



LUMINARIX ACADEMY

The Future of Brilliance

SAMPLE LESSON

Role – Context – Task – Format - Constraints

The RCTFC Framework

Grade 6 · Unit 6-1 · Activity 1

Builder Band — Professional Collaboration

Duration 45 minutes	Domains Problem Architecture · AI Collaboration	Materials Workbook · Pencil · AI access
------------------------	---	--

This sample lesson is drawn directly from the Grade 6 Student Workbook. It represents the level of depth, structure, and intellectual rigor present throughout the Luminarix curriculum from Grades 3 through 12.

For Teachers

Lesson Overview

This lesson introduces the RCTFC framework — Luminarix’s professional-grade prompt engineering structure that students use from Grade 6 through Grade 12. By the end of this 45-minute session, students will understand all five elements of RCTFC and will have written their first complete RCTFC prompt on a topic from their own classes.

Learning Objectives

Students will be able to explain all five RCTFC elements and the purpose of each

Students will write a complete RCTFC prompt on a self-chosen academic topic

Students will compare RCTFC prompt outputs to single-sentence prompt outputs

Students will begin their Professional Prompt Portfolio with their first entry

Teacher Preparation

Read through the full activity before class. You do not need prior AI expertise.

Ensure students have access to one AI tool — Claude, ChatGPT, or Gemini all work equally well

Write the five RCTFC letters on the board before students arrive

Have the “Before RCTFC vs After RCTFC” comparison example ready to share — it is on page 4

Lesson Timing

Time	Teacher action
0–8 min	Open with the question: “What makes AI give you a bad answer?” Take 3–4 student responses. Bridge to: “Today you learn the professional structure that fixes every one of those problems.”
8–20 min	Walk through the RCTFC framework table on page 3 of the student workbook. For each element, ask one student to read the description aloud, then give one real example from a class subject.
20–30 min	Show the Before/After comparison on page 4. Ask: “What specifically changed? Which element made the biggest difference?” Give students 2 minutes to discuss with a partner.
30–43 min	Students complete Part C: writing their first RCTFC prompt on a topic of their choosing. Circulate — check that all five elements are present before students run the prompt.
43–45 min	Close: ask two students to share what element surprised them most. Assign the three Portfolio Entries for next session.

 **Assessment**

Circulate during Part C and check each student’s prompt before they run it. All five RCTFC elements must be present. A prompt missing the Constraints element is the most common error at this stage.

Use the end-of-unit Skill Rating rubric to track: “I can write a complete RCTFC prompt without looking at notes.”

Student Workbook

Activity 6-1.1: The RCTFC Framework

Prompt engineering is a real job. Companies hire people specifically to design and optimize prompts that get the best results from AI systems. In 2025, prompt engineering roles commanded average salaries of \$80,000 to \$200,000 — and that number is growing.

You are not going to become a prompt engineer this quarter. But you are going to learn the same framework that prompt engineers use — the RCTFC structure — and apply it to the real work you do every day in school.

By the end of this quarter, writing RCTFC prompts will feel as natural as writing a paragraph. You will not be able to imagine prompting any other way.

The Five Elements

Element + Question to Ask Yourself	What it looks like in practice
R Role <i>Who should AI be?</i>	Act as an experienced 6th grade history teacher with expertise in economic history.
C Context <i>What background does AI need?</i>	I am a 6th grader writing an essay on the causes of the Civil War. I already understand the timeline but struggle with the economic tensions.
T Task <i>Exactly what do you want?</i>	Give me three economic causes of the Civil War, each explained in 2–3 sentences at a 6th grade reading level.
F Format <i>How should the output look?</i>	Format as a numbered list. Each cause should have a bold title followed by the explanation.
C Constraints <i>What must AI avoid?</i>	Do not use passive voice. Avoid dates before 1820. Do not exceed 200 words total.

The Difference It Makes

Read both prompts below. Both ask about the same topic. One will produce a useful, precise answer. The other will produce something vague that requires three follow-up questions.

Before RCTFC	After RCTFC
<i>“Can you help me understand the American Civil War for school?”</i>	<i>“Act as an experienced middle school history teacher. I am a 6th grader who understands that the Civil War happened 1861–1865 but needs help understanding the economic causes. Give me three economic causes, each explained in 2–3 sentences at a 6th grade reading level. Format as a numbered list. Avoid passive voice and do not use any dates before 1820.”</i>

Which prompt will you get a better answer from? Which prompt would you feel comfortable submitting as research? Which prompt makes you the director of the work?

*Student Activity***Build Your First RCTFC Prompt**

Choose any topic from a class you are taking right now. Build a complete RCTFC prompt using the five elements below. Fill in each element deliberately — do not skip any.

My topic:**R — Role**

*Who should AI be?
What expertise should it
bring?*

C — Context

*What background does
AI need? Who are you?
What is this for?*

T — Task

*Exactly what do you
want AI to produce?*

F — Format

*How should the output
be structured? Length,
style, layout?*

C — Constraints

*What must AI avoid?
What limits apply? What
tone is off-limits?*



After running this prompt, rate the output quality compared to prompts you wrote before RCTFC:

- Dramatically better
- Somewhat better
- About the same
- Surprisingly, worse

Why?

Reflection

1. Which RCTFC element do you think makes the biggest difference to output quality? Why?

2. A classmate says RCTFC takes too long and it is easier to just type a quick question. How would you respond?

3. Write one situation — from any subject, any class — where a bad prompt would genuinely hurt the quality of your work.




For Parents

What Your Child Is Learning

This sample lesson is from Unit 6-1 of the Luminarix Academy Grade 6 curriculum. It introduces the RCTFC framework — a five-element prompt engineering structure used by professional AI engineers at companies like Google, Anthropic, and Microsoft.

Your child is learning this not as a computer science skill, but as a thinking skill. The framework teaches them to define what they want before they ask for it, to provide context before they expect a useful answer, and to evaluate critically whether what they received is actually good. These are not AI skills. They are professional skills that will serve them in every field.

 **What makes this different from just ‘using AI’**

Most students type a question into AI and accept whatever comes back. Luminarix students are trained to be the director of the interaction — to write prompts that produce precisely what they need, verify that the output is accurate, and document their process.

A student who graduates with ten years of Luminarix training does not just know how to use AI tools. They know how to think alongside them — and that distinction is exactly what universities and employers are looking for.

How This Lesson Fits the Bigger Picture

<p>Grades 3–5</p>	<p>Students learn to work with AI under supervision. They build a 20-entry Prompt Library and complete the Explorer Band with a verified 12-skill checklist.</p>
<p>Grade 6 → This lesson</p>	<p>RCTFC is introduced as the professional standard. Students practice it across all subjects until it becomes automatic.</p>
<p>Grades 7–8</p>	<p>Students use RCTFC independently for academic research, debate preparation, a solo research paper, and a real-organization deployment project.</p>

Grades 9–12

Advanced Band. Students build a four-year portfolio of AI-assisted work, develop a Personal AI Ethics Statement updated annually, and complete a real-world capstone defended before an external panel.

 **What comes home**

Your child will complete a Student Workbook for every grade. The workbooks include an AI Interaction Log — a personal record of every significant AI interaction your child has during the school year, including what they asked, what AI produced, whether they verified it, and what they decided to do with it.

From Grade 9, they also build a Portfolio — a four-year curated record of their best AI-assisted work, with reflective essays, that they defend before an external panel at graduation.

Questions about the curriculum?

Contact us at admin@luminarix.academy or visit luminarix.academy for the complete Scope & Sequence document, program overview, and school partnership information.

**LUMINARIX ACADEMY**The Future of Brilliance · luminarix.academy

© 2026 Luminarix Academy. All rights reserved. This sample may be shared freely for evaluation purposes.