Name _____ Class _____ Date _____

DAY 01

How does AI talk?

1 · Think first

Before the lesson, write down what you think the answer is.

2 · Experiment · Probability slider

Try it — the next-word picking machine

What did you change in the experiment, and what happened?

3 · Quiz

Circle the right answer.

Q1 What does AI do in a single step?

① It makes the whole sentence in one go
② It picks the next piece and adds it on
③ It finds a similar sentence on the internet
④ It pulls out one of the answers it saved earlier

Q2 In the experiment above, what happens if you turn “Boldness” down to 0?

① You get a different sentence every time
② You get the same sentence no matter how many times you press
③ The AI gets more accurate
④ It gets faster

Q3 “AI searches for the answer somewhere and then tells you.” True or false?

① True ② False

The takeaway in my own words

“AI is a machine that picks the next piece over and over, really fast.”

Rewrite this line in your own words.

Name _____ Class _____ Date _____

DAY 02

What's a token, the 'piece' AI talks in?

1 · Think first

Before the lesson, write down what you think the answer is.

2 · Experiment · Split it up

Try it — the sentence-splitting machine

What did you change in the experiment, and what happened?

3 · Quiz

Circle the right answer.

Q1 What is a “token”?

① Always exactly one letter
② Always exactly one word
③ A piece AI cuts text into to make computing easier (its size varies)
④ The whole word list people set up in advance

Q2 What happens for the AI when the number of tokens goes up?

① It gets faster
② There's more to compute, and it takes longer
③ No effect at all
④ It always gets smarter

Q3 Different AIs can split the same sentence into tokens differently. True or false?

① True
② False

The takeaway in my own words

“To AI, a sentence isn't letters or words — it's a line of pieces called tokens.”

Rewrite this line in your own words.

Name _____ Class _____ Date _____

DAY 03

Why does AI answer differently every time?

1 · Think first

Before the lesson, write down what you think the answer is.

2 · Experiment · Probability slider

Try it — turn the temperature knob

What did you change in the experiment, and what happened?

3 · Quiz

Circle the right answer.

Q1 What happens if you turn the temperature down very close to 0?

① The ranking of the candidates flips
② Almost always only the #1 candidate gets drawn
③ There are more candidates
④ The AI gets smarter

Q2 When you raise the temperature, what grows along with it?

① Answers get more varied, but so does the risk of going off the rails
② Computing gets faster
③ Accuracy always goes up
④ The number of tokens goes down

Q3 Set the temperature to 0, and the same question always gets exactly the same answer. True or false?

① True ② False

The takeaway in my own words

“Temperature isn't a knob that makes AI smarter — it's a knob for how bold it gets.”

Rewrite this line in your own words.

Name _____ Class _____ Date _____

DAY 04

What does it mean for AI to 'learn' something?

1 · Think first

Before the lesson, write down what you think the answer is.

2 · Experiment · Put it in order

Try it — put the training cycle in order

What did you change in the experiment, and what happened?

3 · Quiz

Circle the right answer.

Q1 What exactly does it mean when AI 'learns'?

① It comes to understand meaning, like a person
② It nudges numbers (weights) a little at a time to get closer to the right answer
③ It saves the whole internet
④ It memorizes a fixed table of rules

Q2 Training means making big fixes so it gets the answer exactly right in one go.

① True ② False

Q3 What happens if training runs just once?

① It gets smart right away
② Almost nothing changes
③ It actually gets worse
④ Training is finished

The takeaway in my own words

“Training isn't a 'lightbulb moment' — it's 'fixing a little,' over and over.”

Rewrite this line in your own words.

Name _____ Class _____ Date _____

DAY 05

Just how big is this number? — Getting a feel for parameters

1 · Think first

Before the lesson, write down what you think the answer is.

2 · Experiment · Number sense

Try it — the number-sense slider

What did you change in the experiment, and what happened?

3 · Quiz

Circle the right answer.

Q1 The more parameters, the smarter the AI — always.

① True ② False

Q2 What exactly is a parameter?

① The number of sentences the model memorized
② How many weight numbers keep getting adjusted during training
③ The number of servers
④ The number of people using it at the same time

Q3 As far as we know, the estimated number of synapses in a human brain is bigger than the parameter count of any AI model released so far.

① True ② False

The takeaway in my own words

“A bigger number doesn't always mean smarter.”

Rewrite this line in your own words.

Name _____ Class _____ Date _____

DAY 06

Why does AI calmly make up facts? — Hallucination

1 · Think first

Before the lesson, write down what you think the answer is.

2 · Experiment · Probability slider

Try it — probability slider

What did you change in the experiment, and what happened?

3 · Quiz

Circle the right answer.

Q1 What's the root cause of hallucination?

① The AI means to lie
② The AI is built to pick words that sound likely, by probability
③ Server errors
④ The user asked the question wrong

Q2 Hallucination happens more often when you ask about things that are missing or rare in the training data.

① True ② False

Q3 If AI answers in a confident tone, what it says is always true.

① True ② False

The takeaway in my own words

“Saying it confidently doesn't make it true.”

Rewrite this line in your own words.

Name _____ Class _____ Date _____

DAY 07

Why does AI forget what you just said? — Memory limits

1 · Think first

Before the lesson, write down what you think the answer is.

2 · Experiment · Context window tracker

Try it — context window tracker

What did you change in the experiment, and what happened?

3 · Quiz

Circle the right answer.

Q1 Why does AI 'forget' the start of a chat?

① Its feelings got hurt
② It can only read so much at once (its context)
③ It ignores you on purpose
④ It's testing you

Q2 Even in a really long chat, AI always remembers exactly what you said first.

① True ② False

Q3 If you repeat important info partway through a chat, AI uses it better.

① True ② False

The takeaway in my own words

"If it matters, say it again."

Rewrite this line in your own words.

Name _____ Class _____ Date _____

DAY 08

Why does changing one question change the whole answer? — Prompts

1 · Think first

Before the lesson, write down what you think the answer is.

2 · Experiment · Before & after

Try it — sharpen the prompt

What did you change in the experiment, and what happened?

3 · Quiz

Circle the right answer.

Q1 What's the key to a good prompt?

① A secret spell that tricks the AI
② Saying clearly what result you want
③ Keeping it as short as possible
④ Using lots of big words

Q2 Change the prompt, and the odds for the AI's next word change too.

① True ② False

Q3 No matter how specific your prompt is, the result barely changes.

① True ② False

The takeaway in my own words

“Don't change the AI — change the question.”

Rewrite this line in your own words.

Name _____ Class _____ Date _____

DAY 09

Is a bigger model always better? — Big models, small models

1 · Think first

Before the lesson, write down what you think the answer is.

2 · Experiment · Pick one

Try it — which one gets this job?

What did you change in the experiment, and what happened?

3 · Quiz

Circle the right answer.

Q1 When a model is 'big,' what does it mostly have a lot of?

① Letters shown on the screen
② Parameters (numbers tuned during training)
③ People using it
④ Time it takes to answer

Q2 What does a small model clearly do better than a big one?

① Solves hard new problems better
② Knows more facts
③ It's fast, cheap and runs offline on your device
④ Never says anything wrong

Q3 There's a way to pour what a big model learned into a small model.

① True ② False

The takeaway in my own words

"Big isn't what's good — the right size for the job is."

Rewrite this line in your own words.

Name _____ Class _____ Date _____

DAY 10

Could this AI fit on my laptop? — Open and closed models

1 · Think first

Before the lesson, write down what you think the answer is.

2 · Experiment · Split it up

Try it — split ‘open’ into four pieces

What did you change in the experiment, and what happened?

3 · Quiz

Circle the right answer.

Q1 When a model is ‘open,’ what can you mainly get?

① The password to the company's servers
② The numbers tuned in training — the weights
③ The AI's chat history with people
④ A share of the company's money

Q2 What can you do when you use a closed model?

① Download the model file onto your laptop
② Look at the data it was trained on
③ Ask and get answers through an app or API
④ Change the numbers inside the model yourself

Q3 If a model's weights are released, its training data is usually released too.

① True ② False

The takeaway in my own words

“Open doesn't mean free — it means you can get the core in your own hands.”

Rewrite this line in your own words.

Answer key · Part 1: What AI Is

DAY 01 · How does AI talk?

Q1 · Answer ② It picks the next piece and adds it on

AI does just one thing: **pick the next piece**. A long sentence is what you get from doing that hundreds of times — it was never made all at once.

Q2 · Answer ② You get the same sentence no matter how many times you press

At 0 it keeps picking **only the #1 candidate**, so the answer is always the same. But it gets boring, and if #1 is wrong there's no way out. Its real name is **temperature**.

Q3 · Answer ② False

False. By default, AI **doesn't search** — it works out the next piece right there and builds the answer. That's why it sometimes makes up facts that don't exist, very confidently. This is called **hallucination**. (When today's chatbots search the web, that's a separate feature added on top.)

Today in one line · AI is a machine that picks the next piece over and over, really fast.

DAY 02 · What's a token, the 'piece' AI talks in?

Q1 · Answer ③ A piece AI cuts text into to make computing easier (its size varies)

A token is **a piece cut to make AI's computing easier**. Sometimes it's one letter, sometimes a whole word — there's no fixed size.

Q2 · Answer ② There's more to compute, and it takes longer

More tokens means **more to compute, and more time (and cost).** Say the same thing more briefly and the AI handles it faster.

Q3 · Answer ① True

True. Some AIs use a **tokenizer** that cuts by character, others one that cuts by common chunks. So the same sentence can come out as a different number of tokens in different AIs.

Today in one line · To AI, a sentence isn't letters or words — it's a line of pieces called tokens.

DAY 03 · Why does AI answer differently every time?

Q1 · Answer ② Almost always only the #1 candidate gets drawn

Temperature doesn't change the ranking. It only changes **how far ahead #1 is**. Near 0, #1's chance gets close to 100%, so you always get the same answer.

Q2 · Answer ① Answers get more varied, but so does the risk of going off the rails

Turn it up and lower candidates get drawn often, so things get **more varied — but the risk of awkward or wrong answers creeping in** grows too. That's why people turn the temperature down for jobs that must be exact, like code or math.

Q3 · Answer ② False

False. A 2026 study ran 4,705 runs and found that **even at temperature 0, the bigger the model, the less often it gave the same answer** — models with more than 120 billion parameters were reproducible less than 20% of the time. That's because the computer does its math in a slightly different order each time.

Today in one line · Temperature isn't a knob that makes AI smarter — it's a knob for how bold it gets.

DAY 04 · What does it mean for AI to 'learn' something?

Q1 · Answer ② It nudges numbers (weights) a little at a time to get closer to the right answer
Training isn't **understanding** — it's nudging the weights a little at a time by however much it was off, again and again.

Q2 · Answer ② False
It only fixes a little at a time. That way it doesn't wreck what it learned from other sentences.

Q3 · Answer ② Almost nothing changes
One fix is tiny. That's why it takes hundreds of billions of repeats before you notice anything.

Today in one line · Training isn't a 'lightbulb moment' — it's 'fixing a little,' over and over.

DAY 05 · Just how big is this number? — Getting a feel for parameters

Q1 · Answer ② False
Size is just the container — the amount and quality of the data have to be good too for its skill to grow.

Q2 · Answer ② How many weight numbers keep getting adjusted during training
Parameters are the total number of numbers (weights) that get adjusted bit by bit during training.

Q3 · Answer ① True
The parameter counts of publicly known models are still short of the estimate for human brain synapses (about 100 trillion).

Today in one line · A bigger number doesn't always mean smarter.

DAY 06 · Why does AI calmly make up facts? — Hallucination

Q1 · Answer ② The AI is built to pick words that sound likely, by probability
AI is built to pick the most likely next words, not to look up facts — so even with no right answer, it produces something that sounds believable.

Q2 · Answer ① True
The rarer the fact, the blurrier the probabilities get — and it fills the gap with believable-sounding words.

Q3 · Answer ② False
A confident tone and whether something is true are two different things. Always check important info separately.

Today in one line · Saying it confidently doesn't make it true.

DAY 07 · Why does AI forget what you just said? — Memory limits

Q1 · Answer ② It can only read so much at once (its context)
AI isn't a memory bank. It rereads the whole chat every time, so once the chat is longer than it can read, the start gets pushed out.

Q2 · Answer ② False
In a long chat, the early part can get pushed 'out of the window' and stop counting.

Q3 · Answer ① True
Anything you repeat is back 'inside the window', so the AI can use it more.

Today in one line · If it matters, say it again.

DAY 08 · Why does changing one question change the whole answer? — Prompts

Q1 · Answer ② Saying clearly what result you want
A prompt is the starting point for the text the AI continues. The more clearly you say what you want, the more the odds lean your way.

Q2 · Answer ① True
When the input text changes, the words most likely to come next change completely.

Q3 · Answer ② False
The more you spell out who it's for, the format, the length and the tone, the more useful the result gets.

Today in one line · Don't change the AI — change the question.

DAY 09 · Is a bigger model always better? — Big models, small models

Q1 · Answer ② Parameters (numbers tuned during training)

Size means the number of parameters — the number you got a feel for on DAY 05. The more there are, the more it can hold.

Q2 · Answer ③ It's fast, cheap and runs offline on your device

A small model doesn't win by being smarter — it wins by being close by. Speed, cost, and the fact that it keeps working when the connection drops.

Q3 · Answer ① True

It's called distillation. Teach a small model using a big model's answers as its textbook, and the small model does far better than its size suggests.

Today in one line · Big isn't what's good — the right size for the job is.

DAY 10 · Could this AI fit on my laptop? — Open and closed models

Q1 · Answer ② The numbers tuned in training — the weights

The weights. That pile of numbers you got a feel for on DAY 05 — a trained model is really just a file full of those numbers.

Q2 · Answer ③ Ask and get answers through an app or API

You can ask questions at the window and get answers — and that's it. The core never leaves the server, so when the internet drops, you can't do anything.

Q3 · Answer ② False

Most models open the weights but not the training data. So the word ‘open’ alone doesn't tell you how much is open.

Today in one line · Open doesn't mean free — it means you can get the core in your own hands.