

LEGO Pendulum Science Exploration

Here's a fun science activity for kids! Make a LEGO pendulum that can be used to test whether mass or length affect the period of a pendulum. The period is the length of time that it takes the pendulum to make one complete back-and-forth swing.

There are two different recording sheets to choose from. The second sheet includes a space to write a hypothesis, results, and a conclusion.

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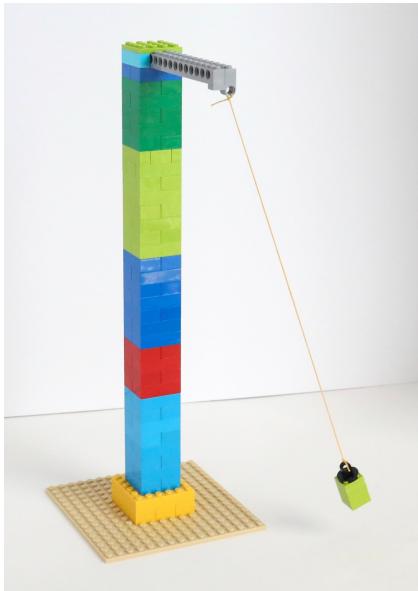
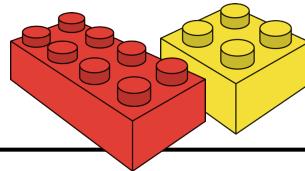
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Science Exploration: LEGO Pendulum



Instructions: Build a LEGO tower and add an arm made from long bricks or Technic bricks. Use a 1 x 2 plate with a pin hole to hold the string. Attach LEGO plates to a 2 x 2 black tile with a ring to create a weight for your pendulum.

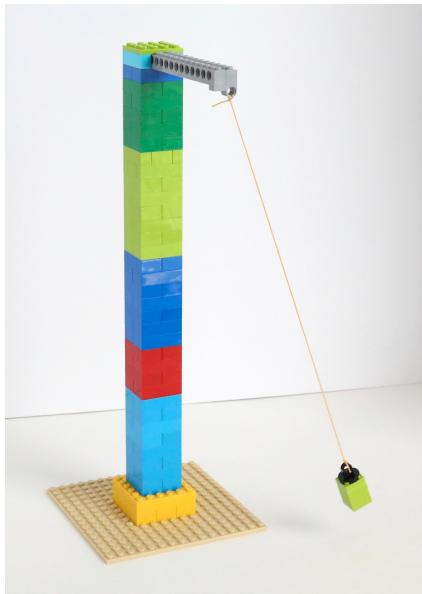
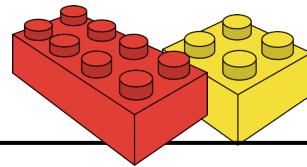
Recommended weights:

7 - 2 x 2 plates = 4 grams

2 - 2 x 4 plates and 10 - 2 x 2 plates = 8 grams

Pendulum String Length in cm	Number of Swings in 30 Seconds Count a complete back-and-forth swing as one swing.	
	Mass #1: _____	Mass #2: _____

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Hypothesis: What do you think affects a pendulum's period, or the time it takes to make a complete swing. Is it the mass of the pendulum, or the length of the string? Or both?

Pendulum String Length in cm	Number of Swings in 30 Seconds	
	Mass #1: _____	Mass #2: _____

Results:

Which length of pendulum had the longest period (fewest swings in 30 seconds)? _____

Which length of pendulum had the shortest period (most swings in 30 seconds)? _____

Which pendulum mass had the longest period? _____

Which pendulum mass had the shortest period? _____

Conclusion:

What affects the period of a pendulum? Write a short paragraph explaining your answer.
