EdSutra

Curriculum

Grade 6

About age 11–12 · Year 7 in the UK · Class 6 in India · 7 Units · about 5 hours

Every EdSutra Unit rated for Grade 6, in the suggested order. Each Unit is one simulation in which the learner takes on a real job, and each lists what learners will be able to do at the end.

- Three stages in a suggested order. Module 1 comes first; after it, any Module can be opened.
- Every Unit is one simulation. The learner takes a job, climbs Bloom's steps from Remember to Evaluate, and ends on an In real life card. Create happens in the browser-based Labs.
- "I can..." lines are each Unit's learning outcomes. "Ask the class" is a question to open discussion.
- Module 1 is free with no account. Everything else is one $99 purchase.

Stage 1 · Beginner

Foundations: How does a machine learn?

How a machine learns from examples, and why the data matters.

Module 01 · AI Foundations Free

The words AI people use, and how a machine learns from examples and makes a call.

3 Units · about 2.5 hours · Labs: Computer Vision Lab, Neural Playground

Unit 01 · 60 min · All grades · Role: Codebook Keeper

AI Alphabet A to Z Words

- I can understand 26 foundational AI words in simple language
- I can connect each AI term to an everyday example
- I can use AI vocabulary in short, everyday sentences of their own
- I can distinguish correct from incorrect uses of AI terms in real tools and conversations

Ask the class If an AI tool gets something wrong, who should check it: the tool, the company, or you?

Teaching guide: edsutra.com/downloads/curriculum/teaching-guides/edsutra-teaching-guide-ai-alphabet.pdf

Unit 02 · 40 min · Grades 6–8 · Role: AI Detective

What is AI? The Knowledge Map

- I can say what AI is in one line: a machine doing a task that usually needs a human mind
- I can tell systems that follow rules from systems that learn from examples
- I can identify key AI milestones, their eras and the people and teams behind them
- I can explain one connection between AI ideas and one limit of a system's results

Ask the class Whose work is easy to miss when a headline names just one AI inventor?

Teaching guide: edsutra.com/downloads/curriculum/teaching-guides/edsutra-teaching-guide-what-is-ai.pdf

Unit 03 · 55 min · Grades 6–9 · Role: Training Inspector

How Machines Learn The Cookie Sorter Investigation

- I can explain how supervised learning uses labeled examples to learn a pattern
- I can analyze which features a model is using to make predictions
- I can evaluate model behavior with unseen data, accuracy, precision, and recall
- I can diagnose shortcut learning and propose counterexamples that improve generalization
- I can design a stronger feature strategy for a classifier

Ask the class Have you ever learned a shortcut that worked in practice but failed on the real test?

Teaching guide: edsutra.com/downloads/curriculum/teaching-guides/edsutra-teaching-guide-how-machines-learn.pdf

Module 04 · Data & Knowledge

Where the data comes from, what it leaves out and how it shapes what a model learns.

1 Units · about 1 hours · Labs: Data Explorer Lab

Unit 01 · 50 min · Grades 6–9 · Role: Intake Inspector

Data & Datasets The Data Kitchen

- I can read a dataset: rows are examples, columns are features, one column is the label
- I can identify problems in datasets: missing values, duplicates, outliers, label bias
- I can measure how cleaning choices change a real model's accuracy and fairness
- I can explain why deleting a biased feature doesn't remove bias

Ask the class Should a computer help choose who gets into a club or team? What would make that fair?

Teaching guide: edsutra.com/downloads/curriculum/teaching-guides/edsutra-teaching-guide-data-kitchen.pdf

Stage 2 · Intermediate

Capabilities: What can AI do with pictures, sound and words?

How AI sees, hears, reads, writes and makes new things.

Module 02 · Seeing & Sensing

How a machine turns a picture or a video into something it can recognize.

1 Units · about 1 hours · Labs: Computer Vision Lab

Unit 01 · 35 min · Grades 6–10 · Role: Observation Officer

Seeing & Sensing How Machines See the World

- I can explain how images are stored as arrays of numbers
- I can describe the three stages of a computer vision pipeline
- I can identify real-world applications across medicine, transport, and entertainment
- I can understand why lighting, angle, and resolution affect model accuracy

Ask the class When you look at a photo, what do you notice that a computer only stores as numbers?

Teaching guide: edsutra.com/downloads/curriculum/teaching-guides/edsutra-teaching-guide-seeing-sensing-intro.pdf

Module 03 · Language & Text

How a language model reads a sentence, guesses the next word and translates.

1 Units · about 1 hours · Labs: AI Story Canvas Lab

Unit 07 · 40 min · Grades 6–12 · Role: Request Writer

Prompting AI The Signal Tuner

- I can name the four features that make a prompt clear: clarity, specificity, role and audience, guardrails
- I can rewrite a vague prompt until it reaches an expert score
- I can predict and test which kinds of noise hurt a prompt most
- I can back your best change with evidence, and explain what a heuristic prompt score can't see

Ask the class Can a score tell you whether a piece of writing is good? What might it miss?

Teaching guide: edsutra.com/downloads/curriculum/teaching-guides/edsutra-teaching-guide-prompting-ai.pdf

Module 07 · Creative AI

How generative AI makes pictures, music and text, and whether that counts as creativity.

1 Units · about 1 hours · Labs: Sound and Music Lab

Unit 01 · 5 min · All grades · Role: Studio Technician

Generative AI Start Here

- I can recognize generative AI as producing an output from learned patterns
- I can name examples of generated outputs: words, images, music, and code
- I can recall that learning patterns happens before a prompt steers generation

Ask the class If one prompt can make many different outputs, who decides which one is good?

Teaching guide: edsutra.com/downloads/curriculum/teaching-guides/edsutra-teaching-guide-generative-ai.pdf