

MATLAB Programming Section 09: Teacher Guide

Storyline

In this lesson, students will continue to refine their AI models for their final project using the techniques introduced in Section 07 and Section 08. Students will first review the material from those previous lessons in the form of a group activity. Then, the students will have the opportunity to implement the material they reviewed as they review each other's AI model with constructive feedback. Lastly, the students will take time to implement the feedback they received from their peers as they edit their final project.

Main Learning Goal

Students will be working on refining their AI models by reviewing material introduced in the previous 2 lessons and participating in a peer review activity. They will then go through their AI models to determine what changes must be implemented to have a functional AI model.

Focus Question

How can you ensure that the AI model works?

Elicit

How will I engage students and elicit their ideas?

Activity Name and Description	Teacher Moves	Student Moves	Resources
<ul style="list-style-type: none">• Reviewing How to Create an AI Model• <i>10-15 minutes</i>• The students will be revisiting material from Sections 07 and 08 on how to make an AI model.	<ul style="list-style-type: none">• The teacher will help the students get into small groups.• The teacher will instruct the students to create a list of the steps outline from Lesson 7 and answer the questions regarding Lesson 8.• Teachers will answer any	<ul style="list-style-type: none">• Students will create a list of the steps outline from Section 7 and discuss their responses with their peers.• Students will answer the questions regarding	<ul style="list-style-type: none">• Section 07• Section 08

Activity Name and Description	Teacher Moves	Student Moves	Resources
	questions that the students might have on the content from the previous lessons.	the material from Section 8 in groups.	

Develop

How will I get students to explore, explain, and develop ideas?

Activity Name and Description	Teacher Moves	Student Moves	Resources
<ul style="list-style-type: none"> • Peer Review • <i>30-40 minutes</i> • This portion of the lesson involves the students reviewing each other's AI models using the content they reviewed in the Elicit section. • The students will be making groups of 2 and complete the following 4 times (each with a different partner): <ul style="list-style-type: none"> – Make groups of two to review each other's AI 	<ul style="list-style-type: none"> • The teacher will help the students find a partner and get into their groups. • The teacher will ensure the students are following the tasks outlined for them in the lesson and are providing constructive feedback to their peers. • The teacher will answer any questions the students might have 	<ul style="list-style-type: none"> • The students will complete the tasks outlined for them in the lessons four times, each with a different partner, to review each other's AI Model. • The students will provide constructive feedback for their peers to implement in their AI Models, using the Guiding Questions 	<ul style="list-style-type: none"> • Peer Review Handout (PDF) • Peer Review Handout (Doc)

Activity Name and Description	Teacher Moves	Student Moves	Resources
<ul style="list-style-type: none"> Model and take notes on its functionality. – Make sure to consider the 6 steps you wrote down at the beginning of class in addition to metrics used to evaluate models. – Take 10-12 minutes to provide constructive feedback on your partner's AI Model 	<ul style="list-style-type: none"> on the suggestions they receive. 	<ul style="list-style-type: none"> in the Peer Review Handout. 	

Activity Name and Description	Teacher Moves	Student Moves	Resources
<ul style="list-style-type: none"> – Please answer the guiding questions for this activity on your handout for each peer review. 			

Deploy

How will I get students to use and apply their ideas to what they've learned?

Activity Name and Description	Teacher Moves	Student Moves	Resources
<ul style="list-style-type: none"> • Action Plan • <i>20-30 minutes</i> • Following the Peer Review Activity, students will begin implementing the feedback they received on their final projects. • The students will review what their peers had to say in the Peer Review Handout, taking note of suggestions 	<ul style="list-style-type: none"> • The teacher will ensure that the students know what they need to do to implement the constructive feedback they received. • The teacher will encourage independent work and help as needed. 	<ul style="list-style-type: none"> • The students will be reading through the Peer Review Handouts they received and take note of the suggestions mentioned more than once. • The students will then independen 	

Activity Name and Description	Teacher Moves	Student Moves	Resources
<p>mentioned more than once.</p> <ul style="list-style-type: none"> The students will then have the time to edit their AI Model as a final revision for their final project. The students will submit their revised AI Model to the assignment linked here: Action Plan 	<ul style="list-style-type: none"> The teacher will answer any questions the students might have on the feedback they received or how they are to implement that feedback. 	<p>tly revise their final projects, using feedback they received in the Peer Review Handout as a guide.</p> <ul style="list-style-type: none"> The students should ask questions as necessary. The students will then submit their revised final project as they will be presenting them in the following lesson (Section 10). 	