

Core Skills Analysis

Math

- The student learned about electrical circuits and how to calculate the total resistance in a series circuit.
- They understood Ohm's Law and how it is applied to calculate current, voltage, and resistance in a circuit.
- By working on electrical calculations, the student improved their algebra skills, solving for unknown variables in equations.
- The student applied geometric concepts to understand the layout and design of circuit diagrams.

Science

- The student learned about the different components of an electrical circuit such as resistors, capacitors, and batteries.
- They gained an understanding of how electricity flows in a circuit and the distinction between series and parallel connections.
- Through hands-on experiments, the student grasped the concept of electrical conductivity and insulators.
- The student was introduced to the basic principles of magnetism and electromagnetism in relation to electrical currents.

Tips

To further develop their knowledge in electrical concepts, the student can engage in practical projects like building simple circuits at home using inexpensive electronic kits. Watching online tutorials and taking part in STEM workshops can also enhance their understanding. It is beneficial for them to keep a journal to document their learning progress and experiment outcomes.

Book Recommendations

- [Make: Electronics: Learning Through Discovery](#) by Charles Platt: A hands-on guide for beginners to learn electronics through practical experiments and projects.
- [Electronics For Kids: Play with Simple Circuits and Experiment with Electricity!](#) by Oyvind Nydal Dahl: An interactive book that introduces electronics and circuits to children through engaging activities and projects.
- [The Manga Guide to Electricity](#) by Kazuhiro Fujitaki: A unique approach to teaching electrical concepts through a manga storyline, suitable for young learners.