learner, record one usability bug and one logic bug, then fix both. 3. Test the result and record evidence of your work. 4. Review the safety scenario and describe one improvement. Finished result: An independent demonstration with evidence: Game plan, Playable project, Test notes, Before/after debugging evidence.
CREATE AN ORIGINAL ROUTE: Plan a rectangle instead of copying the square: repeat twice, move 60, turn 90, move 30, turn 90. Trace it from (0,0) facing right. Predict endpoints (60,0), (60,-30), (0,-30), and (0,0). Use a practice project and keep the path inside the visible stage.
PROVE IT WITH TESTS: Test the original rectangle, then change the repeat count to one and predict the unfinished route. Restore two and retest. Explain why two repetitions produce four sides: each repetition contains two movement blocks. A repeat count is not always the same as the number of sides.
EXPLAIN YOUR DESIGN: Keep the route plan, your working script, and one expected-versus-observed record. A helper should be able to restart and reproduce the result. Use a fictional project title and ask an adult before publishing any project online.
CHECK YOUR REASONING: If the sprite begins facing up, will the same endpoint trace describe the route? No. The shape rotates relative to the start; reset direction before comparing with the written trace.
GO DEEPER: Identify an assumption, test a safe alternative, and explain the trade-off. Keep a short before-and-after record that someone else could follow.
SAFETY CHECK: Use unique passphrases, recognize scams, protect privacy, behave respectfully, and pause before sharing. Use pretend data, never real passwords or private information. Stop and ask a trusted adult if anything seems unsafe.
REVIEW QUESTIONS: What is the main idea? Why does the first step matter? How would you detect a mistake? What evidence proves the result? What would you improve? Answer in your own words before taking the quiz.
PORTFOLIO REFLECTION: Save a drawing, sanitized screenshot, or short note describing

the goal, your approach, your evidence, and one lesson learned. Expected result: An independent demonstration with evidence: Game plan, Playable project, Test notes, Before/after debugging evidence.

Investigate with pictures and choices

A new player cannot use the drag control.

What helps them play?

1. Require the same precise drag
2. Make the target smaller
3. Offer buttons or a tap alternative

Worked reasoning

Answer: Offer buttons or a tap alternative. Multiple input methods can preserve the same game goal.

Try a changed example

Test the game with keyboard controls and with touch.

Picture and meaning matches

Sequence: Runs actions in order

Loop: Repeats instructions

Debug: Tests a specific cause

Ways to respond

Choose, point, draw, demonstrate, type, speak or use your usual communication tool. A helper can operate the controls while you choose.

Counting support if useful

Use zero to ten counters or dots. Touch each once. The last count names the quantity. Rearrange the same set and check whether anything was added or removed. Choose this foundation practice only when it fits the learner goal.

My notes: _____

Hands-on lab

1. Explain the challenge and make a short plan.
2. Give the game to another learner, record one usability bug and one logic bug, then fix both.

3. Test the result and record evidence of your work.

4. Review the safety scenario and describe one improvement.

Finished result: An independent demonstration with evidence: Game plan, Playable project, Test notes, Before/after debugging evidence.

Check your understanding

1. Which idea best describes Independent Challenge & Mastery?

A. It has no purpose in this project.

B. A sequence tells a character what to do in order.

C. Apply what you learned without copying the guided solution.

D. A loop repeats actions without copying the same blocks many times.

2. What is the first step in this lab?

A. Review the safety scenario and describe one improvement.

B. Give the game to another learner, record one usability bug and one logic bug, then fix both.

C. Test the result and record evidence of your work.

D. Explain the challenge and make a short plan.

3. What should you do after step two?

A. Test the result and record evidence of your work.

B. Give the game to another learner, record one usability bug and one logic bug, then fix both.

C. Review the safety scenario and describe one improvement.

D. Explain the challenge and make a short plan.

4. Which result shows that your lab is finished?

A. A blank page with no work

B. An independent demonstration with evidence: Game plan, Playable project, Test notes, Before/after debugging evidence.

C. A copied answer without checking it

D. A skipped lab

Answer review

1. C. Apply what you learned without copying the guided solution.

2. D. Start with: Explain the challenge and make a short plan.

3. A. Step three is: Test the result and record evidence of your work.

4. B. The goal is: An independent demonstration with evidence: Game plan, Playable project, Test notes, Before/after debugging evidence.

Mastery & safe-use plan

Ages 10-12

Digital safety: Use unique passphrases, recognize scams, protect privacy, behave respectfully, and pause before sharing.
AI literacy: Check AI claims with reliable sources, recognize synthetic content, protect private data, and disclose AI help.
Challenge: Solve a guided scenario without using real credentials or private information.
Portfolio: Finish an original game, website, safety plan, media story, or fact-check artifact.
Mastery check: Demonstrate the project, explain a decision, and correct one issue found during review.

Project worksheet

My project: Create and share an original game
Who will use or review it? _____
My plan: _____
Checkpoint 1: A character that follows your planned sequence.
Checkpoint 2: A repeatable movement pattern.
Checkpoint 3: A tested game and one documented fix.
Checkpoint 4: A completed guided project with documented evidence: Game plan, Playable project, Test notes, Before/after debugging evidence.
Checkpoint 5: An independent demonstration with evidence: Game plan, Playable project, Test notes, Before/after debugging evidence.
One thing I tested: _____
One thing I changed after testing: _____
What I learned: _____
Trusted adult or mentor feedback: _____

Family review

Show your finished work to a trusted adult. Explain one thing you learned and one thing you would improve.

Beat IT Kids | For learning at home. Do not put real passwords or private details in practice projects.