**Art**

- The child learned about design and aesthetics by creating and customizing their own vehicles and structures in Scrap Mechanic.
- They explored different color combinations and patterns to make their creations visually appealing.
- Through trial and error, they developed problem-solving skills to overcome design challenges and make their creations more functional and visually interesting.
- They experimented with different art styles, such as futuristic or steampunk, to give their vehicles and structures a unique look.

Encourage the child to continue exploring their creative side by using Scrap Mechanic to design and build their own imaginary worlds. They can create concept art for their characters and environments using traditional art materials or digital drawing tools. They can also experiment with different art styles and techniques inspired by the game, such as creating mixed media sculptures or designing their own digital game assets.

**Math**

- In Scrap Mechanic, the child applied mathematical concepts such as measurement and geometry to build and assemble their vehicles and structures accurately.
- They used addition, subtraction, multiplication, and division to calculate the number of resources needed for their designs.
- They analyzed and compared different vehicle setups to optimize performance, considering factors such as speed, weight distribution, and power-to-weight ratio.
- They practiced problem-solving and critical thinking skills by troubleshooting and fine-tuning their creations to achieve desired outcomes.

To further develop their math skills, the child can explore real-life applications of math in engineering and architecture. They can learn about different types of mechanical systems, such as gears and pulleys, and how they rely on mathematical principles. Encourage them to engage in hands-on experiments and challenges that involve measuring, estimating, and calculating to deepen their understanding of math concepts.

**Science**

- The child gained knowledge about physics and mechanics through the gameplay of Scrap Mechanic, as they had to understand concepts like gravity, friction, and force to create functional vehicles.
- They experimented with different materials and designs to understand their impact on performance, such as testing how different wheel types affect traction and maneuverability.
- They learned about electricity and circuits by incorporating sensors, switches, and lights into their creations.
- They developed problem-solving skills by troubleshooting mechanical and technical issues that arose during gameplay.

To foster their scientific curiosity, encourage the child to conduct further experiments related to motion, energy, and electricity. They can explore topics like aerodynamics by building and testing different vehicle designs, or delve into electrical circuits by creating simple circuits using batteries, wires, and LEDs. They can also research and learn about real-world engineering and technology advancements that were inspired by principles seen in Scrap Mechanic.

**Book Recommendations**

- The Art of Tinkering by Karen Wilkinson and Mike Petrich: This book explores the intersection of art, science, and engineering through a collection of hands-on projects and interviews with

renowned makers and artists.
- The Math and Art Connection by Mary Jo Keller: This book introduces the relationship between math and art, showcasing examples where math principles are applied to create visually stunning artworks.
- The Science of Mechanics by Ernst Mach: A classic book that delves into the principles of mechanics, providing a comprehensive understanding of the scientific concepts behind the workings of machines and structures.

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