

User Prompt
”Minimal Surfaces:
Mathematical Soap Films”

**1. PrerequisiteExplorer
Builds Knowledge Tree
(recursive)**

concept

identify_prerequisites
tool

Kimi K2API

KnowledgeNode Tree
• concept
• depth
• prerequisites[]

**2. MathematicalEnricher
Adds Math Content
(recursive)**

write_mathematical_content
tool

Kimi K2API

Math-Enriched Tree
+ equations[]
+ definitions{}
+ examples[]

**3. VisualDesigner
Designs Visual Specs
(recursive)**

design_visual_plan
tool

Kimi K2API

Visual-Enriched Tree
+ visual_description
+ color_scheme
+ camera_movement

**4. NarrativeComposer
Creates Verbose Prompt
(2000+ words)**

compose_narrative
tool

Kimi K2API

Final Enriched Tree
+ narrative
+ verbose_prompt
Complete for Manim

Manim ThreeDScene
minimal_surfaces_scene.py
Ready to Render

3D Animation