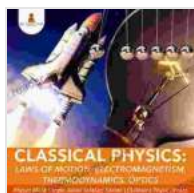


# Laws of Motion, Electromagnetism, Thermodynamics, Optics: Physics Made Simple

Physics is the study of the fundamental laws that govern the universe. It is a vast and complex subject, but it can be made simple with the right approach. This book provides a clear and concise explanation of the fundamental principles of physics, making it an ideal resource for students, teachers, and anyone interested in gaining a deeper understanding of the natural world.



## Classical Physics : Laws of Motion, Electromagnetism, Thermodynamics, Optics | Physics Made Simple Junior Scholars Edition | Children's Physics Books by Justine Davis

★★★★☆ 4.6 out of 5

Language : English

File size : 23362 KB

Screen Reader : Supported

Print length : 241 pages



The book is divided into four parts, each of which covers a different area of physics. The first part, Laws of Motion, introduces the basic principles of motion, including Newton's laws of motion. The second part, Electromagnetism, covers the basics of electricity and magnetism, including Coulomb's law and Gauss's law. The third part, Thermodynamics, covers the laws of thermodynamics, including the first law of thermodynamics and the second law of thermodynamics. The fourth part,

Optics, covers the basics of light and optics, including the laws of reflection and refraction.

Each part of the book is written in a clear and concise style, with plenty of examples and illustrations to help readers understand the concepts. The book also includes a glossary of terms and a list of references for further reading.

This book is an essential resource for anyone who wants to learn about the fundamental principles of physics. It is a must-have for students, teachers, and anyone interested in gaining a deeper understanding of the natural world.

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- Part 1: Laws of Motion
- Part 2: Electromagnetism
- Part 3: Thermodynamics
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## **Part 1: Laws of Motion**

The laws of motion describe the behavior of objects in motion. The three laws of motion were first formulated by Isaac Newton in the 17th century. They are:

1. An object at rest will remain at rest unless acted on by an unbalanced force.

2. The acceleration of an object is directly proportional to the net force acting on the object, and inversely proportional to the mass of the object.
3. For every action, there is an equal and opposite reaction.

The laws of motion can be used to explain a wide variety of phenomena, from the motion of planets to the behavior of objects in everyday life.

## **Part 2: Electromagnetism**

Electromagnetism is the study of the interactions between electric and magnetic fields. Electric fields are created by electric charges, and magnetic fields are created by moving electric charges. The laws of electromagnetism were first formulated by James Clerk Maxwell in the 19th century.

Electromagnetism is a fundamental force in the universe. It is responsible for the interactions between atoms and molecules, and it plays a major role in the behavior of matter.

## **Part 3: Thermodynamics**

Thermodynamics is the study of heat and its relation to other forms of energy. The laws of thermodynamics were first formulated by Rudolf Clausius in the 19th century. They are:

1. The total energy of the universe is constant.
2. The entropy of an isolated system always increases over time.
3. It is impossible to construct a heat engine that is 100% efficient.

The laws of thermodynamics can be used to explain a wide variety of phenomena, from the behavior of heat engines to the formation of stars.

## Part 4: Optics

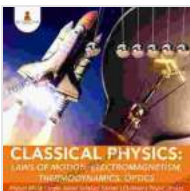
Optics is the study of light and its interactions with matter. The laws of optics were first formulated by Ibn al-Haytham in the 11th century. They are:

1. Light travels in straight lines.
2. The angle of incidence is equal to the angle of reflection.
3. The index of refraction of a material is a constant.

The laws of optics can be used to explain a wide variety of phenomena, from the formation of rainbows to the behavior of lenses.

This book is an essential resource for anyone who wants to learn about the fundamental principles of physics. It is a must-have for students, teachers, and anyone interested in gaining a deeper understanding of the natural world.

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