

Mentor Curriculum

Unit 5

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OBJECTIVES FOR UNIT

💡 Ideation

- ☐ Create a paper and/or cardboard **prototype** to communicate their project idea to others
- ☐ Get user feedback using your prototype
- ☐ Make a **project canvas** to outline the big picture pieces of their project and to plan tasks ahead

📄 Entrepreneurship

- ☐ Consider how you can **partner with organizations** working on the same problem as you

📱 Coding

- ☐ Learn about **storing data** for use in a mobile app
- ☐ Learn how to organize data into lists
- ☐ Train a machine learning model using Python libraries in a Jupyter Notebook and incorporate it in a Streamlit app

📊 Artificial Intelligence

- ☐ Choose a platform and **train your AI model** for your project

BUILD YOUR AGENDA

Select one of the agenda templates and fill it in with the [week'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

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OUTLINE OF ACTIVITIES FOR THE UNIT

Unit 5 has 5 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
✓	✓	💡 Prototyping Activity 1: Make a paper prototype , if building an app, based on the MVP worksheet that students completed in last unit's lesson. If building an AI project, teams may find creating a 3D model or cardboard prototype helpful based on the MVP worksheet they completed in last unit's lesson.
	✓	💡 Prototyping Activity 2: Getting user feedback. Show the prototype to users and take notes of their project flow, comments, reactions.
✓	✓	📋 Partnering with Organizations Activity: Identify 2–3 individuals or organizations that could be potential partners, prepare a script for a phone call or draft an email. Document the date/time students spoke to or emailed the organization.
✓		💡 Planning your Project Activity: Use the Project Canvas to define major parts of the project, and generate a list of actions items for the team.
✓	✓	<i>Skip if you are making a web app</i> 📱 Variables and Lists Activity: Complete a quiz app (Worksheet: App Inventor Thunkable)
✓	✓	📈 Train your AI Model Activity: Using one of the platforms listed above (or any other one the team has found), train their AI model.
	✓	<i>Skip if you are making a mobile app</i> 📱 Web apps using AI models: Build a prediction app (Jupyter notebook)

Goals of the activities:

💡 (Ideation) [Paper and Cardboard Prototyping \(60 min\): Activity 1](#)

In this activities students will:

- Learn about standard user interface practices
- Create a prototype of their project, which can help them quickly get their ideas on paper, or into a

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basic 3D model, to show how their project generally works.

Note: only one of the prototyping activities needs to be done by the team. If students are building an app, they will create a paper prototype, but if they are creating an AI project, they will create a cardboard prototype.

(Ideation) Get user feedback (60 min): Activity 2

In this activities students will:

- Test their prototype with 2-3 potential users
- Understand how understandable their project looks to the users and take notes of potential changes.

! MENTOR TIP !

Getting Feedback!

Encourage the team to reach out to end users as they outline their MVP to make sure they are making something that will be used.

How?

- Contact local (or national) organizations that are already in this space
- Find people in their community whom the problem affects – ask friends, parents, teachers for contacts
- Conduct surveys – school class, friends, reach out on social media
- Use your own contacts
- Ask meaningful questions:
 - Targeted, specific questions, e.g. “Does the app help with step X of this process to resolve the issue? If not, what could we change to improve your experience?” “Which proposed features would be most helpful to address the problem, listed by priority?”
 - Role model an interview with the team

(Entrepreneurship) Partnering with Organizations (30 min)

In this activity students will:

- Identify partners they can work with to build their project, and look for ways to get people to use their product

(Ideation) Planning your Project (30 min)

In this activity students will:

- Create a project canvas to look at their project parts as a way to get organized to accomplish tasks.

Additional Resources:

- Alumnae [video on prioritizing features](#)
- Project Canvas [manual](#)

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(Coding) Variables and Lists (45 min)

In this activity students will:

- Create a complete quiz app to test the user's knowledge about a topic of their choice.

(AI) Train your AI Model (60 min)

In this activity students will:

- Decide on a platform to train their AI model
- Gather their initial dataset and start training the AI model for their project.

Activity: Additional Resources:

- [Advanced integrations](#) (beyond the 4 platforms listed)

(Coding) Web apps using AI models (105 min)

In this activity students will:

- Explore a stroke risk dataset to build an AI model
- Work with data in a Jupyter notebook
- Use the model created in a Streamlit app