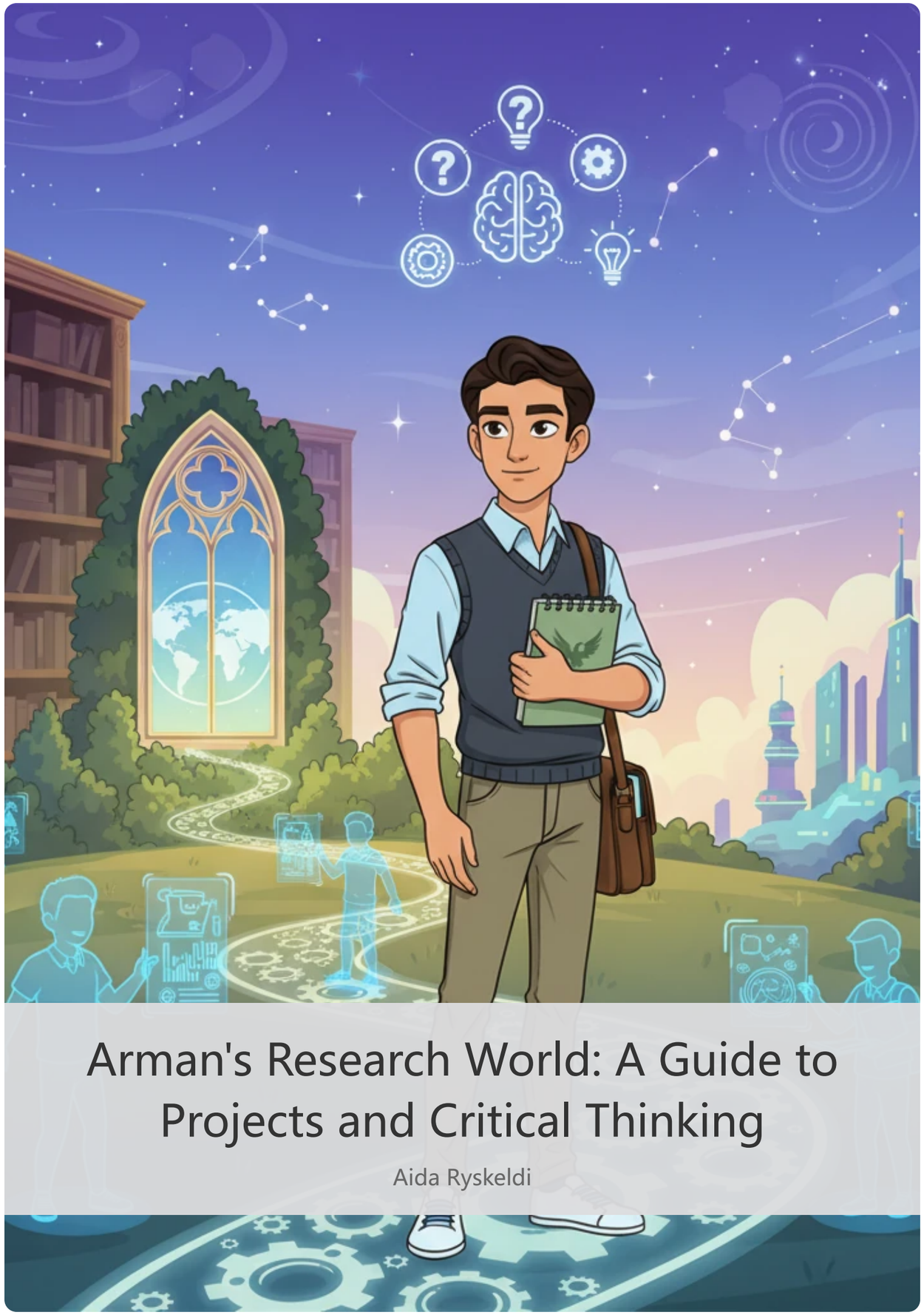


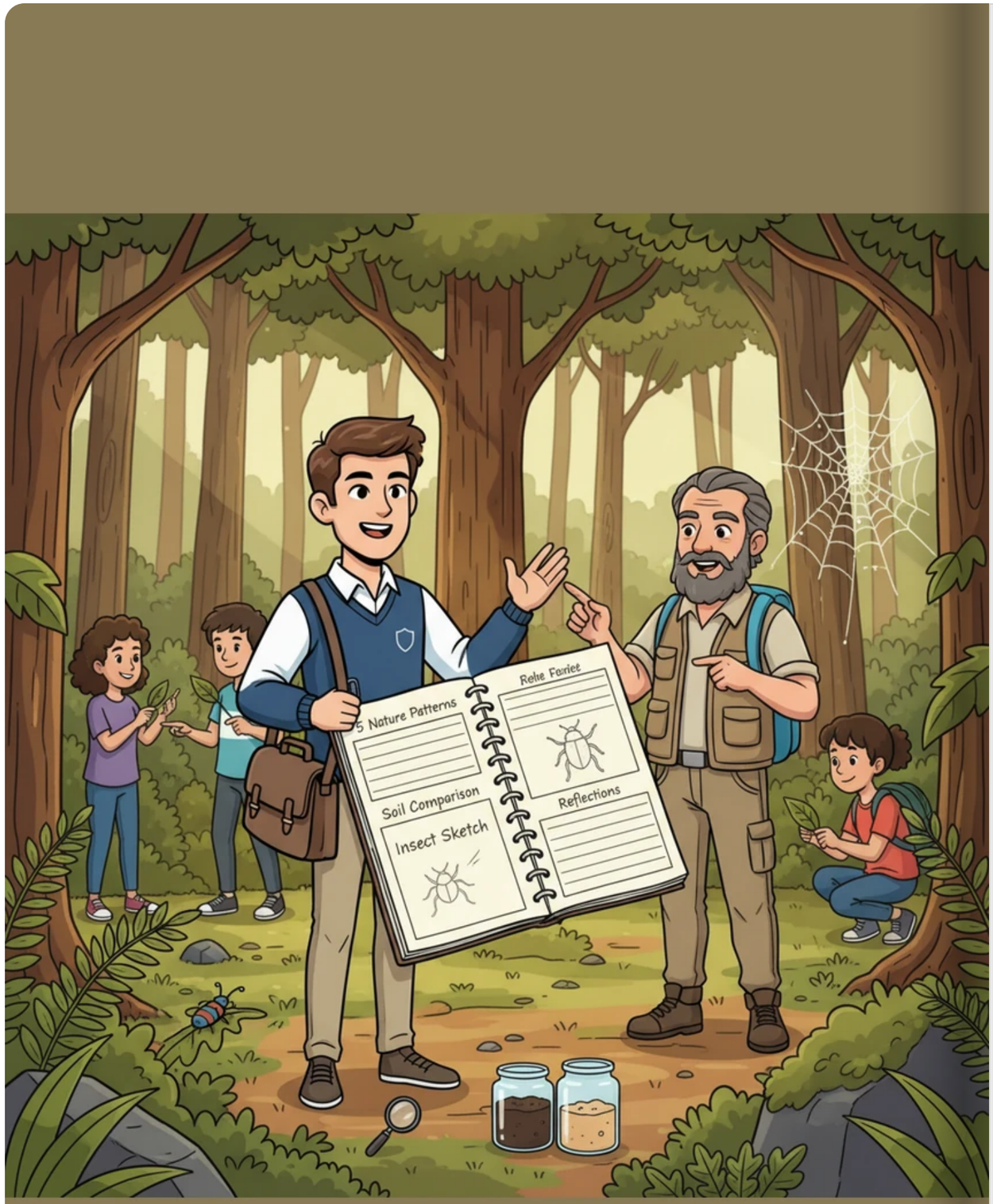
Arman's Research World: A Guide to Projects and Critical Thinking

Aida Ryskeldi

Arman stands in a bright room filled with maps and scientific tools, ready to start his journey as a young researcher. This title page sets the stage for an adventure in learning through the power of projects and critical thinking.

A colorful table of contents is presented as a roadmap, guiding students through each stage of their research adventure. Each chapter represents a new skill to be mastered, from the first spark of an idea to the final presentation of a project.

Arman looks at a large sign with a question mark at a crossroads, realizing that research is about finding answers to the world's most interesting questions. This page describes how developing a curious and critical mind helps us solve real-world problems and understand why things happen.



In the first lesson, Arman practices the art of observation by studying the intricate details of a forest ecosystem. The tasks are to identify five unique patterns in nature, compare two different types of soil, and draw a detailed sketch of a local insect, followed by a space to reflect on the findings.

The second lesson focuses on asking the right questions, showing Arman interviewing an expert to gather deep insights. Students are asked to create a list of five investigative questions, develop a hypothesis for their own project, and note down what they are most curious about in their reflection journal.

For the third lesson, Arman explores the library and the internet to collect data and evidence for his research. The tasks include finding three reliable sources of information, checking the facts for accuracy, and organizing his findings into a structured set of notes with a section for personal thoughts.

In the fourth lesson, Arman analyzes his information by using a comparison chart to evaluate different perspectives. Tasks involve identifying the strengths and weaknesses of a specific idea, finding a hidden cause for a problem, and brainstorming creative solutions while reflecting on the process.

The fifth lesson is all about experimentation and hands-on testing, where Arman builds a prototype of a new invention on his workbench. The tasks are to construct a working model, conduct a fair test of its functions, and record the results to see if the initial hypothesis was correct.

During the sixth lesson, Arman synthesizes his work by creating a vibrant presentation board that tells the story of his research. He practices summarizing his findings into three key messages, designing clear visuals for his audience, and preparing a short speech to explain his discovery.

Arman proudly presents his completed project to a group of smiling classmates and teachers, sharing everything he has discovered during his journey. The final page features a special reflection area for students to write down their own thoughts and what they enjoyed most about the research process.