



Unit 1: Natural Intelligence (NI) Prompt Orchestration (Inquiry Design)

1.1 The Journey from Wonder to a Refined Inquiry Question

- *Why inquiry precedes information*
- *Wonder as the beginning of learning*
- *From curiosity to purposeful inquiry*
- *The learner as the architect of inquiry*

1.2 Activating Mentelix for Metacognitive Inquiry

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- *Thinking before searching*
- *Becoming aware of your own thinking*

1.3 Identifying the Stimulus and Wonder

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- *Identifying problems, puzzles, and phenomena*



- *Determining inquiry worthiness*
- *Moving from observation to investigation*

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- *Locating uncertainty*
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- *Recognising contradictions*
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1.7 Identifying Stakeholders

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- *Cultural perspectives*
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- *What am I trying to understand?*
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- *Choosing the inquiry direction*

1.10 Refining the Inquiry

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- *Making questions researchable*
- *Making questions evidence-oriented*
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1.11 Constructing the Refined Inquiry Question (RIQ)

- *Characteristics of a strong RIQ*
- *Writing purposeful inquiry questions*
- *The anatomy of an excellent inquiry*
- *Why RIQs guide investigation*

1.12 Reflection: How has my thinking changed?



- *From curiosity to inquiry*
- *Reflecting on my thinking*
- *Identifying remaining questions*
- *Preparing for systematic investigation*

1.1 The Journey from Wonder to a Refined Inquiry Question

Every inquiry begins when something makes the learner pause and wonder. This may be an observation, a contradiction, a question in class, a real-world issue, or a personal experience that does not fully make sense. Learners understand that inquiry must come before information because searching too early often leads to shallow answers. By the end of this stage, learners recognise that they are not passive answer-seekers but **architects of inquiry**.

Keywords: Wonder • Inquiry • Curiosity • Refined Inquiry Question • Inquiry Architect • Purposeful Questioning

1.2 Activating Mentelix for Metacognitive Inquiry

Mentelix is the learner's inner thinking system that helps organise the mind before using AI. Learners pause, reflect, and ask themselves what they are really trying to understand before searching externally. This stage develops **metacognition**, which means thinking about one's own thinking. By the end of this stage, learners understand that Natural Intelligence must lead before Artificial Intelligence supports.

Keywords: Mentelix • Natural Intelligence • Metacognition • Thinking Before Searching • Self-awareness • Mind Prompting



1.3 Identifying the Stimulus and Wonder

A stimulus is anything that triggers curiosity, such as a sound, image, event, problem, question, experience, or observation. Learners identify what caught their attention and why it felt surprising, confusing, meaningful, or incomplete. They learn to distinguish ordinary curiosity from deeper wonder. By the end of this stage, learners can name the starting point of their inquiry.

Keywords: Stimulus • Observation • Wonder • Curiosity • Attention • Trigger

1.4 Discovering an Inquiry Worth Pursuing

Not every interesting fact becomes a strong inquiry. Learners examine whether their curiosity contains a meaningful problem, puzzle, phenomenon, contradiction, or issue worth investigating. This helps them move beyond random questions towards purposeful inquiry. By the end of this stage, learners can decide whether a question deserves deeper exploration.

Keywords: Inquiry Worthiness • Problem • Puzzle • Phenomenon • Meaningful Inquiry • Investigation

1.5 Identifying the Knowledge Gap

A knowledge gap is the space between what the learner already knows and what the learner still needs to understand. Learners ask what is unknown, misunderstood, underexplored, or unanswered. This gives the inquiry direction because the learner now knows what must be investigated. By the end of this stage, curiosity becomes more focused.

Keywords: Knowledge Gap • Unknown • Unanswered • Misunderstood • Uncertainty • Inquiry Gap



1.6 Investigating Contradictions, Tensions, and Trade-offs

Strong inquiries often begin when something does not fit neatly. Learners look for contradictions, where two ideas or observations seem to conflict; tensions, where different needs or values compete; and trade-offs, where one choice may create both benefits and losses. This helps learners recognise complexity instead of oversimplifying the issue. By the end of this stage, learners understand why the inquiry matters.

Keywords: Contradiction • Tension • Trade-off • Complexity • Competing Explanations • Dilemma

1.7 Identifying Stakeholders

A stakeholder is any person, group, community, organisation, environment, or system affected by the inquiry. Learners ask who benefits, who loses, who is affected, and whose voice may be missing. This step prevents the inquiry from becoming narrow or self-centred. By the end of this stage, learners understand that meaningful inquiry often involves more than one person or viewpoint.

Keywords: Stakeholder • Voice • Impact • Affected Groups • Systems • Relationships

1.8 Exploring Multiple Perspectives

A perspective is a particular way of seeing or interpreting an issue. Learners explore how different disciplines, cultures, people, experiences, or communities may understand the same situation differently. This broadens the inquiry and helps learners avoid one-sided thinking. By the end of this stage, learners understand that better questions often emerge when many viewpoints are considered.



Keywords: Perspective • Discipline • Culture • Lived Experience • Viewpoint • Broader Understanding

1.9 Clarifying the Purpose of the Inquiry

Learners now decide what their inquiry is trying to do. They ask whether they want to explain, compare, evaluate, predict, solve, design, justify, or challenge something. Purpose gives direction to the question and prevents it from becoming vague. By the end of this stage, learners know the exact thinking action their inquiry requires.

Keywords: Purpose • Explain • Compare • Evaluate • Predict • Solve • Challenge

1.10 Refining the Inquiry

Refining the inquiry means improving the question so that it becomes clear, focused, researchable, and evidence-oriented. Learners remove vague words, narrow the scope, clarify the context, and make sure the question can guide investigation. This stage turns raw curiosity into a disciplined inquiry. By the end of this stage, the learner's question is no longer scattered; it is ready to guide research.

Keywords: Refinement • Focus • Scope • Researchable • Evidence-oriented • Clear Question

1.11 Constructing the Refined Inquiry Question (RIQ)

The Refined Inquiry Question is the final outcome of Unit 1. It is a purposeful, focused, researchable question that clearly shows what the learner wants to understand. A strong RIQ guides investigation, evidence gathering, reasoning, and knowledge construction in Unit 2. By the end of this stage, learners have created the intellectual blueprint for their inquiry journey.

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Keywords: Refined Inquiry Question • Purposeful • Focused • Researchable • Inquiry Blueprint • Investigation Guide

1.12 Reflection: How Has My Thinking Changed?

Reflection helps learners notice how their thinking has developed from curiosity into inquiry. They compare their first raw question with their final Refined Inquiry Question and identify what changed. They also recognise remaining questions and prepare for systematic investigation in Unit 2. By the end of this stage, learners understand that good inquiry is designed through thinking, not rushed through searching.

Keywords: Reflection • Metacognition • Thinking Growth • Self-evaluation • Remaining Questions • Preparation

1.1 The Journey from Wonder to a Refined Inquiry Question

Keyword	Simple Meaning	Mindgleian Example
Wonder	A feeling that something is surprising or not fully understood.	A learner notices that some plants close their leaves when touched and wonders why.
Inquiry	A systematic investigation to understand something better.	Instead of accepting the behaviour of the plant, the learner decides to investigate it.
Curiosity	The desire to know or learn something.	"Why do birds sing before sunrise?"
Refined Inquiry Question (RIQ)	A focused, purposeful, researchable question.	"To what extent does early morning birdsong help birds establish territory and attract mates?"



Keyword	Simple Meaning	Mindgleian Example
Inquiry Architect	A learner who deliberately designs meaningful investigations.	Before asking AI, the learner carefully refines the question to guide the investigation.
Purposeful Questioning	Asking questions that lead to meaningful understanding rather than quick answers.	Instead of asking "What is climate change?", the learner asks "How does climate change affect local agriculture?"

1.2 Activating Mentelix for Metacognitive Inquiry

Keyword	Simple Meaning	Mindgleian Example
Mentelix	Mindgle's internal thinking system that organises inquiry.	The learner pauses to organise thoughts before searching online.
Natural Intelligence	The human ability to think, reason, question and reflect.	The learner analyses the problem independently before using AI.
Metacognition	Thinking about and managing your own thinking.	The learner realises personal assumptions are influencing the question.
Thinking Before Searching	Organising your thoughts before looking for information.	The learner lists what is already known before opening Google.
Self-awareness	Understanding how your own thoughts influence learning.	The learner notices personal interest is shaping the inquiry.
Mind Prompting	Asking questions to your own mind before prompting AI.	"What exactly am I trying to understand?"



1.3 Identifying the Stimulus and Wonder

Keyword	Simple Meaning	Mindgleian Example
Stimulus	Anything that triggers curiosity.	Seeing a rainbow sparks an inquiry about light.
Observation	Carefully noticing something.	The learner observes that mushrooms grow after rain.
Wonder	Feeling that something deserves deeper explanation.	"Why do mushrooms appear overnight?"
Curiosity	Wanting to know more.	The learner wants to understand the pattern.
Attention	Focusing on something important.	The learner notices the mushrooms instead of ignoring them.
Trigger	The event that starts the inquiry.	Heavy rainfall becomes the trigger for investigation.

1.4 Discovering an Inquiry Worth Pursuing

Keyword	Simple Meaning	Mindgleian Example
Inquiry Worthiness	Whether a question deserves investigation.	The learner decides antibiotic resistance is worth studying because it affects global health.
Problem	A situation needing explanation or solution.	Why are bee populations declining?
Puzzle	Something confusing or difficult to explain.	Why can geckos climb walls?



Keyword	Simple Meaning	Mindgleian Example
Phenomenon	An observable event or occurrence.	The Northern Lights.
Meaningful Inquiry	An investigation that leads to deeper understanding.	Studying why children learn differently.
Investigation	Systematically exploring a question.	Collecting information to answer the inquiry.

1.5 Identifying the Knowledge Gap

Keyword	Simple Meaning	Mindgleian Example
Knowledge Gap	What you still do not understand.	The learner knows pollution exists but not how microplastics affect humans.
Unknown	Information not yet discovered.	The learner does not know how neurons communicate.
Unanswered	A question without a complete answer.	Why do some people recover from stress faster than others?
Misunderstood	Something commonly explained incorrectly.	Believing antibiotics kill viruses.
Uncertainty	Not yet knowing the answer with confidence.	Scientists still debate consciousness.
Inquiry Gap	The exact area requiring investigation.	Understanding how sleep affects memory.

1.6 Investigating Contradictions, Tensions and Trade-offs



Keyword	Simple Meaning	Mindgleian Example
Contradiction	Two ideas that conflict.	One study recommends homework; another suggests less homework improves wellbeing.
Tension	Competing needs or priorities.	Economic growth versus environmental protection.
Trade-off	Gaining one benefit while sacrificing another.	Using pesticides increases crop yield but harms biodiversity.
Complexity	Many connected factors influencing the issue.	Obesity involves biology, psychology and lifestyle.
Competing Explanations	Different reasons proposed for the same phenomenon.	Stress may arise from work, personality or genetics.
Dilemma	A difficult choice between competing options.	Privacy versus public safety.

1.7 Identifying Stakeholders

Keyword	Simple Meaning	Mindgleian Example
Stakeholder	Anyone affected by the issue.	Students, teachers and parents in school policy.
Voice	Someone's viewpoint or experience.	Listening to indigenous communities during conservation planning.
Impact	The effect something has on people.	Air pollution affects children's health.



Keyword	Simple Meaning	Mindgleian Example
Affected Groups	Different people influenced by an issue.	Farmers, consumers and governments.
Systems	Connected parts influencing one another.	Education, family and society shape learning.
Relationships	How stakeholders influence each other.	Teachers and parents working together.

1.8 Exploring Multiple Perspectives

Keyword	Simple Meaning	Mindgleian Example
Perspective	A particular way of viewing an issue.	A psychologist and economist explain poverty differently.
Discipline	A field of study.	Biology, sociology and economics.
Culture	Shared beliefs and practices of a group.	Different cultures celebrate festivals differently.
Lived Experience	Knowledge gained through personal life.	A refugee explains migration differently from a textbook.
Viewpoint	A personal opinion or interpretation.	Students and teachers view homework differently.
Broader Understanding	Seeing the issue from many angles.	Combining science, ethics and economics.

1.9 Clarifying the Purpose of the Inquiry



Keyword	Simple Meaning	Mindgleian Example
Purpose	The goal of the inquiry.	To explain why coral reefs are disappearing.
Explain	Describe why or how something happens.	Why do earthquakes occur?
Compare	Identify similarities and differences.	Compare renewable and non-renewable energy.
Evaluate	Judge strengths and weaknesses.	Evaluate whether online learning is effective.
Predict	Estimate what may happen next.	Predict future climate patterns.
Solve	Find a practical solution.	Reduce food waste in schools.
Challenge	Question an existing belief.	Challenge the idea that intelligence is fixed.

1.10 Refining the Inquiry

Keyword	Simple Meaning	Mindgleian Example
Refinement	Improving the quality of the question.	Narrowing "Why is pollution bad?" to "How do PM2.5 particles affect lung health?"
Focus	Making the question specific.	Investigating one species instead of all animals.
Scope	Setting the boundaries of the inquiry.	Studying pollution only in urban India.



Keyword	Simple Meaning	Mindgleian Example
Researchable	Able to be investigated using evidence.	Measuring sleep and memory.
Evidence-oriented	Designed to be answered using evidence.	Asking about measurable effects rather than opinions.
Clear Question	Easy to understand and investigate.	"How does exercise influence cortisol levels?"

1.11 Constructing the Refined Inquiry Question

Keyword	Simple Meaning	Mindgleian Example
Refined Inquiry Question	The final researchable question.	"To what extent does sleep quality influence memory consolidation in adolescents?"
Purposeful	Having a clear reason for investigation.	The learner knows exactly what will be studied.
Focused	Narrow enough to investigate deeply.	One age group rather than everyone.
Researchable	Can be answered using evidence.	Scientific studies can investigate it.
Inquiry Blueprint	The plan that guides the investigation.	The RIQ directs Unit 2.
Investigation Guide	Keeps the learner focused throughout research.	Prevents collecting unrelated information.



1.12 Reflection: How Has My Thinking Changed?

Keyword	Simple Meaning	Mindgleian Example
Reflection	Thinking about what you learned.	Comparing your first idea with your final RIQ.
Metacognition	Thinking about your thinking.	Realising your question became more focused.
Thinking Growth	Improvement in the quality of thinking.	Moving from curiosity to systematic inquiry.
Self-evaluation	Judging your own learning.	Checking whether the RIQ is clear and researchable.
Remaining Questions	Things still needing investigation.	Identifying ideas for Unit 2.
Preparation	Getting ready for the next stage.	Using the RIQ to begin knowledge construction.