



# Automata: Simple Machines Mimicking Life

## PROGRAM DESCRIPTION

Introduction to the history, art, and science behind clockwork toys that mimic animal and human life. Learn the basic mechanisms of automata, trace their evolution from the Renaissance to the digital era, and have hands-on time analyzing automata models to see how the six Simple Machines combine to create movement. Maker component available.

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## LOGISTICS, FEE & DELIVERY REQUIREMENTS

**Duration:** 2.5 hour interactive program | **Age Range:** 8/9-Adult | **Participants:** 10-30

**Cost:** See Website | **Requirements:** Video Projector with HDMI port and speakers ; 1 large table for presenter's items ; 8 medium tables with 4 chairs each for hands-on stations ; 1.0 hour setup and breakdown times ; additional travel charges may apply.

### CORE TOPICS & GOALS

▲ Analyze key historical periods, patterns, and figures in the evolution of automata from adornments in medieval clock towers to surrogates for humans in caregiving, rescue operations, and space exploration

▲ Establish a chronology for the increasingly lifelike animation of automata, starting with the use of simple machines, progressing to complex mechanical miniaturization, and culminating in high-end digital electronics



### CORE TOPICS & GOALS

▲ Assess the impact of automata on the 18th century's concept of life and science, the 19th century's spawning of the industrial revolution, and the 21st century's focus on artificial intelligence and human surrogates

▲ Differentiate among the types of simple machines that animate traditional automata and determine how they serve as a mechanical computer code directing their operation

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