



Irina E. Lyublinskaya

# *Connecting Mathematics with Science*

**EXPERIMENTS FOR PRECALCULUS**

**KEY CURRICULUM PRESS.**

**Blackline Activity Masters**



$$P = A \cos\left(2\pi \frac{J_1 - J_2}{2} t\right) \sin\left(2\pi \frac{J_1 + J_2}{2} t\right)$$

## ***Connecting Mathematics with Science*** **Experiments for Precalculus**

Through hands-on experiments grounded in physical and life sciences, *Connecting Mathematics with Science: Experiments for Precalculus* helps students strengthen their grasp of precalculus concepts. Activities connect mathematics with science in a way that is accessible to teachers and students alike.

Irina E. Lyublinskaya, Ph.D., designed these experiments with the mathematics classroom in mind, but science classes can also benefit from them. Each activity explores a scientific phenomenon, connecting it to precalculus concepts such as periodic, exponential, logarithmic, logistic, and parametric functions; modeling using functions; asymptotic behavior; and transformations of functions. Students experience how scientists solve problems and use mathematical models to design experiments. They apply a variety of techniques to verify their experimental results and develop conjectures. There are 15 activities: 10 use the Calculator Based Laboratory, CBL™, with different probes; 5 require only basic tools, such as a stopwatch, metersticks, tape, and scissors.

You can use the experiments as hands-on activities or demonstrations. Each activity includes blackline masters for students, accompanied by teacher notes that provide the science background and instructions necessary to successfully guide students. You will find that the experiments stimulate the imagination and the development of practical understanding, making the study of mathematics more interesting and useful. These activities will truly enhance your students' learning, while meeting the needs of different learning styles.

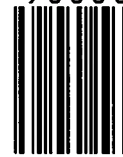


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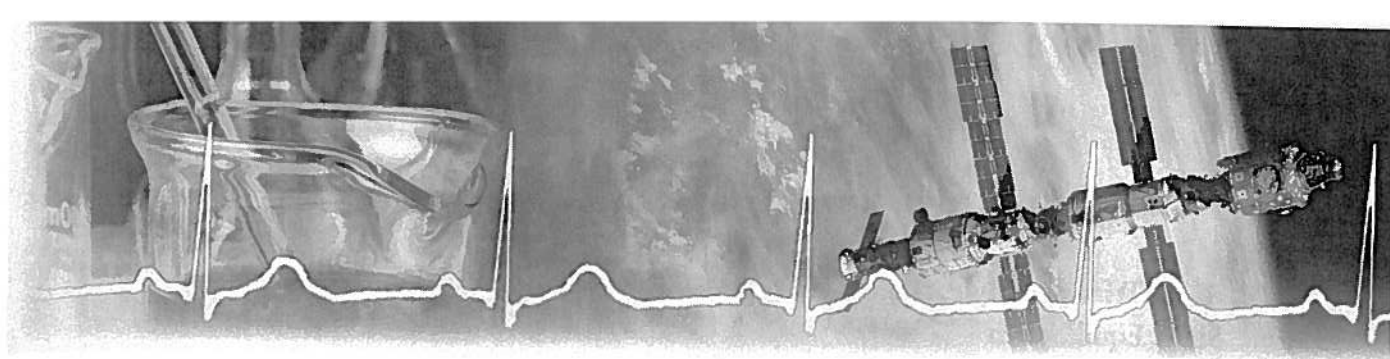
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# Contents

Introduction	vii
How to Use These Labs	viii
Acknowledgments	ix
Connecting Mathematics with Science: At a Glance	x
<b>1 Asymptotic Behavior of Functions</b>	<b>1</b>
pH of Acid-Base Solutions	
<b>2 The Concept of Periodic Functions</b>	<b>11</b>
EKG	
<b>3 Sum-to-Product Identity for Sines</b>	<b>19</b>
Sound Beats	
<b>4 Parametrically Defined Functions</b>	<b>31</b>
Heart Rate and Exercise	
<b>5 Symmetry and Even Functions</b>	<b>39</b>
Acid-Base Solution Titration and Conductivity	
<b>6 Transformations of Trigonometric Functions</b>	<b>51</b>
Mechanical Oscillations	
<b>7 Harmonic Series</b>	<b>63</b>
The Leaning Tower of Tiles	
<b>8 Parametric Equations</b>	<b>73</b>
Catch the Ball	
<b>9 The Binomial Theorem and Logistic Functions</b>	<b>83</b>
Spread of Disease Simulation	

<b>10 Right Triangle Trigonometry</b>	<b>93</b>
Static Equilibrium	
<b>11 Properties of the Cosine and Sine Functions</b>	<b>101</b>
Circular Motion and Oscillations	
<b>12 Properties of Exponential Functions</b>	<b>113</b>
Fast and Slow Cooling	
<b>13 Logarithmic and Exponential Functions</b>	<b>125</b>
pH of Hydrochloric Acid	
<b>14 Geometric Sequences</b>	<b>139</b>
Salinity of NaCl Solutions	
<b>15 Intersection of Parametric Curves</b>	<b>149</b>
Catching a Moving Target	
 Appendix A: How to Adapt These Labs for the Original CBL	 <b>163</b>
Appendix B: Assessment	<b>167</b>
Bibliography	<b>175</b>