

**Science DesCartes: Concepts & Processes: Scientific Process:
Scientific Knowledge, Nature of Science
Skills: Unifying Concepts and Themes**

Students:	DesCartes Skills: (Highlight the skills related to your chosen standard/concept)		RIT 191-200: <ul style="list-style-type: none"> • Recognizes that models are useful to illustrate processes that are too large to manipulate • Selects models to represent the parts of an object or process • Explains that models are useful to examine things or processes which cannot be directly observed or tested • Compares physical models to what they represent • Describes a constant rate of change for a familiar system • Describes changes that have occurred in a system • Classifies events as change • Explains what caused a particular change in a common system to occur • Describes the importance of direct observation in determining the cause of change to systems • Gives real life examples of things that remain constant • Gives examples of a cause and effect relationship • Explains how determining cause and effect relationships can be useful • Classifies a given scenario as an example of cause and effect • Infers the possible causes for a given scenario (presented as a diagram)
	RIT Above 230: <ul style="list-style-type: none"> • Analyzes relationships using a simple mathematical model • Uses symbolic equations to represent change 		
	RIT 221-230: <ul style="list-style-type: none"> • Differentiates among examples of models and observations • Selects appropriate scale models to represent data • Assesses how well a model represents a real life event, process, or concept 		
	RIT 211-220: <ul style="list-style-type: none"> • Explains how models help scientists to understand the physical world • Compares physical, mathematical, and conceptual models • Gives examples of conceptual (e.g., scientific) models • Evaluates the usefulness of a model • Describes circumstances that might lead to the revision of a scientific model • Orders the stages that are involved in creating a scientific model • Analyzes changes occurring within systems • Understands that rates describe the time it takes for a unit of a given event to occur • Analyzes changes in scale • Understands that correlations seen in data are most useful in making predictions when a cause-effect relationship is established 		
	RIT 201-210: <ul style="list-style-type: none"> • Recognizes that models are not identical to the object, process, or event they portray • Determines which model would be most useful in describing a particular process, event, or concept • Orders the stages that are involved in creating a scientific model • Explains that very fast and very slow changes can be difficult to see or measure • Represents change quantitatively • Explains that change in nature is common and widespread • Classifies events as change • Describes properties of matter that remain constant after changes to systems • Understands that rates describe the time it takes for a unit of a given event to occur • Analyzes changes in scale 		RIT 181-190: <ul style="list-style-type: none"> • Describes changes that have occurred in a system • Explains what caused a particular change in a common system to occur • Determines causes for a given effect • Predicts effects of a particular action RIT Below 181: <ul style="list-style-type: none"> • Describes ways in which things can change • Describes variables that cause change • Identifies qualitative change in systems, given the conditions that occur before, during, and after an event • Determines causes for a given effect • Predicts effects of a particular action

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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: