

What Educators Need to Know About STEM Non-Fiction

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Introduction

- Many children enjoy different kinds of STEM nonfiction books, and some pupils are more suited to a certain genre than others.
- A teacher should be aware that there isn't just one set of guidelines for choosing books for students.
- This poster presentation is based on the information that teachers need to understand about STEM nonfiction, as supported by several educational philosophies.

Educational Philosophies

- Metaphysics, epistemology, axiology, and logic are branches of educational philosophies which are broken down into three domains.
 - a. Teacher centered philosophies
 - b. Student centered philosophies
 - c. Society centered philosophies
- STEM details 'WHY' (axiology), the 'HOW' (epistemology), and the 'WHAT' (ontology) – drawing upon variety of philosophies of education, science, mathematics, and technology.

STEM

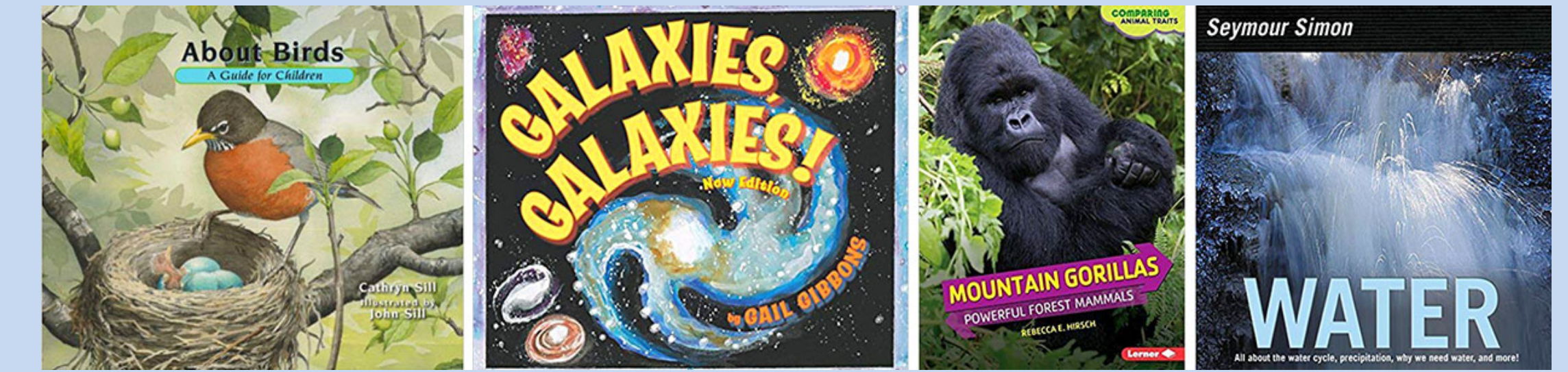
- Science, Technology, engineering, and Mathematics – way of thinking that underpins the discipline.
- Gather together the distinct but related discipline of four margining routes.
- Used in context of education policy or curriculum choices.

Non-fiction

- Writing about real events and facts, rather than invented stories or assumptions.
- A great source for making real world connection to build on children's knowledge and personal experiences,
- Implied to using nonfiction to enhance students experiences and interests.
- Emphasize solving problem using tools - STEM
- Types of non-fiction such as biographies, autobiographies, narrative, writing non-fiction novel, expository, narrative structure, others.

STEM-Nonfiction

- **Flying Deep: Climb Inside Deep-Sea Submersible ALVIN – Narrative Non-fiction** by Michelle Cusolito and Nicole Wong (Charlesbridge, 2018)
- **The Hidden Life of a Toad** by Doug Wechsler (Charlesbridge, 2017)
- **Life on Surtsey: Iceland's Upstart Island** by Loree Griffin Burns (Houghton Mifflin Harcourt, 2017)
- Real characters, settings, scenes, and narrative arc.
- Chronological text structure
- STEM biographies or journeys, life cycles stories, natural process.
- Includes observation, conservation, and development.
- Features an innovative format, voice, engaging language, scientific experiments, written experiments, book-model combination.
- Opportunities for collaborative problem-solving and critical thinking, as well as a strong basis for future learning.



Conclusions

- STEM nonfiction books are related to educational philosophies because they employ philosophical methodologies to examine the goals and presumptions of STEM education.
- Next, by comprehending the traits of conventional nonfiction, teachers, parents, and students can profit from STEM nonfiction.



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