

# Unit 02B: Circular Motion NJ NGSS

Content Area: **Science**  
Course(s): **Generic Course**  
Time Period: **Marking Period 1**  
Length: **3**  
Status: **Published**

## Standards

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- Forces at a distance are explained by fields (gravitational, electric, and magnetic) permeating space that can transfer energy through space (HS-PS2-4)

<http://www.state.nj.us/education/modelcurriculum/sci/physicsu2.shtml>

SCI.9-12.HS-PS2-4	Use mathematical representations of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic forces between objects.
SCI.9-12.HS-PS2-1	Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.

## Essential Questions

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- What underlying forces explain the variety of interactions observed?
- How do rules of motion in our universe affect objects?
- What rules determine the motion of an object?

## Content / Skills

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- Identify sources of centripetal force. (Accelerated)
- Define and apply the centripetal force and acceleration (Accelerated)
- Define and apply the concepts of circular motion, centripetal acceleration and force. (Accelerated)
- Explain how apparent existence of an outward force in circular motion can be explained as inertia resisting centripetal force. (Accelerated)