Team #: _____ Block: _____ Date: _____
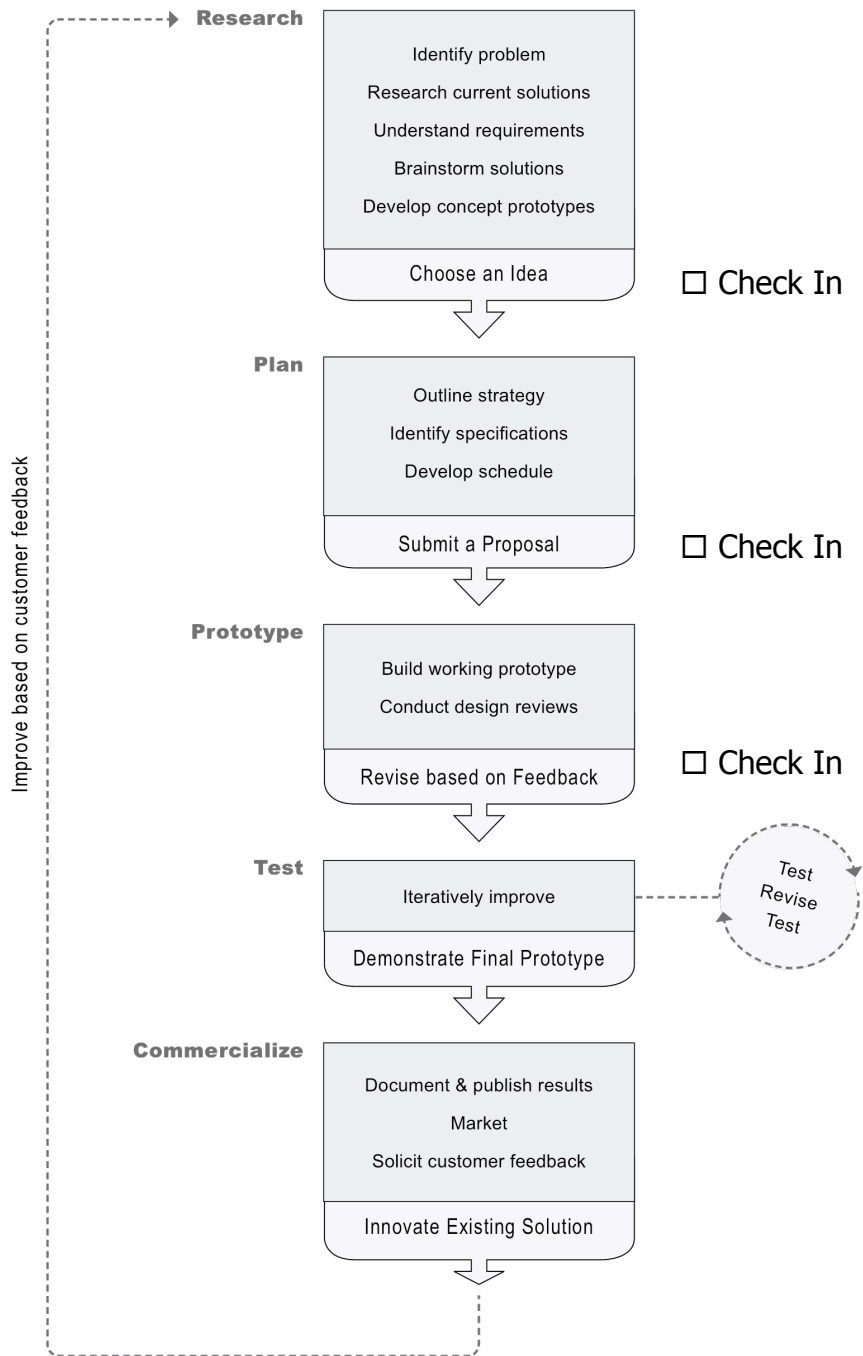

Engineering Process Logbook

GearBots Educational Resources

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Engineering Process Overview

Research
- Identify problem
- Research current solutions
- Understand requirements
- Brainstorm solutions
- Develop concept prototypes

Choose an Idea ☐ Check In

Plan
- Outline strategy
- Identify specifications
- Develop schedule

Submit a Proposal ☐ Check In

Prototype
- Build working prototype
- Conduct design reviews

Revise based on Feedback ☐ Check In

Test
- Iteratively improve

Demonstrate Final Prototype

Test Revise Test

Commercialize
- Document & publish results
- Market
- Solicit customer feedback

Innovate Existing Solution

Improve based on customer feedback

Team #: _____ Block: _____ Date: _____

Engineering Process:

STAGE ONE: Research Stage

1. What is the problem you need to solve?

2. What are the specific requirements of the challenge?

3. Research current solutions to solve the problem.

4. Develop prototypes / determine feasibility of concept.

5. Select your final concept.

☐ **Check In**

Team #: _____ Block: _____ Date: _____

Engineering Process:

STAGE TWO: Plan Stage

1. Outline a strategy to develop your prototype. What roles will the group members play?

2. Identify the special features / specifications of your prototype that you will need.

3. Develop a schedule for the remainder of the challenge. What are your goals for each class?

☐ **Check In**

Get final approval from your teacher.

Team #: _____ Block: _____ Date: _____

Pseudocode Worksheet:

Research Stage

Pseudocode is a sort of halfway language between English and computer code. It lets you address the important details of your program without having to worry about the less relevant parts getting in your way. Our goal when developing pseudocode will be to identify and organize the simple behaviours a robot needs to complete its mission / task.

Pseudocode Description:

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

17.

Use the back if you need extra space

Name: _____ Block: _____ Date: _____

Were you present for this class ☐ **YES** ☐ **NO** I was absent.
　　　- If you answered **YES**, complete the following questions:

Engineering Logbook:

This class is DAY _____ of the challenge

Rate your participation today:

| 1 Not meeting expectations | 2 Minimally meeting expectation | 3 Meeting expectations | 4 Exceeding expectations |

	Employability Skills Profile 2000+	**1**	**2**	**3**	**4**
1	Gives full attention to instructions and follow directions				
2	Comes prepared and works the entire class				
3	Works well with minimal supervision				
4	Works up to potential, shows maximum effort				
5	Works cooperatively as a member of a group				
6	Makes effective use of time and/or materials				
7	Demonstrates initiative and motivation				
8	Has a cooperative, positive attitude				
9	Is on time for class				

1. What did you want to accomplish today?

2. What went well in your team today?

3. What problems did you experience today?

4. What solutions did you try to solve the problem? Did they work? Why or why not?

5. What is your goal for tomorrow's class?

Name: _____ Block: _____ Date: _____

Employability Skills Profile 2000+:
Workplace Competencies

Rate your participation in this challenge:

1 Not meeting expectations   2 Minimally meeting expectation   3 Meeting expectations   4 Exceeding expectations

	Employability Skills Profile 2000+	1	2	3	4
1	Consistently demonstrates a positive attitude				
2	Cooperates all of the time				
3	Communicated well with others				
4	Honest				
5	Dependable				
6	Recognizes problems and finds acceptable solutions				
7	Concentrates (on-task)				
8	Produces quality work				
9	Makes smart decisions				
10	Always attends class				
11	Always punctual				
12	Follows direction				
13	Reads, writes, and calculates well				
14	Shows leadership				

Team Member's Name: _____
Rate your team member in this challenge:

1 Not meeting expectations   2 Minimally meeting expectation   3 Meeting expectations   4 Exceeding expectations

	Employability Skills Profile 2000+	1	2	3	4
1	Consistently demonstrates a positive attitude				
2	Cooperates all of the time				
3	Communicated well with others				
4	Honest				
5	Dependable				
6	Recognizes problems and finds acceptable solutions				
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Team Member's Name: _____
Rate your team member in this challenge:

1 Not meeting expectations   2 Minimally meeting expectation   3 Meeting expectations   4 Exceeding expectations

	Employability Skills Profile 2000+	1	2	3	4
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Team Member's Name: _____
Rate your team member in this challenge:

1 Not meeting expectations   2 Minimally meeting expectation   3 Meeting expectations   4 Exceeding expectations

	Employability Skills Profile 2000+	1	2	3	4
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