

CS+Future Lesson Plan:

Week 3 Lesson 3

Note to Teachers: **Teach from the web page and use it as your lesson guide.** You do not have to be the expert in the room. You get to be the lead learner, modeling life-long learning for your students throughout these CS+Apps lessons! There is not a detailed script, because your goal is to talk as little as possible and to focus on facilitating CS Talk between students.

Prepare: Make a copy of the [Week 3 Student Hyperdoc](#) and share Hyperdoc with students over Google Classroom; **OPTIONAL:** print Unit Anchor Charts, ([8.5" x 11"](#) or [17" x 11"](#) for Word Wall) and [Discussion Bubbles](#).

Review Learning Goal with Students: *Today we will learn how to train (or teach) and AI model to classify images that we upload for a real-world application.*

ELD Supports for the Lessons

WARM UP 1	This section is designed to encourage discussion among students; plan to facilitate pairs, groups, or whole class. Read the objective aloud at the top of the page ("Today we will..."). Then, project and display the Warm Up . Students will answer the prompting questions. They should use the sentence frames in their discussion. <i>*See the ELD Support document for more information...</i>
Learn 2	Project Webpage Week 3 Lesson 3 and watch the Learn How AI and Machine Learning Select Ripe Fruit video with students. Engage students by asking them questions about the video after playing the video. (Students are not using computers during the Learn)
TURN & TALK 3	This section is designed to encourage discussion among students; plan to facilitate pairs. Project and display the TURN & TALK . Using the content from the video, have students ask and answer the prompting questions. Tell students to use the sentence frames in their discussion to follow up with their partner and keep the conversation going. <i>*See the ELD Support document for more information...</i>
UCSD DOES 4	Project and play the video: Learn to Classify Bananas with Teachable Machine (Students are not using computers during the UCSD DOES.)
WE DO 5	Open and project the Website: Teachable Machine and Worksheet: Classifying Bananas slide and review the instructions with students on how to complete the worksheet. Have students think of any questions they may have before starting. Remember, teachers are projecting and students are directing teacher actions. (Students are not using computers during the We Do.)
YOU DO 6	Group students into pairs. Ask them to open the Week 3 Student Hyperdoc from your Google classroom. Tell students to open the Website: Teachable Machine and the Worksheet: Number of Samples provided in the student hyperdoc . Students will work side-by-side to complete this task.

REFLECT &
SHARE

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This section is designed to encourage discussion among students; plan to facilitate pairs, groups, or whole class. Project the **Reflect & Share** section and have students discuss what they learned about **machine learning and classification**. They may also be sharing their project and explaining their process. Tell students to use the sentence frames in their discussion. Optional: Students can type their response in the student hyperdoc for this lesson. **See the ELD Support document for more information...*