Invention Journal

REFLECT
•Attitude
•Real-world
•Skills

DEFINE
•User
•Need
•Goal

DESIGN
•Brainstorm
•Select

COMMUNICATE
•Share

PLAN
•Sketch
•Label
•Materials

ITERATE
•Modify
•Assess
•Test

CODE
•Plan
•Code
•Test
•Debug

TEST
•Function
•Usability

MAKE
•Construct
•Tinker
•Combine
•Beautify

Invention Engine
The fun of inventing is the journey

Define

Define the problem you are trying to solve (user, need and goal)

_____

_____

_____

_____

_____

Design

Brainstorm and select one idea

Plan

Sketch, label, and list your materials

Materials:

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

_____   _____

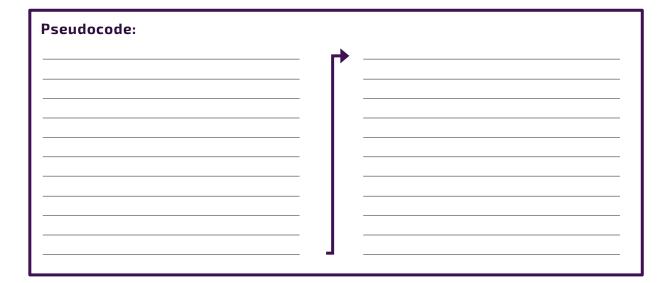# 🖥 Code

Coding checklist

- Plan your program
- Write your pseudocode
- Use the bit map to plug in your bits
- Set up blocks
- Start blocks

- Download your program
- Save your program
- Test your program
- Debug your program

Pseudocode:

Port	Bit	Descriptive name
0		
1		
2		
3		
4		
5		
6		
7		

- Download, test, and debug your code.
- Save it on your computer.

Make

Make checklist

Construct
- Choose your cardboard
- Draw on cardboard
- Measure twice, cut once

Combine
- Create a grid
- Use the bit guide

- Perforate the external bit shape
- Perforate the rivet holes
- Secure the bits
- Fix and tinker

Beautify
- Make it awesome!

Test

Functional testing
Test against the specifications and constrains for your invention

Plan and execution Test procedure	
Document test What happens in your test?	
Analyse test results What did/did not work? What could be improved?	

Usability testing
Test for user experience, ease of use

Plan and execution Test procedure	
Document test What happens in your test?	
Analyse test results What did/did not work? What could be improved?	

Iterate

Variable:
Design change:

Modification:	**Assess why:**
Keep or kick	

Draw, and label your iterated invention

Communicate

How does your invention work? Share your invention!

_____
_____
_____
_____
_____

Reflect

What are your first thoughts about the project? Are they mostly positive or negative? And why?

_____
_____
_____
_____
_____

What was surprising about the experience? What new knowledge or skills did you gain?

_____
_____
_____
_____
_____

What would you do differently if you approached the same problem again?

_____
_____
_____
_____
_____

How does your invention help the user? How can your technology be improved?

_____
_____
_____
_____
_____