

# Mentor Curriculum

## Unit 3

### TABLE OF CONTENTS

- ★ [Objectives For Unit 3](#)
- ★ [Build your agenda](#)
- ★ [Outline of Activities for the Unit](#)
- ★ [Goals of the activities:](#)
  - [! Mentor tip !](#)
  - [💡 \(Ideation\) Identifying Solutions \(45 min\)](#)
  - [💡 \(Ideation\) Market Research \(150 min\)](#)
  - [📋 \(Entrepreneurship\) Business and Mission Statements \(40 min\) Senior div. only](#)
  - [📱 \(Coding\) Conditionals \(20 min\)](#)
  - [📊 \(AI\) Find Patterns with AI \(30 min\)](#)

### OBJECTIVES FOR UNIT 3

#### 💡 Ideation

- ☐ **Brainstorm possible solutions** to their problem
- ☐ Identify their **target market** for their problem solution
- ☐ **Research competitors** to their solutions and help them improve their ideas to stand out

#### 📋 Entrepreneurship

- ☐ Determine which **business model** you will use for your project
- ☐ Write a **mission statement** for your Technovation business

#### 📱 Coding

- ☐ Learn what **conditional blocks** do and use them in a mobile app

#### 📊 Artificial Intelligence

- ☐ Learn how to **train a basic AI model** to identify patterns

### BUILD YOUR AGENDA

Select one of the agenda templates and fill it in with the [unit's activities](#) to organize what your team will cover in your meeting for the week.

*Any remaining activities should be completed by the team outside of the meeting or in future meetings.*

1 - hour meeting

2 - hour meeting

# Mentor Curriculum

## OUTLINE OF ACTIVITIES FOR THE UNIT

Unit 3 has 6 – 8 activities, not all of them need to be done in your session together. Choose what you would like to accomplish together in a 1–2 hour meeting. The team can work on the remaining activities separately. To learn how these activities help your team, review the [Goals of the Activities](#).

| Can be done during the meeting | Can be done after the meeting | Activity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ✓                              |                               |  <b>Identifying Solutions Activity 1:</b> Brainstorm problems with the team, write down the problem, have the team write as many solutions as possible. After 10 minutes, let the team group similar ideas & spend some time chatting about them, then let them pick the top 2–3 ideas.                                                                                                                                                                                                                                         |
| ✓                              |                               |  <b>Identifying Solutions Activity 2:</b> <a href="#">Choosing a Solution worksheet</a> , take the top solutions and use the checklist to determine if each solution is innovative, relevant, and uses technology.                                                                                                                                                                                                                                                                                                              |
| ✓                              | ✓                             |  <b>Market Research Activity 1:</b> <a href="#">User Research worksheet</a> . Teams will generate questions for interviews/surveys, but will conduct them as an external activity.                                                                                                                                                                                                                                                                                                                                              |
| ✓                              | ✓                             |  <b>Market Research Activity 2:</b> <a href="#">Competitor Research worksheet</a> to find what other organizations/companies are working on similar solutions                                                                                                                                                                                                                                                                                                                                                                 |
| ✓                              | ✓                             |  <b>(Sr. division only) Business and Mission Statements Activity 1:</b> Choose a business type by guiding the team through a discussion around the following questions: <ul style="list-style-type: none"> <li>• What do you want to accomplish by opening your business?</li> <li>• What are some goals of your business?</li> <li>• How do you think you can sustain (keep it running) your business?</li> <li>• What type of business do you want yours to be? (for-profit, non-profit, or a social enterprise)</li> </ul> |
| ✓                              | ✓                             |  <b>(Sr. division only) Business and Mission Statements Activity 2:</b> Develop a mission statement, have the team think about the following with their business: what do we do, how we do it, whom we do it for, what value are we bringing?                                                                                                                                                                                                                                                                                 |
| ✓                              | ✓                             |  <b>Coding Conditionals Activity:</b> Update the Counting Game app ( <a href="#">App Inventor</a>   <a href="#">Thunkable</a> ) to check for a win (total=100) or lose (total > 100)                                                                                                                                                                                                                                                                                                                                          |
| ✓                              | ✓                             |  <b>Find Patterns with AI Activity:</b> Train a machine learning model. <a href="#">Rock, Paper, Scissors</a> with Google's Teachable Machine. Students use the computer webcam to take pictures of the rock, paper, scissors hand gestures. This will be their dataset. They train it, and use the model in a Scratch project template.                                                                                                                                                                                      |

# Mentor Curriculum

## Goals of the activities:

### ! MENTOR TIP !

**Keep your team on track:** If you have asked team members to complete tasks between meetings, you may find team members struggle to complete the tasks.

Strategies to address this:

- **Check in** at the start of each session to see what has been accomplished and what is outstanding to do.
- **Don't make it about particular team members**, but more about the tasks at hand. Consult the checklist from last week's session and see what is not checked off.
- **Celebrate the tasks that have been completed!** Be positive!
- **Be flexible** with the plan for this current meeting. If needed, the team might have to work on completing outstanding tasks that are needed to move forward.
- Find out **what obstacles are preventing team members from achieving goals** and see how you can support them in getting there.
- You might need to **break down tasks into smaller chunks** that are attainable. For example, if the team needs to get feedback from users, you might break it down to (1) create interview questions (2) identify users to ask (3) contact and set up interview time (4) interview (5) report back
- Use a **tracking system** to keep on top of who is doing what

### (Ideation) Identifying Solutions (45 min)

In these activities, students will:

- Start to brainstorm solutions, and possibly choose one to build
- Do a preliminary check of their solutions for being innovative, relevant and making use of technology

### (Ideation) Market Research (150 min)

In these activities, students will:

- Identify your **target market** - people who will use your product.
- Perform a **competitor analysis** to see how your solution is different and better than your competitors'.

### (Entrepreneurship) Business and Mission Statements (40 min) *Senior div. only*

In these activities students will:

- Learn about **different types of businesses**.
- Decide which type of business (for-profit, social enterprise, or non-profit) that they want to use for your project.
- Write a **mission statement**, a formal summary of the values of a company, organization, or individual. It is a short and simple sentence that outlines the organization's purpose and how it

# Mentor Curriculum

accomplishes that purpose. .

## (Coding) Conditionals (20 min)

**In this activity students will:**

- Make more complex conditional statements by adding else if to an if or if/else block.

**Activity:** Update the Counting Game app to check for a win (total=100) or lose (total > 100)

**Additional Resources:**

- [if statements in Thunkable](#)

## (AI) Find Patterns with AI (30 min)

**In this activity, students will:**

- Walk through training an AI model with the platform, Google's Teachable Machine.