# UNMASKING THE MIRAGE: TEACHING STUDENTS TO DETECT FAKE SCIENCE NEWS

*by:*
**Noime Saavedra Diwa**
*Teacher I, Pablo Roman National High School*

In an era flooded with digital information, fake science news has become a pervasive challenge that distorts public understanding and influences critical decisions. These misleading stories frequently appear as sensational headlines promising miracle cures, exaggerating health risks, or manipulating data about climate change and other scientific topics. They often exploit uncertainty in ongoing research, cherry-pick evidence, rely on anecdotal accounts instead of rigorous data, or leverage celebrity endorsements to gain credibility. The emergence of AI-generated deepfakes and increasingly sophisticated fabricated content has made it even harder to separate truth from fiction, especially on social media platforms where such material spreads rapidly. Students, who typically spend several hours each day online, are especially susceptible; research consistently shows that many young people have difficulty distinguishing credible scientific reporting from advertisements, sponsored content, or outright misinformation.



Educators hold a central role in countering this issue by weaving critical thinking and media literacy skills directly into classroom instruction. As more educational systems revise standards to emphasize information evaluation, teachers can provide students with reliable, practical strategies for assessing science-related claims. One widely recommended framework is the SIFT method: Stop before sharing or reacting, Investigate the source's credibility and purpose, Find trusted coverage from other reputable outlets, and Trace claims back to their original context or primary evidence. Through this approach, students practice lateral reading—quickly cross-referencing information across multiple sources—rather than becoming absorbed in potentially deceptive material. They

learn to evaluate website reputations, check whether authors possess relevant scientific or journalistic credentials, move beyond attention-grabbing headlines to examine full articles, and demand peer-reviewed studies rather than personal stories or unverified assertions as support.

Additional checkpoints strengthen students' analytical skills. They should scrutinize publication dates to catch outdated or recycled misinformation, watch for emotional language or fear-based appeals that often signal bias, and carefully inspect visuals such as graphs and charts for deceptive techniques like truncated axes, cherry-picked time frames, or inappropriate chart types that distort trends. Recognizing common red flags—such as absolute claims about complex topics, lack of transparency about funding or conflicts of interest, and overreliance on single studies rather than scientific consensus—further sharpens their judgment.



Engaging, hands-on activities help these concepts become second nature. Lessons can ask students to analyze short videos or social media posts to spot signs of deepfakes through reverse image searches, unusual lighting inconsistencies, or unnatural facial movements. Fact-checking assignments, where learners use tools like FactCheck.org, Google Fact Check Explorer, or Snopes to verify viral science rumors, build confidence and reinforce methodical evaluation. In science classrooms, comparing the presentation of data in popular posts against reports from authoritative bodies such as the IPCC, WHO, or peer-reviewed journals reveals how information can be selectively framed or misrepresented. Group discussions exploring cognitive biases—confirmation bias, the illusory truth effect, and emotional reasoning—encourage students to reflect on why false claims can feel intuitively convincing, transforming theoretical understanding into practical habits of skepticism.

By consistently applying these strategies, educators help cultivate a generation capable of questioning provocative assertions, resisting the spread of rumors, and engaging with scientific issues from an evidence-based perspective. In today's information-saturated environment, even modest, sustained efforts in the classroom can empower students to navigate misinformation more effectively, sustain curiosity about genuine science, and contribute to a society grounded in reason and reliable knowledge.

*References:*

American Psychological Association. (2024, September 1). How to teach students critical thinking skills to combat misinformation online. https://www.apa.org/monitor/2024/09/media-literacy-misinformation

Hutchinson, A. (2025, October 29). Real, fake, or deepfake? This lesson helps students decide. Edutopia. https://www.edutopia.org/article/teaching-students-identify-fake-videos

Kiely, E. (2024, October 17). Helping students spot misinformation online. National Education Association. https://www.nea.org/nea-today/all-news-articles/helping-students-spot-misinformation-online

Noyce, P. (2019, February 26). Lessons on telling scientific fact from fiction. Yale Climate Connections. https://yaleclimateconnections.org/2019/02/lessons-on-telling-scientific-fact-from-fiction