Best STEM Books

Criteria and Rubric

OVERVIEW

STEM (Science, Technology, Engineering, Mathematics) is an integrated and creative approach to discovering and applying knowledge about our world to solve problems which utilizes one, or more of the content areas. Trade books that deliver background and model the practices of STEM provide context and inspiration to readers. Recognizing the best publications in this field can help guide their use and provide direction to publishers.

CRITERIA

The best STEM books must:

Invite STEM-like thinking by

- Modeling real-world innovation
- Embracing real-world design, invention and innovation
- Connecting with authentic experiences
- Showing assimilation of new ideas
- Illustrating teamwork, diverse skills, creativity, and cooperation
- Inviting divergent thinking and doing
- Integrating interdisciplinary and creative approaches
- Exploring multiple solutions to problems
- Addressing connections between STEM disciplines
- Exploring Engineering Habits of Mind
  - Systems thinking,
  - Creativity
  - Optimisation
  - Collaboration
  - Communication
  - Ethical considerations
  - Critical thinking
Best STEM Books Rubric

The best STEM books might represent the practices of science and engineering by:

- Asking questions, solving problems, designing and redesigning
- Integrating STEM disciplines
- Showing the progressive changes that characterize invention and/or engineering by
  - Demonstrating designing or redesigning, improving, building, or repairing a product or idea
  - Showing the process of working through trial and error
  - Progressively developing better engineering solutions
  - Analyzing efforts and makes necessary modifications along the way
  - Illustrates at points, failure might happen and that is acceptable providing reflection and learning occurs.
## Best STEM Books Rubric

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