Data & AI Lab

Ages 13-15 | Tech Builders

Explore a small dataset and discuss responsible AI.

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: Data

LEARNING GOAL: Data. Your finished work should demonstrate: A clean, labeled data table.

EXPLAIN THE CONCEPT: A dataset is a collection of observations. Know what each column means before making a claim. 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. Make a table of five days and their weather. 2. Label the date and temperature columns. 3. Check each entry for missing or unusual values. 4. Write one question your table could answer. Finished result: A clean, labeled data table.

EXPLAIN THE MECHANISM: A dataset contains observations with defined columns and units. Missing, duplicated, or inconsistent values can change a conclusion. Before calculating, describe what one row represents and how the data was obtained. Use fictional data for this activity.

WORKED CASE: A table lists pretend reading times in minutes: 10, 15, blank, 20. Blank means unknown, not zero. The mean of the three known values is 15 minutes. Replacing the blank with zero would give 11.25 and answer a different, unjustified question.

TEST AND JUSTIFY: Write a data dictionary and mark missing values explicitly. Check for repeated rows and mixed units such as seconds beside minutes. Record each cleaning choice so another reader knows what changed and which observations were excluded.

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: Recognize phishing and social engineering, secure accounts, understand

privacy settings, and perform cyber labs only with authorization. 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 clean, labeled data table.

Investigate with pictures and choices

A table mixes missing values with zero.
What should you do before averaging?
1. Define what missing and zero mean
2. Treat every blank as zero silently
3. Delete all values

Worked reasoning

Answer: Define what missing and zero mean. Missing data and a measured zero are different observations.

Try a changed example

Compare averages with a missing entry and a genuine zero.

Picture and meaning matches

Data: Records observations
Model: Uses a learned rule
Responsible AI: Checks impacts and limits

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. Make a table of five days and their weather.
2. Label the date and temperature columns.
3. Check each entry for missing or unusual values.
4. Write one question your table could answer.

Finished result: A clean, labeled data table.

Check your understanding

1. Which idea best describes Data?

A. A model uses patterns in examples to make a prediction.

B. A dataset is a collection of observations.

C. Data can leave people out or contain private details.

D. It has no purpose in this project.

2. What is the first step in this lab?

A. Label the date and temperature columns.

B. Check each entry for missing or unusual values.

C. Make a table of five days and their weather.

D. Write one question your table could answer.

3. What should you do after step two?

A. Label the date and temperature columns.

B. Write one question your table could answer.

C. Make a table of five days and their weather.

D. Check each entry for missing or unusual values.

4. Which result shows that your lab is finished?

A. A clean, labeled data table.

B. A copied answer without checking it

C. A skipped lab

D. A blank page with no work

Answer review

1. B. A dataset is a collection of observations.
2. C. Start with: Make a table of five days and their weather.
3. D. Step three is: Check each entry for missing or unusual values.
4. A. The goal is: A clean, labeled data table.

Section 2: Models

LEARNING GOAL: Models. Your finished work should demonstrate: A prediction with a

stated limit.
EXPLAIN THE CONCEPT: A model uses patterns in examples to make a prediction. A pattern is not a guarantee about the future. 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. Look at your five weather rows. 2. Guess whether the next day may be warmer or cooler. 3. Write the reason for your guess. 4. Compare with a new day and note the uncertainty. Finished result: A prediction with a stated limit.
EXPLAIN THE MECHANISM: A model uses patterns from examples to predict an outcome. Evaluate it on examples not used to build the rule. Repeating training examples can make performance look better than it is. A simple baseline helps you judge whether the model adds value.
WORKED CASE: For fictional shape cards, a rule predicts triangle when the side count is three. Keep some cards for testing, including rotated triangles and a circle. Evaluate the same held-out cards for a baseline that always predicts not triangle and for the side-count rule.
TEST AND JUSTIFY: Record correct and incorrect predictions, including which kind of mistake occurred. Do not describe a paper rule as a trained real-world AI system. Explain why success on a tiny chosen set does not establish reliability on every new image.
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: Recognize phishing and social engineering, secure accounts, understand privacy settings, and perform cyber labs only with authorization. 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 prediction with a stated limit.

Investigate with pictures and choices

A model is tested on its training examples only.

What is missing?

1. A longer model name
2. More decorative charts
3. Separate evaluation examples

Worked reasoning

Answer: Separate evaluation examples. Testing on familiar examples can overstate generalization.

Try a changed example

Hold out examples before choosing a rule.

Picture and meaning matches

Data: Records observations

Model: Uses a learned rule

Responsible AI: Checks impacts and limits

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. Look at your five weather rows.
2. Guess whether the next day may be warmer or cooler.
3. Write the reason for your guess.
4. Compare with a new day and note the uncertainty.

Finished result: A prediction with a stated limit.

Check your understanding

1. Which idea best describes Models?

A. Data can leave people out or contain private details.

B. It has no purpose in this project.

C. A dataset is a collection of observations.

D. A model uses patterns in examples to make a prediction.

2. What is the first step in this lab?

A. Look at your five weather rows.

B. Compare with a new day and note the uncertainty.

C. Guess whether the next day may be warmer or cooler.

D. Write the reason for your guess.

3. What should you do after step two?

A. Look at your five weather rows.

B. Write the reason for your guess.

C. Guess whether the next day may be warmer or cooler.

D. Compare with a new day and note the uncertainty.

4. Which result shows that your lab is finished?

A. A skipped lab

B. A blank page with no work

C. A prediction with a stated limit.

D. A copied answer without checking it

Answer review

1. D. A model uses patterns in examples to make a prediction.

2. A. Start with: Look at your five weather rows.

3. B. Step three is: Write the reason for your guess.

4. C. The goal is: A prediction with a stated limit.

Section 3: Responsible AI

LEARNING GOAL: Responsible AI. Your finished work should demonstrate: A short responsible-use checklist.

EXPLAIN THE CONCEPT: Data can leave people out or contain private details. Ask who is represented and how an error might affect them. 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. Review a pretend dataset with a missing group. 2. Identify what the model might misunderstand. 3. Remove any private information from your example. 4. Write one question to ask before using its result. Finished result: A short responsible-use checklist.

EXPLAIN THE MECHANISM: Responsible evaluation asks who is represented, whose

information is used, and what errors could cause. A high overall score can hide poor results for a small group. Do not use sensitive personal data to make this lesson feel realistic.

WORKED CASE: A fictional picture sorter succeeds on nine large, clear drawings and fails on one faint drawing. Overall accuracy is 90%, but its result on the faint-drawing group is zero of one. That tiny sample is a warning to investigate, not enough to estimate a stable error rate.

TEST AND JUSTIFY: Describe the missing examples and a privacy-safe plan for testing more varied drawings. State where human review is required. Do not turn a classroom model into a tool for judging a real person’s abilities, eligibility, or worth.

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: Recognize phishing and social engineering, secure accounts, understand privacy settings, and perform cyber labs only with authorization. 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 short responsible-use checklist.

Investigate with pictures and choices

An AI summary includes a private classmate detail.

What should the project do?

1. Hide it only in the title
2. Remove unnecessary private data
3. Publish because the model wrote it

Worked reasoning

Answer: Remove unnecessary private data. Responsible data use includes privacy and review of generated outputs.

Try a changed example

Replace personal records with synthetic data.

Picture and meaning matches

Data: Records observations

Model: Uses a learned rule

Responsible AI: Checks impacts and limits

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. Review a pretend dataset with a missing group.
2. Identify what the model might misunderstand.
3. Remove any private information from your example.
4. Write one question to ask before using its result.

Finished result: A short responsible-use checklist.

Check your understanding

1. Which idea best describes Responsible AI?

A. A model uses patterns in examples to make a prediction.

B. It has no purpose in this project.

C. A dataset is a collection of observations.

D. Data can leave people out or contain private details.

2. What is the first step in this lab?

A. Review a pretend dataset with a missing group.

B. Write one question to ask before using its result.

C. Identify what the model might misunderstand.

D. Remove any private information from your example.

3. What should you do after step two?

A. Review a pretend dataset with a missing group.

B. Remove any private information from your example.

C. Identify what the model might misunderstand.

D. Write one question to ask before using its result.

4. Which result shows that your lab is finished?

A. A skipped lab

B. A blank page with no work

C. A short responsible-use checklist.

D. A copied answer without checking it

Answer review

1. D. Data can leave people out or contain private details.

2. A. Start with: Review a pretend dataset with a missing group.

3. B. Step three is: Remove any private information from your example.

4. C. The goal is: A short responsible-use checklist.

Section 4: Guided Project & Worked Examples

COURSE INVESTIGATION: Averages depend on missing-data decisions

YOUR PRACTICE INPUT: A synthetic table lists practice times of 10, 20, blank, and 30 minutes. The blank means unreported, not zero.

WHY IT WORKS: The mean of reported times is 60/3 = 20 minutes. Filling the blank with zero changes the mean to 15 and changes the question.

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: Build a data-quality table, explain the blank and duplicate policies, then calculate the chosen summary by hand.

COMPARE WITH THE EXPECTED RESULT: A defensible result states which records are included, why, and how many observations remain.

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: Clean dataset, Chart/table, Analysis paragraph, Responsible-AI risk note.

EXPLAIN THE CONCEPT: Review the course concepts through two applied examples. Clean a small table by identifying missing, duplicate, inconsistent, and outlier values. Compare correlation/pattern language with an unsupported causal claim. Guided project: Analyze a small non-sensitive dataset: define a question, clean data, calculate summaries, visualize a pattern, and state limitations. 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. Analyze a small non-sensitive dataset: define a question, clean data, calculate summaries, visualize a pattern, and state limitations. 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: Clean dataset, Chart/table, Analysis paragraph, Responsible-AI risk note.
EXPLAIN THE MECHANISM: Create a fictional card-classification study with a data dictionary, a simple rule, a held-out test set, and an error log. Decide the labels before examining test outcomes. Keep the study small and reproducible.
WORKED CASE: Use side count to distinguish triangles from other shapes. Build the rule on one set of drawings and test different drawings, including rotation and faint lines. Record the expected label, predicted label, and reason for any uncertainty.
TEST AND JUSTIFY: Compare with a simple baseline and report both total and error types. If you change the rule after seeing test results, note that this test has influenced development; prepare new held-out examples for another independent check.
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: Recognize phishing and social engineering, secure accounts, understand privacy settings, and perform cyber labs only with authorization. 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: Clean dataset, Chart/table, Analysis paragraph, Responsible-AI risk note.

Investigate with pictures and choices

Values are 2, 3, 3, 4, 18.

Which statement is correct?

1. Mean is 6 and median is 3
2. Mean and median are both 18
3. The largest value is the median

Worked reasoning

Answer: Mean is 6 and median is 3. The total is 30 over five values, while the middle sorted value is three.

Try a changed example

Remove the outlier and explain which summary changes most.

Picture and meaning matches

Data: Records observations

Model: Uses a learned rule

Responsible AI: Checks impacts and limits

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. Analyze a small non-sensitive dataset: define a question, clean data, calculate

summaries, visualize a pattern, and state limitations.

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: Clean dataset, Chart/table, Analysis paragraph, Responsible-AI risk note.

Check your understanding

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

A. A dataset is a collection of observations.

B. Review the course concepts through two applied examples.

C. A model uses patterns in examples to make a prediction.

D. It has no purpose in this project.

2. What is the first step in this lab?

A. Analyze a small non-sensitive dataset: define a question, clean data, calculate summaries, visualize a pattern, and state limitations.

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. Analyze a small non-sensitive dataset: define a question, clean data, calculate summaries, visualize a pattern, and state limitations.

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: Clean dataset, Chart/table, Analysis paragraph, Responsible-AI risk note.

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: Clean dataset, Chart/table, Analysis paragraph, Responsible-AI risk note.

Section 5: Independent Challenge & Mastery

INDEPENDENT TRANSFER CASE: Averages depend on missing-data decisions
KEEP THE ORIGINAL BASELINE: A synthetic table lists practice times of 10, 20, blank, and 30 minutes. The blank means unreported, not zero.
CHANGE ONE CONDITION: A duplicate of the 30-minute row appears. Counting it changes both population and total.
YOUR TASK: Build a data-quality table, explain the blank and duplicate policies, then calculate the chosen summary by hand.
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: A defensible result states which records are included, why, and how many observations remain.
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: Clean dataset, Chart/table, Analysis paragraph, Responsible-AI risk note.
EXPLAIN THE CONCEPT: Apply what you learned without copying the guided solution. Independent challenge: Evaluate a pretend model result for accuracy limits, representation, bias, false positives/negatives, and who could be affected. Safety and responsibility: Use public/synthetic data for practice; remove identifiers; never upload private school, health, family, or account data to AI. 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. Evaluate a pretend model result for accuracy limits, representation, bias, false positives/negatives, and who could be affected. 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: Clean dataset, Chart/table, Analysis paragraph, Responsible-AI risk note.

EXPLAIN THE MECHANISM: Choose a new fictional classification task with low-stakes labels, such as sorting drawn objects by a stated shape rule. Define the question, units or features, labels, and privacy limits. Avoid private photographs or scraped personal records.

WORKED CASE: A model performs well on neat drawings but struggles on messy ones. Investigate whether the test set included enough of both. Do not silently remove hard cases to improve the score. Explain what a person should do when the model is uncertain.

TEST AND JUSTIFY: Present the dataset definition, baseline, held-out predictions, error analysis, and one limitation. Be honest about the small sample. A strong report explains what the evidence supports and what would require additional testing.

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: Recognize phishing and social engineering, secure accounts, understand privacy settings, and perform cyber labs only with authorization. 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: Clean dataset, Chart/table, Analysis paragraph, Responsible-AI risk note.

Investigate with pictures and choices

A classifier fails more often for one setting.

What should the report include?

1. Only the overall best score
2. No failed examples

3. Per-setting errors and uncertainty

Worked reasoning

Answer: Per-setting errors and uncertainty. Disaggregated results can expose limits hidden by an average.

Try a changed example

Collect suitable additional test evidence with permission.

Picture and meaning matches

Data: Records observations

Model: Uses a learned rule

Responsible AI: Checks impacts and limits

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. Evaluate a pretend model result for accuracy limits, representation, bias, false positives/negatives, and who could be affected.
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: Clean dataset, Chart/table, Analysis paragraph, Responsible-AI risk note.

Check your understanding

1. Which idea best describes Independent Challenge & Mastery?

A. It has no purpose in this project.

B. A dataset is a collection of observations.

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

D. A model uses patterns in examples to make a prediction.

2. What is the first step in this lab?

A. Review the safety scenario and describe one improvement.

B. Evaluate a pretend model result for accuracy limits, representation, bias, false positives/negatives, and who could be affected.

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. Evaluate a pretend model result for accuracy limits, representation, bias, false positives/negatives, and who could be affected.

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: Clean dataset, Chart/table, Analysis paragraph, Responsible-AI risk note.

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: Clean dataset, Chart/table, Analysis paragraph, Responsible-AI risk note.

Mastery & safe-use plan

Ages 13-15

Digital safety: Recognize phishing and social engineering, secure accounts, understand privacy settings, and perform cyber labs only with authorization.

AI literacy: Evaluate bias, hallucinations, deepfakes, privacy risks, attribution, and responsible model use.

Challenge: Complete an independent debugging, defense, data, or design scenario with documented reasoning.

Portfolio: Publish a sanitized project artifact with README-style purpose, steps, screenshots or evidence, and lessons learned.

Mastery check: Explain the design, demonstrate testing, identify a security or

ethics risk, and defend one improvement.

Project worksheet

My project: Explore a dataset and explain patterns

Who will use or review it? _____

My plan: _____

Checkpoint 1: A clean, labeled data table.

Checkpoint 2: A prediction with a stated limit.

Checkpoint 3: A short responsible-use checklist.

Checkpoint 4: A completed guided project with documented evidence: Clean dataset, Chart/table, Analysis paragraph, Responsible-AI risk note.

Checkpoint 5: An independent demonstration with evidence: Clean dataset, Chart/table, Analysis paragraph, Responsible-AI risk note.

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.