

LESSON 5

Studio: AI Pose Space Game

40 minutes

Build With a Model You Trained

WHAT THIS LESSON DOES

Students load their trained pose model into Scratch and build a space game steered by leaning left and right, then tune the confidence threshold so the controls feel reliable.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Load a Teachable Machine pose model into Scratch, use tilt poses to steer a sprite, set a confidence threshold, and debug body-controlled movement so the game responds as intended.

BEFORE THE BELL

- Students logged in to Scratch via <https://stretch3.github.io/> (Stretch3) with camera permission available
- Pose model URLs ready from the earlier training lesson, or the provided sample model URL on hand
- TMPose2Scratch extension available; clear space so students can tilt left and right on camera
- Open a demo project on the board with the extension already added if network is slow

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HOW THE LESSON RUNS

4 min	introduction	Start: What We're Building
3 min	content	Introduction
3 min	content	Setup Scratch and Tmpose2scratch
2 min	content	Add the Rocketship Sprite
3 min	content	Load Teachable Machine Model
2 min	content	Display Pose Label
4 min	content	Set the Confidence Threshold
2 min	content	Move Left and Right
3 min	content	Label Every X Seconds
2 min	content	Add the Star Sprite
4 min	content	Show and Make Stars Fall
2 min	content	Challenge
3 min	content	Make Sense: What Worked, What Broke
2 min	content	Reflect
1 min	summary	What You Covered

TEACHING MOVES

- Model adding TMPose2Scratch and allowing the camera once on the board before pairs work alone
- Keep the sample model URL visible so anyone without their own model can still finish the game
- When tuning confidence, have students try 0.4, 0.6 and 0.8 and say which feels fairest for tilt left and right
- Label-every interval controls how snappy steering feels; link that back to testing after each change

WHAT TO WATCH FOR

- Pose label names do not match the hat blocks (for example trained as Lean Left but code waits for Tilt Left). Align the exact label text with the model
- Camera blocked or wrong face to the lens so labels never fire. Check Allow and that the student is fully in frame
- Confidence set too high so movement rarely triggers, or label interval left out so steering feels sluggish. Lower threshold slightly or add the label-once-every block

DIFFERENTIATION

- Support: Use the sample model URL and focus on left and right tilt only before adding stars
- Support: Provide a printed checklist of extension, URL, threshold, then movement hats
- Extension: Score on star hits, dodge hazards, or add sound when a pose is recognised