Core Skills Analysis

Physics

- Learned about the principles of reflection and refraction through the use of mirrors in the infinity mirror kit.
- Understood the concept of light travel and how it interacts with surfaces to create a visual effect.
- Explored how the arrangement of mirrors can create an illusion of depth and infinity.
- Gained knowledge of basic optics, including the angle of incidence and angle of reflection.

Mathematics

- Practiced measuring dimensions of the mirror and the kit components to ensure proper assembly.
- Applied geometric concepts to figure out the space and angle arrangement for optimal visual effect.
- Used basic arithmetic to calculate the required number of LEDs to create the desired brightness.
- Understood symmetry in design and how it plays a role in the aesthetics of the infinity mirror.

Art and Design

- Experimented with color combinations for LED lights to enhance the visual appeal of the infinity mirror.
- Explored artistic concepts such as symmetry, balance, and depth within a three-dimensional space.
- Learned about the importance of aesthetics in science projects, blending creativity with technical skills.
- Developed an understanding of design principles through the assembly and arrangement of components.

Tips

To further explore and improve the project, consider experimenting with different materials and designs, such as incorporating colored or patterned films to change the visual outcome. Investigate the addition of sound effects or integrating smart technology to create an interactive experience. Further study can also include deeper engagement with optics, enhancing understanding of various light phenomena, and encouraging creativity in how to present or display the infinity mirror aesthetically.

Book Recommendations

- <u>Why Does Ice Burn? and 113 Other Questions About Science</u> by Dorling Kindersley Publishing: An engaging book that answers various science questions, perfect for curious minds interested in exploring the principles behind phenomena like reflection and refraction.
- <u>The Art of Electronics</u> by Paul Horowitz and Winfield Hill: An accessible introduction to electronic circuits which can inspire students to integrate electronics in creative projects like the infinity mirror.
- <u>Geometry for Dummies</u> by Mark Ryan: A helpful guide that simplifies geometric concepts and their applications, perfect for reinforcing skills learned through the infinity mirror activity.