

Science DesCartes: Physical Science

Skills: Force and Motion

Students:	DesCartes Skills: (Highlight the skills related to your chosen standard/concept)
	RIT 241-250: <ul style="list-style-type: none"> Applies Newton's laws to examine action and reaction
	RIT 231-240: <ul style="list-style-type: none"> Relates changes in speed or direction to unbalanced forces (2-D)
	RIT 221-230: <ul style="list-style-type: none"> Applies $F=ma$ to calculate the magnitude of a change in motion Analyzes examples of accelerated motion using Newton's laws Explains how frictional forces affect motion Gives examples to support the idea that an object will remain at rest or move in a straight line at constant speed if it is not subjected to an unbalanced force Explains how an object that is not being subjected to an outside force will move with constant velocity in a straight line Applies Newton's first law (inertia) to real world objects Defines inertia Determines whether a simple machine is used to multiply force or change the direction of an applied force Describes the relationship between a screw and an inclined plane Recognizes that a screw is an inclined plane wrapped around a center post Describes properties of magnets
	RIT 211-220: <ul style="list-style-type: none"> Calculates the distance an object has travelled, using geometry Compares the acceleration of falling objects Recognizes that for two interacting objects, the force that the first object applies to the second object is equal to the force the second object applies to the first (equal and opposite force) Explains how frictional forces affect motion Classifies forces as caused by friction Explains that simple machines make work easier Makes inferences about the type of simple machine that will be most useful in a given situation Locates simple machines and their components in applied settings Explains that work is not dependent on time, but on force and distance only Infers that work is dependent on mass and velocity (momentum)
	RIT 201-210: <ul style="list-style-type: none"> Describes how forces may create equilibrium for an object Analyzes how air resistance influences the relative motion of objects Explains how frictional forces affect motion Identifies types of simple machines Gives examples of simple machines

	<ul style="list-style-type: none"> Describes the effects of Earth's gravity on objects
	RIT 191-200: <ul style="list-style-type: none"> Interprets graphs of motion Defines a force as a push or pull on an object Applies Newton's second law (the interrelationship between force, mass, and acceleration) to everyday objects, such as teeter-totters/see-saws Gives examples of simple machines Describes parts of a first class lever Classifies machines as simple or complex Predicts how a lever will act in a given situation Calculates work Understands that work is dependent on force and distance Selects evidence that supports the idea that magnets attract only some kinds of metal Defines gravity Infers that there is a force that keeps us connected to Earth Explains that gravity pulls on all objects on or near Earth towards Earth's center
	RIT 181-190: <ul style="list-style-type: none"> Relates movement of objects to the application of force Describes everyday situations in terms of forces Infers how the size and structure of a wheel determines its usefulness Recognizes that wheels make it easier to push heavy objects Generalizes that magnets attract only certain types of metals (e.g., iron) Explains that gravity pulls on all objects on or near Earth towards Earth's center
	RIT Below 181: <ul style="list-style-type: none"> Recognizes that pushing or pulling an object can cause a change in the object's position and motion

Science DesCartes: Physical Science

Skills: Force and Motion

Lesson Title:

Standard/Concept for All:

Introduction: (Get Attention; Connect to Prior Knowledge)

For Students Ready for a Challenge:

Lesson/Activity:

Resources:

Means of Assessment:

For Most Students:

Lesson/Activity:

Resources:

Means of Assessment:

For Students Needing Extra Support:

Lesson/Activity:

Resources:

Means of Assessment:

Closure/Summary for All: