Art

- The student learned about design and aesthetics while creating the elevator with LEGO pieces. They had to consider the visual appearance and functionality of the elevator, which ties into principles of art and design.
- Through constructing the elevator, the student engaged in a hands-on artistic process, fostering creativity and innovation in their approach to the project.

English Language Arts

- The student practiced communication skills by verbally explaining their design choices and the functionality of the elevator to their peers or instructors.
- They may have written a descriptive paragraph or instructions for their elevator design, enhancing their writing skills and ability to convey technical information clearly and effectively.

Math

- Through building the elevator and working with the pulley system, the student gained practical knowledge of geometry, particularly in terms of spatial reasoning and understanding of angles and shapes.
- They may have also utilized math concepts such as measurement and scale to ensure the elevator functioned properly within the LEGO structure.

Science

- The student learned about simple machines, including pulleys, and how they function by reducing the amount of force needed to move an object. This ties into physics and the study of mechanics.
- They also gained an understanding of lift and gravitational force, as well as the principles of energy transfer and potential/kinetic energy, all of which are fundamental scientific concepts.

Continued development related to this activity can include challenging the students to design more advanced elevators with additional features. They could create a themed elevator, such as a futuristic space elevator or a historical time machine elevator, which would not only further their engineering skills but also encourage creativity and storytelling through their creations.

Book Recommendations

- The Boy Who Harnessed The Wind by William Kamkwamba: The story of a young boy who builds a windmill from scrap materials in Africa, providing an inspiring example of the power of engineering and innovation.
- George's Secret Key to the Universe by Lucy Hawking and Stephen Hawking: This adventure novel introduces young readers to basic concepts of physics and engineering while following a boy's adventures through space and time.
- World Without Fish by Mark Kurlansky: This non-fiction book explores the impact of human activity on the ocean and marine life, including discussions of environmental engineering and sustainability.