

# Book Review

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## **Think like a scientist: A kid's guide to scientific thinking**

By David Pakman

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### **Reviewed by:**

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Since 2005, David Pakman has been the host of *The David Pakman Show*, a progressive political commentary program on YouTube. Holding an MBA from Bentley University and a bachelor's degree in economics and communication from the University of Massachusetts-Amherst, David Pakman has been interested in critical thinking and ways to develop it for many years. In March 2018, he produced a series of 16 short videos addressing several concepts to help recognize, among other things, the quality of an argument and the presence of fallacious reasoning. More recently, he began writing children's books to encourage them to develop their curiosity, creativity, and motivation to seek the truth by asking the right questions. *Think like a Detective* is the first book in the *Adventures in Thinking* series, which also includes *Think like a Scientist: A Kid's Guide to Scientific Thinking* (2023) and *Think like a Voter: A Kid's Guide to Shaping Our Country's Future* (2024). This literature review will focus specifically on *Think like a detective* and *Think like a scientist*.

## **Think like a Detective**

Beautifully illustrated, *Think like a Detective* begins by introducing Daniel, a curious young boy who wants to become a detective and solve mysteries. To do so, throughout

the story, the reader will develop a superpower alongside Daniel: critical thinking. To nurture this superpower, the book invites the parent and child to practice four basic concepts of critical thinking through several short scenarios: 1) asking the right questions, 2) finding evidence, 3) distinguishing between opinion and fact, and 4) recognizing a lie. To facilitate this, Pakman offers eight exercises (see Table 1).

**Table 1***The mysteries to solve*

<b>Tools</b>	<b>Mysteries to solve</b>
Ask the right questions	1. Max claims that aliens are coming to Earth!
Find evidence	2. Cassie says that there's a shipwreck filled with treasure at the bottom of the ocean! 3. Tucker announces that he saw a ghost in his room last night!
Distinguish between opinion and fact	4. Practice exercises For example : Is $1 + 2 = 3$ a fact or an opinion? 5. Marge claims that everyone with freckles is more likely to steal.
Recognize a lie	6. A salesperson claims that their pillows are made from unicorn hair! 7. Ronald says that a thousand people came to his birthday party, while a photo shows only 50 guests...
Synthesis exercise	8. Daniel must solve the mystery of the cookies: who, between Sara, Dylan, and Katie, stole the cookies from the kitchen?

## Think like a scientist

Pakman's second book cleverly introduces a basic version of the scientific research method by explaining its three major steps: 1) observing a phenomenon, 2) formulating a hypothesis, and 3) conducting an experiment. These three core steps of a scientific experiment are explained in a simple way through the story of Amy, a young girl who is deeply curious about her surroundings, loves asking questions, and enjoys discovering how the world works. One day, she notices that her plants seem to like the sun and asks THE important question that drives the scientific method: "Why...?" Proactive in her

curiosity, Amy then proposes an explanation, reflecting the key concept of a “hypothesis,” saying: “Maybe because...” However, Amy’s curiosity doesn’t stop there—her explanation might be wrong! Driven by a desire to uncover the truth, Amy sets up an experiment based on her question and hypothesis: she places one plant in the sunlight and another in the shade to observe any differences. After some time, Amy can answer her initial question and validate her hypothesis: “Plants grow better under the sun.”

Amy’s story continues as she observes new phenomena around her, asks questions about the reasons behind these observations, forms hypotheses, and tests them by creating experiments. During one of her plant experiments, Amy even builds on the results of her previous test! While testing why plants seem to like water, she places her them in the sun, demonstrating her ability to generalize findings from one experiment to another. Finally, when one of her questions goes beyond her knowledge, Amy looks for answers in scientific books at the library. Her curiosity thus drives her to deepen her understanding of the world by acquiring knowledge about advanced scientific concepts already validated by other researchers’ experiments. She then uses this newfound knowledge to explain her initial observations. Now comfortable with the scientific research process, Amy continues to observe her environment and ask even more questions.

## Conclusion

David Pakman’s two books are complementary and address two important needs. First, the books are written in simple, accessible language suitable for young readers learning their first language as well as older readers who wish to learn to read or acquire a new language. Because they cover topics that can also appeal to an adult audience, these books can easily be integrated into a program for learning to read or mastering a second language.

Secondly, *Think Like a Detective* and *Think Like a Scientist* encourage readers—both children and adults—to observe their environment, stay curious and creative, maintain a desire to understand the world, and take a proactive approach to seeking the truth. These books serve as a foundation to help readers develop cognitive flexibility, enabling them to consider multiple pieces of information simultaneously and cultivate the humility to change their worldview when scientific findings disprove their hypotheses.

More specifically, the first two books in the *Adventures in Thinking* series foster independent thinking by introducing readers to the scientific method and credible sources of information, such as scientific books and experts. *Think Like a Scientist* can also guide young readers in developing more abstract critical thinking skills as they approach adolescence. The emphasis on seeking additional information through scientific books highlights the importance of acquiring knowledge beyond everyday observations. Reading both books together prepares readers not only to know where to look for information but also to question these potential sources. This includes critically analyzing the messages they receive from news media, social media, their peers, experts, pseudo-experts, scientific and pseudoscientific literature, and political leaders.

*Think Like a Detective* and *Think Like a Scientist* are excellent books addressing critical topics. Educational institutions and parents of young children alike should have these two books on hand to support the development of critical thinking in the next generation.