Mindspark
AI & Digital Thinking

Global Framework Alignment

How our curriculum maps to the world's leading standards for AI literacy, computational thinking, and digital competence

We built this curriculum by studying every major global framework for AI and computational thinking education — then going deeper. The table below maps our 10 strands and 244 sessions of content (184 LEARN modules, 20 CREATE projects & hackathons, 16 unplugged worksheets, and 24 assessments) against each framework's core requirements. Our goal was not to check boxes, but to build what we genuinely believe children need. The alignment with these frameworks is a consequence of that, not the starting point.

FRAMEWORK	FIT	WHERE WE ALIGN	WHERE WE DIFFER OR HAVE ROOM TO GROW
CBSE AI & CT India's national mandate	★★★★☆	We start CT from Level 1 — **ahead of CBSE's Class 3 mandate**. Our Logic Puzzles, Programming, and Data Analysis strands directly fulfil the CT requirement; AI Foundations builds from pixel representation to neural networks, exceeding the depth of CBSE's current 15-hour SOAR module. Our ~18 hrs/year at upper levels surpasses CBSE's minimum. The **structured grade-by-grade progression** is exactly what CBSE envisions but hasn't yet detailed in a full syllabus.	*CBSE emphasises CT integration into Maths and core subjects — our Interdisciplinary strand covers this from Level 3, but it's a smaller allocation. CBSE may eventually require specific tool proficiency (office suites, etc.) that we deliberately don't teach — our focus is on thinking skills, not software training.*
OECD AI Principles Human-centric AI governance	★★★★☆	Our AI Foundations strand covers **bias (Bias Busters), the black-box problem, AI ethics, and algorithmic feed curation** — directly mapping to OECD's principles of transparency and fairness. At Level 8, AI Safety & Alignment and AI Ethics Auditor address **accountability and human-centred values**. Our Critical Thinking strand reinforces this with structured ethical reasoning, cognitive biases, and evaluating claims.	*The OECD principles also cover environmental impact of AI and privacy-by-design. We touch on environmental topics (Climate Data Lab, Ecosystem Simulator) and privacy (Privacy Settings Simulator), but don't foreground them as AI-specific concerns. Room to strengthen this connection explicitly.*
ISTE Standards Empowered learner, digital citizen	★★★★☆	**5 of 7 ISTE student standards strongly mapped.** Computational Thinker is our deepest alignment (logic, programming, data, AI across all levels). Digital Citizen maps to our Digital Literacy strand. Knowledge Constructor maps to our Data Analysis and Critical Thinking strands. Innovative Designer is addressed through CREATE projects and Hackathons. Our self-paced, scaffolded platform embodies the **Empowered Learner** standard.	*Creative Communicator and Global Collaborator are lighter areas. We don't explicitly teach multimedia presentation, persuasive communication, or cross-cultural digital collaboration as structured strands. CREATE modules partially address creative expression, but it's not a progression track.*
CSTA K–12 CS Algorithmic thinking, data practices	★★★★★	**All 5 CSTA core concepts covered.** Algorithms & Programming (44 weeks, block to Python). Data & Analysis (22 weeks, tallying to SQL and A/B testing). Networks & Internet (How the Internet Works, Encryption, Wireless). Impacts of Computing (AI Ethics, Bias Busters, Digital Literacy). Computing Systems (Binary Builders, Inside the Machine). Our **9 tagged skills** (logical reasoning, pattern recognition, decomposition, algorithmic design, debugging, optimisation, abstraction, instruction design, evaluation) map cleanly to CSTA practices.	*CSTA emphasises collaborative computing and fostering inclusive computing culture. Our curriculum is self-paced and individual by design. Collaboration exists mainly in Hackathons and Unplugged activities (still being developed). Pair programming appears at Level 7 (Code Collaborator) but isn't a foundational practice.*

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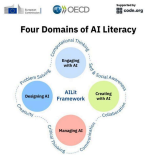 **OECD AI Literacy** AI literacy competency model	★★★★★	**All 4 domains deeply covered — possibly our strongest alignment.** Engage with AI: from Level 1 (how computers see) through critical evaluation of AI outputs. Create with AI: our entire AI Productivity strand — prompting for images, games, music, code, chatbots. Manage AI: AI Research Assistant, Automation Architect, strategic AI delegation. **Design AI**: training data, decision trees, neural networks, bias, LLMs, transformers, GANs, model evaluation with precision/recall/F1.	*The OECD framework also emphasises "managing AI for wellbeing" — knowing when to disengage from AI, managing AI-related screen time. Our Digital Literacy strand touches on digital wellbeing broadly, but we could strengthen the AI-specific angle of this competency.*
AI4K12 Five Big Ideas Perception, learning, impact	★★★★★	**All 5 Big Ideas with clear level-by-level progression.** Perception: Pixel Peepers (L1), Sensor Safari (L4), Computer Vision Lab (L7). Representation & Reasoning: decision trees, search algorithms, data structures. Learning: Training Robo, Neural Nets 1–2, Deep Neural Networks, model evaluation. Natural Interaction: NLP Unpacked, prompt engineering from L1, Chatbot Architect. **Societal Impact**: AI Ethics Arena, AI Safety & Alignment, Bias Busters, How Algorithms Shape Your Feed, Ethical Dilemmas.	*AI4K12 provides formal grade-band progression charts (K–2, 3–5, 6–8, 9–12) for each Big Idea. We haven't yet created a formal crosswalk document mapping our levels to their bands — this would be a strong addition for schools that reference AI4K12 specifically.*
DigComp 3.0 EU digital competence framework	★★★★☆	**4 of 5 competence areas strongly covered.** Information & Data Literacy: our Data Analysis + Critical Thinking strands. Digital Content Creation: Programming strands + CREATE projects + AI Productivity (DigComp 3.0 specifically added "interacting with AI" — we are deeply aligned here). Safety: Digital Literacy strand covers privacy, cyberbullying, misinformation, digital identity. **Problem Solving**: Logic Puzzles, debugging, algorithmic design, data-driven decision-making.	*Communication & Collaboration is our lightest area relative to DigComp. The framework covers interacting through digital technologies, sharing and collaborating online, netiquette, and managing digital identity. We address digital identity (Level 8) and safe sharing (ShareWise), but structured online collaboration isn't a strand focus.*
UNESCO AI Framework AI competency & ethics guidelines	★★★★☆	UNESCO defines five pillars — we cover all of them. **AI Mindset**: progressive exposure from Level 1 builds curiosity and ethical awareness. **AI Use**: our AI Productivity strand, from basic prompting to chatbots and automation. **AI Foundations**: our AI Foundations + Advanced AI strands cover the full technical arc. **AI Ethics**: Bias Busters, AI Ethics Arena, AI Safety & Alignment, AI Ethics Auditor. **Human-AI Collaboration**: Code Collaborator, AI Research Assistant, Automation Architect.	*UNESCO strongly emphasises teacher AI competency alongside student competency. Our teacher training programme is launching in April 2026 — it's a work in progress. UNESCO also stresses local/cultural context in AI education. Our Telugu deployment (70,000 students) addresses this, but the core curriculum content is largely universal in framing.*

The consistent pattern across all eight frameworks: **we exceed requirements on AI understanding, data reasoning, and critical thinking** — the strands that every report identifies as the fastest-growing skills. The consistent gap is **collaboration and communication**, which our curriculum addresses lightly through Hackathons and Unplugged activities rather than as structured strands. This is a deliberate design choice — we prioritise depth of thinking over breadth of soft-skill coverage — but it's worth noting for schools that weight collaboration heavily in their ICT outcomes.

Competency Coverage Map

Which competency domains does each framework address — and how does our curriculum compare? A filled circle means the framework explicitly covers that domain. A half circle means partial coverage. An empty circle means it is outside the framework's scope.

COMPETENCY DOMAIN	CBSE AI&CT	OECD AI Prin.	ISTE	CSTA K-12	OECD AILit	AI4K12	Dig Comp	UNES CO AI	PISA 2029	WEF FoJ	Ei MS AI&DT
Logical reasoning & puzzles Traditionally: Maths	◐	○	◐	◐	○	○	○	○	○	○	●
Block coding (visual) Traditionally: CS / ICT	●	○	●	●	○	○	●	○	○	○	●
Text coding (JS, Python) Traditionally: CS / ICT	●	○	●	●	○	○	●	○	○	○	●
Data analysis & visualisation Traditionally: Maths / Science	◐	○	◐	●	○	○	●	○	○	○	●
Statistical reasoning Traditionally: Maths	○	○	○	◐	○	○	○	○	○	○	●
How AI works (training, models) Traditionally: None — new	●	●	◐	◐	●	●	○	●	●	○	●
Neural networks & deep learning Traditionally: Higher ed	◐	○	○	○	●	●	○	◐	◐	○	●
LLMs, transformers, GANs Traditionally: Higher ed	○	○	○	○	◐	◐	○	○	○	○	●
AI safety & alignment Traditionally: Philosophy / new	○	●	○	○	●	◐	○	●	○	○	●
Prompt engineering & AI use Traditionally: None — new	◐	○	◐	○	●	◐	◐	●	◐	○	●
AI bias & fairness Traditionally: Ethics / new	◐	●	○	◐	●	●	○	●	●	○	●
Critical thinking & evaluation Traditionally: Language / Science	◐	○	●	○	●	◐	◐	◐	●	●	●
Fact vs. opinion, fallacies Traditionally: Language	○	○	○	○	○	○	○	○	◐	○	●

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Probability & estimation Traditionally: Maths	○	○	○	○	○	○	○	○	○	○	●
Digital safety & privacy Traditionally: ICT	●	○	●	●	○	○	●	◐	●	○	●
Cyberbullying & digital identity Traditionally: ICT / PSHE	◐	○	●	◐	○	○	●	○	●	○	●
Misinformation & deepfakes Traditionally: Media literacy	○	○	◐	○	●	◐	●	◐	●	○	●
Interdisciplinary application Traditionally: Science / SS	◐	○	●	○	○	○	○	◐	○	○	●
Algorithms & data structures Traditionally: CS / Higher ed	●	○	○	●	○	◐	○	○	○	○	●
Creative thinking Traditionally: Arts / Language	○	○	●	○	●	○	●	○	●	●	◐
Collaboration Traditionally: All subjects	○	○	●	●	○	○	●	◐	◐	●	○

● Explicitly covered ◐ Partially / implicitly covered ○ Outside scope ● = Ei Mindspark AI & DT covers

The pattern is clear: no single framework covers the full breadth we do. Most frameworks focus on AI *or* coding *or* digital literacy — our curriculum integrates all three alongside logic, data reasoning, critical thinking, and interdisciplinary application. Domains like probability, statistical reasoning, and logical fallacies — traditionally confined to Maths or Language classrooms — find a natural home in our ICT curriculum for the first time.

References & Framework Links

All frameworks referenced in this document, with direct links to official sources.

FRAMEWORK	FULL TITLE	URL
CBSE AI & CT	AI and Computational Thinking Curriculum (Class 3–12)	cbseacademic.nic.in/ai.html
OECD AI Principles	OECD Principles on Artificial Intelligence (2019, updated 2024)	oecd.ai/en/ai-principles
ISTE Standards	ISTE Standards for Students (2016, refreshed 2024)	iste.org/standards/students
CSTA K–12 CS	Computer Science Teachers Association K–12 CS Standards (2017)	csteachers.org/k12standards
OECD AI Literacy	Empowering Learners for the Age of AI: AI Literacy Framework (2025)	ailiteracyframework.org
AI4K12	AI4K12 Five Big Ideas in AI (AAAI + CSTA, 2018–ongoing)	ai4k12.org
DigComp 3.0	EU Digital Competence Framework for Citizens, v3.0 (2024)	publications.jrc.ec.europa.eu (JRC128415)
UNESCO AI Framework	UNESCO AI Competency Framework for Teachers & Students (2025)	unesco.org/en/articles/ai-competency-framework-teachers
PISA 2029 MAIL	PISA 2029 Media & AI Literacy Assessment Framework (draft, 2026)	oecd.org — PISA 2029 MAIL
WEF Future of Jobs	World Economic Forum Future of Jobs Report 2025	weforum.org — Future of Jobs 2025
McKinsey Skill Shift	McKinsey Global Institute — Skill Shift: Automation & the Future of the Workforce (2018)	mckinsey.com — Skill Shift
PISA 2022 Creative Thinking	PISA 2022 Results Volume III: Creative Minds, Creative Schools (OECD, 2024)	oecd.org — PISA 2022 Creative Thinking
ICILS	International Computer and Information Literacy Study (IEA)	iea.nl/studies/iea/icils

This analysis was prepared by Educational Initiatives as part of the Ei Mindspark AI & Digital Thinking curriculum documentation, March 2026.