

AI Literacy - LINCS Vocabulary (Grades 9-12)

AI Literacy: Navigating the Algorithmic Age

Tech for Everyone · LINCS Vocabulary Sheet

About This Resource

This resource sheet applies the LINC S vocabulary strategy, developed at the University of Kansas, to every key term in *AI Literacy: Navigating the Algorithmic Age* (Grades 9-12). LINC S turns each vocabulary word into a memory device by connecting how a term *sounds* to what it *means* — a technique that research shows dramatically improves recall compared with rote definition drills.

It is written for both teachers and students of this textbook. Teachers can use the ready-made cards below for direct instruction, warm-ups, or review stations; students can use them as study aids and as models for building their own cards with the blank template on the last page.

Each LINC S card follows five steps:

1. **List the parts** — write the term and its definition.
2. **Identify a reminding word** — pick a familiar word or phrase that sounds like (part of) the term.
3. **Note a LINCing story** — write a one- or two-sentence story that connects the reminding word to the term's meaning.
4. **Create a LINCing picture** — sketch a simple scene from the story.
5. **Self-test** — quiz yourself in both directions until recall is automatic.

Tip

How to self-test: Cover everything on the card except the term. Say the term, recall the reminding word, replay the story, picture the scene, and recite the definition. Then flip it: cover the term, read only the definition, and work backward through the picture and story to name the term. When you can travel the chain both ways without peeking, the word is yours.

Chapter 1: Introduction to AI Literacy – Your World, Powered by Algorithms

This chapter introduces 14 terms.

Artificial Intelligence (AI)

Definition: A branch of computer science dedicated to creating systems capable of performing tasks that typically require human intelligence, such as recognizing speech, making decisions, translating languages, and identifying patterns.

- **Reminding word:** Aye, aye ("AI" sounds like "aye, aye")
- **LINCing story:** The ship's computer answers "Aye, aye, Captain" and then does jobs that used to need a human crew member — recognizing voices, translating radio calls, and deciding the safest route.
- **Picture idea:** A ship's control screen saluting "Aye, aye!" while it steers, translates, and listens all at once.

Algorithms

Definition: A set of step-by-step instructions a computer follows to solve a problem or complete a task. Think of it as a recipe: if X happens, do Y.

- **Reminding word:** Al's rhythm ("algorithm" sounds like "Al's rhythm")
- **LINCing story:** Drummer Al plays the exact same rhythm from his sheet, beat by beat: if the chorus starts, hit the cymbal; if the verse starts, switch to the snare — a fixed recipe of steps.
- **Picture idea:** A drummer named Al reading a numbered list of beats taped to his drum kit.

Machine Learning (ML)

Definition: A type of AI where instead of being given exact instructions for every scenario, a computer is fed massive amounts of data and learns to find patterns on its own — learning from

experience.

- **Reminding word:** Earning ("learning" sounds like "earning")
- **LINCing story:** Nobody handed the rookie a rulebook; she *earned* her skill by studying thousands of past games until she spotted the patterns herself — exactly how machine learning earns ability from mountains of data instead of explicit instructions.
- **Picture idea:** A robot surrounded by towers of game footage, pinning pattern notes to a corkboard it made itself.

Neural Networks

Definition: An advanced type of machine learning inspired by the structure of the human brain. It uses layers of artificial "neurons" to process complex data — enabling things like facial recognition across different angles and lighting.

- **Reminding word:** Mural ("neural" sounds like "mural")
- **LINCing story:** A team paints a giant brain mural in layers: the first layer roughs in shapes, the next adds edges, the last adds a face — each painted layer of "neurons" passes its work to the next until a complex image emerges.
- **Picture idea:** Painters on scaffolding, each level of a brain-shaped mural adding more detail to a face.

Artificial Narrow Intelligence (ANI)

Definition: AI that is incredibly good at doing one specific task — like playing chess or recommending videos — but cannot transfer that skill to any other domain.

- **Reminding word:** Arrow ("narrow" sounds like "arrow")
- **LINCing story:** An arrow flies dead-center into one bullseye every time, but an arrow can't drive you home or cook dinner — it does exactly one thing brilliantly and nothing else.
- **Picture idea:** An arrow buried in a bullseye labeled "chess," with question marks over targets labeled "driving" and "cooking."

Artificial General Intelligence (AGI)

Definition: A hypothetical AI that would possess the ability to understand, learn, and apply

knowledge across a wide variety of tasks, just like a human. AGI does not currently exist.

- **Reminding word:** General ("general" sounds like an army General)
- **LINCing story:** A legendary five-star General could command any unit — infantry, navy, engineers, medics — mastering every domain like a human can; but this General is only a rumor, because no such commander has ever been commissioned.
- **Picture idea:** An empty general's uniform on a stand, surrounded by maps of many different battlefields, tagged "position not yet filled."

Natural Language Processing (NLP)

Definition: A branch of AI that enables computers to understand, interpret, and generate human language — powering voice assistants, chatbots, and translation tools.

- **Reminding word:** Food processor ("processing" sounds like "food processor")
- **LINCing story:** Drop raw, messy human sentences into the food processor and it blends them into something a computer can digest — then reverses to serve fresh sentences back, powering chatbots and translators.
- **Picture idea:** A kitchen food processor with word bubbles going in the top and a chatbot reply pouring out the spout.

digital literacy

Definition: The ability to use digital tools and technology effectively — like knowing how to search the internet, create documents, and navigate apps.

- **Reminding word:** Digits ("digital" sounds like "digits," your fingers)
- **LINCing story:** Skilled digits fly across the keyboard and screen — searching, creating documents, navigating apps — because knowing how to *work* the tools with your fingers is the base level of tech skill.
- **Picture idea:** Two hands with labeled fingers tapping a keyboard, phone, and search bar at once.

AI literacy

Definition: A deeper level of understanding that goes beyond using technology — it means

understanding why a search engine chose specific results, recognizing hidden sorting mechanisms, and understanding that two people can receive completely different results based on their digital profiles.

- **Reminding word:** Litter-a-see ("literacy" sounds like "litter-a-see")
- **LINCing story:** Lift the tidy search page like a rug and "litter-a-see" — you *see the litter* hidden underneath: the sorting machinery deciding why you and your friend get completely different results.
- **Picture idea:** A student lifting the corner of a clean search-results page to reveal gears and ranking levers hidden below.

deepfake

Definition: AI-generated media — usually video or audio — that realistically depicts a real person saying or doing something they never actually said or did.

- **Reminding word:** Deep lake ("deepfake" sounds like "deep lake")
- **LINCing story:** In the deep lake floats a fish so realistic that anglers swear it's alive — just as a deepfake video shows a real person convincingly saying words they never actually said.
- **Picture idea:** A lifelike rubber fish in a deep lake, with a shocked angler and a tiny "100% fake" tag on its fin.

Turing Test

Definition: A test proposed by Alan Turing in 1950 to evaluate a machine's ability to exhibit intelligent behavior indistinguishable from that of a human. If a human interrogator cannot reliably tell whether they are talking to a machine or a person, the machine is said to have passed.

- **Reminding word:** Touring ("Turing" sounds like "touring")
- **LINCing story:** On a touring bus you chat with the guide through a curtain the whole trip; if by the last stop you still can't tell whether the guide is a person or a machine, the machine has passed the test.
- **Picture idea:** A tour bus passenger talking to a curtained driver's seat, with "human or machine?" written on the curtain.

generative AI

Definition: A category of AI systems capable of creating new, original content — including text, images, audio, and video — based on patterns learned from vast training datasets. Examples include ChatGPT, Gemini, Midjourney, and Suno.

- **Reminding word:** Generator ("generative" sounds like "generator")
- **LINCing story:** A generator doesn't store old electricity — it produces brand-new power on demand; generative AI likewise produces brand-new text, images, and songs from the patterns it learned.
- **Picture idea:** A humming generator with cables outputting a poem, a painting, and a music note instead of sparks.

algorithmic society

Definition: A society in which automated algorithmic systems make or substantially influence high-stakes decisions in areas like employment, credit, healthcare, and criminal justice — often without meaningful human oversight or transparency.

- **Reminding word:** Rhythmic drumbeat ("-rithmic" sounds like "rhythmic")
- **LINCing story:** The whole town marches to one rhythmic drumbeat played by an unseen machine drummer — job offers, loans, and court decisions all keep its tempo, and no human conductor is checking the score.
- **Picture idea:** A town of people marching in step past signs reading "hired," "loan denied," "parole," while a hidden drum machine sets the beat.

ATS system

Definition: An Applicant Tracking System — software that automatically scans, filters, and ranks job applications using keyword matching and scoring algorithms before a human recruiter reviews them. Approximately 75% of large companies use ATS systems.

- **Reminding word:** At the scanner ("ATS" sounds like "at the scanner")
- **LINCing story:** Your resume stops "at the scanner" before any human ever sees it — the machine hunts for keywords, scores you, and ranks you, and only the survivors reach the

recruiter's desk.

- **Picture idea:** A conveyor belt of resumes passing through an airport-style scanner, with most dropping into a reject bin before a distant recruiter.

Chapter 2: Engaging with AI – Accessing Information and Expanding Horizons

This chapter introduces 14 terms.

Large Language Models (LLMs)

Definition: Powerful AI systems trained on enormous amounts of text data. They generate human-like text by predicting the most probable next word in a sequence, one word at a time.

- **Reminding word:** Large lasagna ("large language" sounds like "large lasagna")
- **LINCing story:** The chef builds a large lasagna one layer at a time, each layer chosen because it best fits everything already stacked — an LLM writes one predicted word at a time after digesting an enormous pantry of text.
- **Picture idea:** A chef stacking lasagna layers that are each printed with a single word, forming a sentence up the side of the dish.

prompt

Definition: The instruction or question you give to an AI system. Because AI predicts text based on your input, a vague prompt produces a vague, generic answer.

- **Reminding word:** Prom ("prompt" sounds like "prom")
- **LINCing story:** A vague prom invitation — "come sometime, wear something" — gets you a confused, generic reply; the clearer the invitation you give an AI, the better the answer that shows up.
- **Picture idea:** Two prom invitations side by side: one blank and smudged with a shrugging reply, one detailed with an enthusiastic reply.

Prompt engineering

Definition: The skill of crafting clear, specific, and structured instructions to get high-quality, useful outputs from an AI model.

- **Reminding word:** Engine gears ("engineering" sounds like "engine gears")
- **LINCing story:** A mechanic keeps tuning the engine gears — tightening, adjusting, restructuring — until the machine runs perfectly; a prompt engineer keeps refining the wording of instructions until the AI's output is exactly right.
- **Picture idea:** A mechanic adjusting gears inside an engine whose exhaust pipe outputs a polished paragraph.

Recommendation algorithms

Definition: AI systems that analyze your past behavior to suggest what you might want to see, hear, or buy next. Their primary goal is to maximize the time you spend on a platform.

- **Reminding word:** Rec center ("rec-" in "recommendation" sounds like "rec center")
- **LINCing story:** The rec center clerk tracks every court and class you've used, then keeps suggesting your next activity — not for your benefit, but to keep you inside the building as long as possible.
- **Picture idea:** A clerk at a rec center desk holding a clipboard of your history and pointing to a "you might like this next" sign.

Content-based filtering

Definition: A recommendation strategy that looks at the characteristics of things you already like and finds similar content to show you next.

- **Reminding word:** Contents of the box ("content" sounds like "contents")
- **LINCing story:** The grocer checks the contents of the cereal box you loved — chocolate, crunchy, no raisins — and hands you other boxes with matching contents, judging only the item's own characteristics.
- **Picture idea:** A grocer comparing ingredient labels on two cereal boxes and handing the matching one to a shopper.

Collaborative filtering

Definition: A recommendation strategy that finds other users with similar tastes to yours and recommends content that those users enjoyed but you haven't seen yet.

- **Reminding word:** Co-lab partners ("collaborative" sounds like "co-lab")
- **LINCing story:** Your co-lab partners like all the same experiments you do, so when they rave about one you haven't tried, the teacher recommends it to you — matching you to people with similar tastes, not to the item's ingredients.
- **Picture idea:** Two lab partners with matching checklists, one pointing the other toward an experiment only they have finished.

filter bubble

Definition: An invisible digital boundary created by personalization algorithms where you are only exposed to information, news, and opinions that align with what you already believe.

- **Reminding word:** Coffee filter ("filter" sounds like "coffee filter")
- **LINCing story:** A coffee filter fits over your head like a clear bubble, letting through only the one flavor you already like — every headline and opinion that disagrees gets strained out before you ever taste it.
- **Picture idea:** A person inside a transparent bubble shaped like a coffee filter, with matching headlines dripping in and different ones stuck outside.

echo chamber

Definition: A situation where a person only encounters information or opinions that reflect and reinforce their own, making it seem like the whole world agrees with them.

- **Reminding word:** Canyon echo ("echo" sounds like a canyon echo)
- **LINCing story:** Shout your opinion into the canyon and only your own voice bounces back, again and again, until you're convinced the whole world is chanting agreement.
- **Picture idea:** A person yelling into a canyon while dozens of identical speech bubbles echo back from the walls.

AI hallucination

Definition: When an AI system generates information that sounds confident and plausible but is actually incorrect, fabricated, or not grounded in real facts.

- **Reminding word:** Hall of illusions ("hallucination" starts with "hall," like "hall of

illusions")

- **LINCing story:** In the hall of illusions, a confident tour guide describes paintings that aren't actually on the walls — smooth, plausible, and completely fabricated, just like an AI stating made-up "facts" with total confidence.
- **Picture idea:** A tour guide gesturing proudly at empty picture frames while visitors nod along.

algorithmic bias

Definition: When an AI system produces results that are systematically skewed or prejudiced because of flaws, gaps, or historical prejudices embedded in its training data.

- **Reminding word:** Buyers ("bias" sounds like "buyers")
- **LINCing story:** For decades the store's buyers stocked only one style, so the "smart shelf" trained on those records keeps pushing that same style to everyone — old human prejudice baked into the data tilts every new result.
- **Picture idea:** A tilted store shelf stocked with one identical product, resting on a stack of yellowed old order forms.

chain-of-thought prompting

Definition: A prompting technique where you instruct an AI to reason through a problem step-by-step before arriving at a final answer. Adding phrases like "Think step by step" dramatically improves performance on math, logic, and complex reasoning tasks.

- **Reminding word:** Chain links ("chain" sounds like "chain links")
- **LINCing story:** The climber reaches the answer at the top by gripping the chain one link at a time — telling the AI to "think step by step" forces it up the reasoning chain link by link instead of leaping and falling.
- **Picture idea:** A climber ascending a hanging chain whose links are numbered steps, with the answer shining at the top.

SIFT method

Definition: A four-step media literacy framework (Stop, Investigate the source, Find better

coverage, Trace claims) developed by Mike Caulfield to help people evaluate information before sharing or accepting it.

- **Reminding word:** Sifting flour ("SIFT" sounds like "sift," as in sifting flour)
- **LINCing story:** A baker sifts the flour to catch lumps and grit before anything goes in the oven — you Stop, Investigate, Find better coverage, and Trace claims to catch bad information before it goes in your feed.
- **Picture idea:** A baker shaking a sifter labeled S-I-F-T, with fake headlines caught in the mesh and clean flour falling through.

attention economy

Definition: An economic system in which human attention is the primary scarce resource.

Companies profit by capturing user attention and selling it to advertisers. The longer you watch, scroll, or engage, the more money the platform earns.

- **Reminding word:** A tension ("attention" sounds like "a tension")
- **LINCing story:** Every app hooks a rope to your eyes and pulls, creating a tension — because your gaze is the scarce resource, and whichever platform holds the tension longest sells that time to advertisers.
- **Picture idea:** A tug-of-war where several phone apps pull ropes attached to one person's wide-open eyes, with a cash register at each rope's end.

variable reward schedule

Definition: A behavioral psychology principle where unpredictable rewards are more addictive than predictable ones. Social media platforms are deliberately designed around variable reward schedules — sometimes you get likes, sometimes you don't — to create compulsive checking behavior.

- **Reminding word:** Very rare prize ("varia-" sounds like "very rare")
- **LINCing story:** The claw machine pays out a very rare prize on no schedule you can predict, so you keep feeding it coins — the unpredictability itself, not the prize, is what hooks you, exactly like refreshing for likes.
- **Picture idea:** A student feeding coins into a claw machine shaped like a phone, with a

"maybe this time" thought bubble.

Chapter 3: Creating with AI – The Ultimate Collaborative Tool

This chapter introduces 9 terms.

plagiarism

Definition: Presenting someone else's work, ideas, or expression as your own without proper attribution. With AI, this means submitting machine-generated content as your own original thought.

- **Reminding word:** Plague ("plagia-" sounds like "plague")
- **LINCing story:** Copying spread through the school like a plague — students stamping their own names on essays a machine or a classmate wrote — until every infected grade had to be thrown out.
- **Picture idea:** An essay covered in plague-style warning spots, with one student's name stamped over another author's crossed-out name.

Co-creation

Definition: A collaborative process where a human and an AI work together on a creative or problem-solving task, with the human remaining in the driver's seat to set direction, make final decisions, and edit the output.

- **Reminding word:** Co-pilot ("co-creation" starts with "co-," like "co-pilot")
- **LINCing story:** You fly the plane while the AI co-pilot handles readouts and suggestions — but you set the destination, make the calls, and land it, because the human stays in the pilot's seat.
- **Picture idea:** A cockpit with a student gripping the controls and a small robot co-pilot handing over a suggested flight path.

academic integrity

Definition: The commitment to honest, responsible, and ethical scholarship — including being

transparent about how AI tools are used in your work and ensuring your final product genuinely reflects your own understanding.

- **Reminding word:** Intact ("integrity" sounds like "intact")
- **LINCing story:** Her essay arrived intact — nothing hidden, nothing borrowed without credit, AI help openly disclosed — so the work still genuinely held her own understanding in one honest piece.
- **Picture idea:** An unbroken glass case around an essay, with a visible label listing exactly which tools helped and how.

diffusion

Definition: A technique used by AI image generators where the model learns to create images by gradually removing "noise" from a random pattern, guided by the patterns it learned from billions of training images.

- **Reminding word:** De-fuzz ("diffusion" sounds like "de-fuzzing")
- **LINCing story:** The artist de-fuzzes a static-filled TV screen, pass after pass, until a clear picture emerges from the snow — a diffusion model creates images by removing noise step by step, guided by everything it learned.
- **Picture idea:** Four TV screens in a row going from pure static to a crisp landscape, with a brush wiping the fuzz away.

copyright

Definition: A legal right that grants the creator of an original work exclusive rights to its use and distribution. With AI-generated art, questions of ownership are legally unresolved.

- **Reminding word:** Right to copy ("copyright" splits into "copy" + "right")
- **LINCing story:** A robot painter finishes a canvas and the courtroom argues over who holds the right to copy it — the robot's maker, the prompt writer, or nobody — because the law hasn't decided who the creator is.
- **Picture idea:** A judge staring at a robot-painted canvas while three people each grab a corner of a "RIGHT TO COPY" certificate.

pair programmer

Definition: An AI coding assistant that works alongside a human developer — helping write code, identify bugs, and explain logic errors in real time.

- **Reminding word:** Pear ("pair" sounds like "pear")
- **LINCing story:** A pear-shaped robot pulls a chair up to your keyboard and codes alongside you — spotting bugs as you type and explaining logic errors in real time like a partner sharing the desk.
- **Picture idea:** A student at a laptop with a pear-shaped robot beside them, pointing at a highlighted line of buggy code.

voice cloning

Definition: An AI technique that creates a synthetic copy of a specific person's voice from a short audio sample. The cloned voice can then be used to say anything the operator types, making it indistinguishable from the real person's speech.

- **Reminding word:** Cologne ("cloning" sounds like "cologne")
- **LINCing story:** A stranger wearing your friend's exact cologne fools everyone in the dark hallway — just as a voice copied from a short sample can say anything typed and be mistaken for the real person.
- **Picture idea:** A shadowy figure spraying "Voice No. 5" cologne while speaking into a phone labeled with someone else's name.

AlphaFold

Definition: An AI system developed by DeepMind that predicts the three-dimensional structure of proteins from their amino acid sequences. It solved the protein folding problem — a challenge that had stumped biologists for 50 years — and has mapped the structures of over 200 million proteins.

- **Reminding word:** Alpha folding laundry ("AlphaFold" splits into "alpha" + "fold")
- **LINCing story:** The alpha laundry robot — best folder in the world — took a 50-year backlog of tangled protein "shirts" and folded 200 million of them into their exact 3-D

shapes overnight.

- **Picture idea:** A gold-medal robot folding a mountain of tangled ribbon-like shirts into neat twisted 3-D shapes.

authorship

Definition: The quality of being the originator or creator of a work — traditionally implying intention, perspective, lived experience, and creative agency. The question of whether AI can be an author challenges fundamental assumptions about creativity, consciousness, and meaning.

- **Reminding word:** Arthur ("author" sounds like "Arthur")
- **LINCing story:** The publisher asks, "Did Arthur write this, or did his machine?" — because being the true originator means bringing intention and lived experience, and a machine's byline forces us to ask whether it can ever really be Arthur.
- **Picture idea:** A book cover reading "by Arthur" with a question mark, split between a man with a pen and a printer spitting out pages.

Chapter 4: Managing AI – Intentionality and Responsibility

This chapter introduces 8 terms.

digital footprint

Definition: The trail of data you leave behind when using the internet and digital devices — including your searches, uploads, prompts, and interactions with AI tools.

- **Reminding word:** Wet cement ("footprint" brings to mind footprints in wet cement)
- **LINCing story:** Every step you take online lands in wet cement — each search, upload, and prompt hardens into a permanent trail that others can follow long after you've walked away.
- **Picture idea:** A sidewalk of hardened cement footprints, each print stamped with a search bar, a photo, or a chat prompt.

productive struggle

Definition: The challenging but beneficial process of working through a difficult problem without immediate help. This cognitive effort is what builds real skills, knowledge, and mental resilience.

- **Reminding word:** Strudel ("struggle" sounds like "strudel")
- **LINCing story:** Kneading strudel dough by hand is slow and exhausting, but that effort is exactly what makes a real baker — grinding through a hard problem without shortcuts is what builds real skill and resilience.
- **Picture idea:** A sweating baker kneading tough strudel dough by hand while an unused bread machine sits ignored in the corner.

automation bias

Definition: The psychological tendency to over-trust and blindly follow a machine's output over your own human intuition, judgment, or expertise.

- **Reminding word:** Autopilot ("automation" sounds like "autopilot")
- **LINCing story:** The pilot keeps trusting the autopilot even as the mountain fills the windshield — blindly following the machine's output instead of his own trained judgment.
- **Picture idea:** A pilot relaxing with arms crossed while the autopilot screen says "all clear" and a mountain looms in the window.

human augmentation

Definition: The use of AI and technology to enhance human capabilities, allowing professionals to work faster, smarter, and with greater impact — rather than being replaced by machines.

- **Reminding word:** A magnet station ("augmentation" sounds like "a-magnet-station")
- **LINCing story:** At the magnet station, a powered brace snaps onto the worker's own arm — the machine doesn't take her job, it amplifies her strength so she works faster and lifts more than she ever could alone.
- **Picture idea:** A worker at a station where a magnetic exo-arm clicks onto her arm, lifting a beam labeled "impossible alone."

dopamine loop

Definition: A neurological feedback cycle where an action produces a reward (such as a like, a follow, or an entertaining video), which motivates the brain to repeat the action, creating a habit loop. Social media platforms are engineered to exploit this cycle compulsively.

- **Reminding word:** Dough machine ("dopamine" sounds like "dough machine")
- **LINCing story:** The dough machine drops a warm donut every time you pull the lever, so your brain begs you to pull again — action, reward, repeat — the same loop a like or a viral video runs in your head.
- **Picture idea:** A person pulling a lever on a donut machine shaped like a phone, with an arrow circling from hand to donut to brain and back.

data broker

Definition: A company that collects personal data from hundreds of different sources — public records, purchase histories, online behavior, social media, and more — and compiles it into

detailed profiles that are sold to marketers, insurers, employers, and other buyers.

- **Reminding word:** Pawn broker ("broker" as in "pawn broker")
- **LINCing story:** A pawn broker you've never met has assembled a scrapbook of your entire life — receipts, records, posts, late-night searches — and sells copies over the counter to marketers, insurers, and employers.
- **Picture idea:** A pawn shop counter displaying a thick scrapbook with someone's face on the cover and a "for sale" tag.

surveillance economy

Definition: An economic system in which the collection, analysis, and sale of personal behavioral data is the primary mechanism of value creation — sometimes described as "capitalism based on monitoring human experience."

- **Reminding word:** Sir Vey-Lance ("surveillance" sounds like "Sir Vey-Lance")
- **LINCing story:** Sir Vey-Lance rides through the kingdom recording everything the villagers buy, say, and do, then sells the scrolls at market — an entire economy built on watching people and selling what's observed.
- **Picture idea:** A knight with a spyglass and quill filling scrolls about villagers, with a market stall selling the scrolls for gold.

GDPR Article 22

Definition: A provision of the European Union's General Data Protection Regulation that gives individuals the right not to be subject to decisions made solely by automated systems that significantly affect them — such as credit decisions, hiring, or parole assessments. It also gives the right to request human review of automated decisions.

- **Reminding word:** Catch-22 ("Article 22" sounds like "Catch-22")
- **LINCing story:** It sounds like a Catch-22, but Article 22 is the opposite of a trap — it's the exit door: in the EU, when a machine alone denies your loan or job, you can refuse the verdict and demand a human review it.
- **Picture idea:** A person stepping out of a maze of robot judges through a door marked "22: human review this way."

Chapter 5: Designing AI – Shaping the Future and Ethical Impact

This chapter introduces 9 new terms (algorithmic bias, which also appears here, was covered in Chapter 2).

data labeling

Definition: The process of tagging or annotating raw data (images, text, audio) with meaningful labels so that an AI model can learn from it. This is often performed by a large, often invisible human workforce.

- **Reminding word:** Label gun ("labeling" as in a price-tag label gun)
- **LINCing story:** An invisible army works night shifts with price-tag label guns, stamping millions of photos "cat," "stop sign," "tumor" — because a model can only learn from raw data after humans have tagged what everything is.
- **Picture idea:** Rows of shadowy workers firing label guns at a conveyor belt of photos, each photo gaining a small tag.

Garbage In, Garbage Out (GIGO)

Definition: A principle stating that the quality of an AI's output is entirely dependent on the quality of its training data. Flawed, biased, or incomplete data will always produce flawed, biased, or incomplete results.

- **Reminding word:** Gecko ("GIGO" sounds like "gecko")
- **LINCing story:** Feed the gecko nothing but garbage flies and it grows sickly and off-color — a model fed flawed, biased, or incomplete data can only ever produce flawed, biased, incomplete output.
- **Picture idea:** A gecko eating flies from a trash can labeled "data," looking sickly, with garbage coming out the other end.

transparency

Definition: The principle that AI systems should be able to explain their decision-making process in a way that humans can understand and verify — rather than producing outputs that cannot be audited or questioned.

- **Reminding word:** Parent ("trans-PARENT-cy" contains "parent")
- **LINCing story:** If the system's reasoning is written so plainly that even your parent can read every step and check the math, it's transparent — a decision humans can audit and question instead of a sealed verdict.
- **Picture idea:** A parent reading a glass-walled machine's step-by-step decision printout and nodding, checklist in hand.

Explainable AI (XAI)

Definition: A field of AI research focused on creating systems that can clearly describe the steps and reasoning behind their decisions, making it possible for humans to audit, trust, and challenge AI outputs.

- **Reminding word:** X-ray ("XAI" sounds like "X-ray")
- **LINCing story:** An X-ray shows exactly what's happening inside the body; XAI is the X-ray for a model — letting humans see the steps and reasoning inside a decision so they can audit, trust, or challenge it.
- **Picture idea:** A doctor holding an X-ray of a computer, with the "bones" drawn as a flowchart of reasoning steps.

AI geopolitics

Definition: The study of how artificial intelligence capabilities shape international power dynamics, national competition, military strategy, and global governance — including the race for AI dominance between major powers and the efforts to regulate AI internationally.

- **Reminding word:** Globe ("geo-" sounds like the "geo" in "geography," the globe)
- **LINCing story:** World leaders lean over a giant globe playing tug-of-war with a glowing chip — because whichever nation pulls ahead in AI gains military muscle, economic power,

and a bigger say in the world's rules.

- **Picture idea:** Two leaders on opposite sides of a globe pulling a rope tied to a glowing computer chip at the North Pole.

open-source AI

Definition: AI systems whose model weights, training code, or architecture are publicly available for anyone to inspect, modify, and deploy. Examples include Meta's LLaMA family and Mistral. Open-source AI enables broad research access and prevents any single entity from monopolizing the technology.

- **Reminding word:** Open sauce ("open source" sounds like "open sauce")
- **LINCing story:** The chef publishes the secret sauce recipe on the door for everyone — anyone can inspect it, tweak it, and cook with it, so no single restaurant can ever monopolize the flavor.
- **Picture idea:** A restaurant door with a taped-up sauce recipe, and a line of cooks copying it into their own notebooks.

responsible scaling

Definition: A framework, advocated by some AI labs including Anthropic, that proposes deliberately limiting AI capability development until safety research has demonstrated sufficient techniques to ensure the system remains aligned with human values at the next capability level.

- **Reminding word:** Scaling a cliff ("scaling" as in scaling a cliff)
- **LINCing story:** A responsible climber refuses to scale the next pitch until the ropes and anchors for that height have been tested — labs deliberately hold back capability climbs until safety research proves the next level can be secured.
- **Picture idea:** A climber pausing on a cliff ledge, testing an anchor labeled "safety research" before touching the next stretch of rock.

AI alignment

Definition: The research problem of ensuring that AI systems' goals, values, and behaviors remain consistent with the intentions and values of their human designers — especially as

systems become more capable and autonomous.

- **Reminding word:** Wheel alignment ("alignment" as in a car's wheel alignment)
- **LINCing story:** A car with bad wheel alignment drifts off the road no matter how you steer — alignment research keeps an AI's goals tracking the road its human designers intend, even as the car gets faster.
- **Picture idea:** A mechanic aligning the wheels of a robot-driven car so its tire tracks follow the painted line labeled "human values."

orthogonality thesis

Definition: Nick Bostrom's philosophical argument that intelligence and goal content are independent — meaning a superintelligent AI system could pursue almost any goal, including ones deeply harmful to humans, simply because its intelligence does not automatically generate good values.

- **Reminding word:** Orthodontist ("ortho-" sounds like "orthodontist")
- **LINCing story:** A genius orthodontist could aim that brilliance at any goal — straightening teeth, or something far worse — because raw intelligence sits at a right angle to values and never automatically supplies good ones.
- **Picture idea:** Two perpendicular arrows labeled "how smart" and "what it wants," with a brainy figure free to slide anywhere along the "wants" axis.

Blank LINCS Card

Copy this table into your notebook (or print it) to build your own LINCS cards for any term.

Step	Your work
1. List the term	
2. List the definition	
3. Reminding word (sounds like...)	
4. LINCing story	
5. LINCing picture (sketch it!)	

Tips for good LINCS cards

- The reminding word must be a real, familiar word or phrase that genuinely sounds like part of the term — never the term itself.
- The story must connect sound to meaning: someone who remembers the story should be able to rebuild the definition from it.
- The picture must show the story, not the term — draw the scene, not the word.
- Keep stories short (one or two sentences) and pictures simple enough to sketch in about 30 seconds.
- Self-test in both directions: term to definition, and definition back to term.