

6. The Making of a Scientist



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Question 1. How did a book change Richard Ebright's life?

The book 'The Travels of Monarch X' introduced Richard to the world of science. After reading it, he became fascinated by tracking butterfly migration, which sparked his interest in various projects and experiments, eventually leading him to become a great scientist.

Question 2. How did his mother support him?

Richard's mother was very supportive. She took him on trips, bought scientific equipment, and set challenges for him to learn. She also gifted him the book that changed his life forever.

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Question 1. What lesson did Ebright learn when he didn't win a prize at a science fair?

When Ebright did not win for his frog tissue slides, he learned science isn't about just displaying something, but about conducting meaningful experiments. From then on, he focused on experimentation.

Question 2. What projects and experiments did he undertake after that? He studied viceroy butterflies to show they mimicked monarchs, discovered a new hormone by studying bright spots on monarch pupae, and researched how cells read their DNA.

Question 3. What qualities make a good scientist?

Three important qualities are a sharp mind, strong curiosity, and the will to work hard and succeed.

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Think About It

Question 1. How can one become a scientist, economist, or historian? Is reading enough?

Reading alone isn't enough. One must observe, think critically, experiment, and stay curious. Hard work and resilience against failure are essential.

Question 2. How does Richard Ebright's work relate to what you know about cells and DNA? If you could work in science like him, what would you choose?









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DNA is the blueprint of life, passing traits through generations. If I had the chance, I'd study diseases to help find cures by understanding DNA better.

Talk About It

Question 1. Children ask many questions that spark scientific inquiry. Some examples asked to Prof. Yash Pal and Dr. Rahul Pal include:

- What is DNA fingerprinting and why is it useful?
- How do honeybees find their honeycombs?
- Why does rain fall in drops?

Answers:

DNA fingerprinting helps identify people through their unique DNA, useful in crime investigations and parentage tests.

Honeybees use chemical signals to guide others to their honeycombs. Rain forms drops because water vapor condenses on dust particles, which act as centers for droplet formation until they become heavy and fall.

Question 2. What questions have you wondered about? Share with your class and try to answer them.

Common questions include:

- Why is the sky blue?
- Why do stars twinkle?
- What causes a rainbow?
- Why do fruits fall to the ground?





