

**VISION** CCKSians with *Future-Ready Mindsets* and *Empathetic Hearts* who Act Responsibly.

**MISSION** A positive environment that *empowers CCKSians to thrive* and *contribute*.

FUTURE-READY LEARNING

# Future-Ready CCKSians: Preserving Agency in Human-AI Learning

through a Research-Practice Knowledge Building AI-CRAFT Pedagogical Approach

RESEARCH-INFORMED · AI-ENABLED · HUMAN-CENTRED

THE PREMISE

What happens when research, innovation, and AI converge in the classroom? At Chua Chu Kang Secondary School, **Knowledge Building Pedagogy** transforms students into **creators, not just consumers** of knowledge. Through our signature **AI-CRAFT** approach to multidisciplinary programmes such as *The Singapore Times*, educators and learners co-design learning, harness AI as a collaborative partner, and reimagine classrooms for a future driven by curiosity, agency, and ideas.

KEY MESSAGE

Human agency remains **central**. AI does not replace teachers or students — it **amplifies thinking**, supports inquiry, and enables **deeper collaboration** between teachers, students, and knowledge.

## 01 Three Positioning of Human-AI Learning



01

PEDAGOGY

### Teachers as Inventors

Teachers design, adapt, and create learning experiences that meaningfully integrate AI and Knowledge Building Pedagogy.



02

INQUIRY

### Students as Co-designers

Students shape inquiry, contribute ideas, build knowledge together, and take ownership of learning.

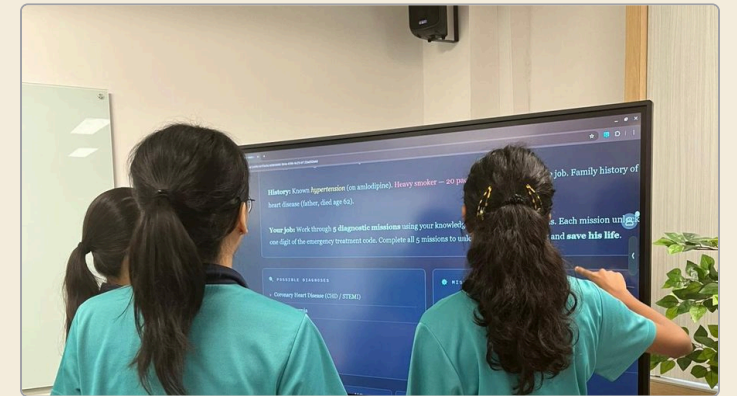


03

PARTNERSHIP

### AI as Collaborator

AI supports questioning, ideation, feedback, sense-making, and knowledge creation as a thinking partner.



## 02 The Knowledge Building Ecosystem

INQUIRY · IDEATION · CO-CREATION

FEATURED PROGRAMME

### The Singapore Times

A multidisciplinary newsmagazine where students investigate, write, and publish — co-designing inquiry with AI as research partner.

METHOD

### Knowledge Forum

Students post ideas, build on one another's thinking, and grow shared understanding.

STANCE

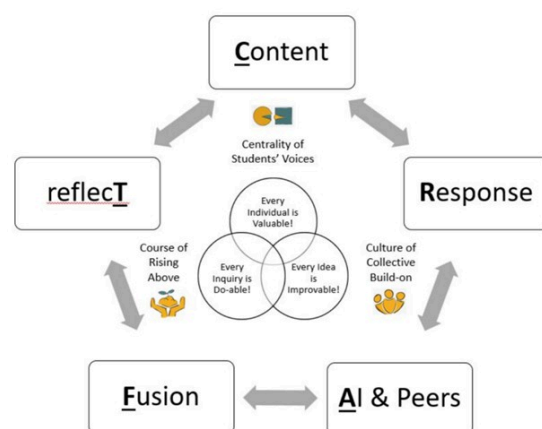
### Idea-centred Talk

Classrooms where ideas — not answers — drive the conversation.

## 03 AI-CRAFT Pedagogical Scaffold & Foundational Tenets

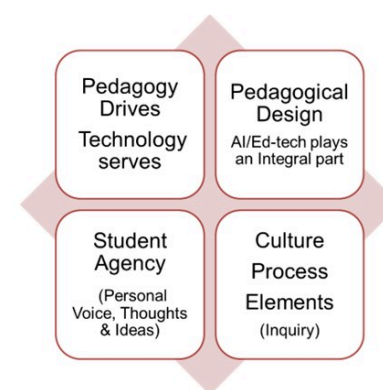
FRAMEWORK · AI-CRAFT CYCLE

The pedagogical scaffold for Human-AI learning



FOUNDATIONAL TENETS

What anchors our practice across every classroom



## 04 From Research to Future-Ready Learners

STAGE 01

### Research

Knowledge Building theory · Learning sciences · AI in education

STAGE 02

### Classroom Practice

AI-CRAFT scaffolds applied across multidisciplinary programmes & lessons

STAGE 03

### Future-Ready Learners

Curious · Agentic · Collaborative · Confident with AI



THE OUTCOME

Future-ready CCKSians who are *curious, agentic, collaborative*, and confident in **shaping knowledge with AI**.

