



Science Explorers Leonardo's Toy Chest Camp Daily Schedule

MONDAY Transformation of Energy	TUESDAY Art Drives Invention	WEDNESDAY Mechanical Movement	THURSDAY Ability to Improve	FRIDAY Renaissance Era
<p>Sign-in: Create Take-Home Bags & Name Tags</p> <p>Clockwork Car Build a wooden car that you can make move forward, backward, right and left. Learn how potential and kinetic energy 'drive' this car.</p> <p>Bubbles Leonardo enjoyed studying water and creating bubbles; we'll mix up a bubble solution to examine the properties of water.</p>	<p>Rubbings Rubbings are an early form of artwork that we will explore.</p> <p>Revolving Stage Create a masterpiece theater with a revolving stage and story line that you create.</p> <p>Helicopter Leonardo was fascinated with flight. He created blueprints of helicopters, airplanes, parachutes and other flying objects. Reinvent a helicopter – can you use the laws of flight to make it fly?</p>	<p>Rebus Puzzles Rebus puzzles were often found in Leonardo's notebooks. We'll try to decipher some puzzles and create our own.</p> <p>Paddlewheel Boat Use Leonardo's fascination of water and water-based inventions to duplicate his original paddlewheel boat design. Race it against your fellow campers.</p>	<p>Secret Codes Leonardo was fascinated with secret codes & messages. We'll use our thinking skills and creativity to try & create & decode messages.</p> <p>Improvised Ride Recreate Leonardo's last great masterpiece: the first ever wind-up toy as you learn about mechanics and energy.</p> <p>Invention in Motion 1 Using individual pieces create a toy that incorporates two different types of motion.</p>	<p>Tall Towers Work in engineering teams to build towers. Use your knowledge of building to create geodesic domes.</p> <p>Invention in Motion 2</p> <p>Catapult Leonardo designed the first catapult for the Duke of Milan. Create your own catapult and use degrees of tension to vary your accuracy.</p>
LUNCH	LUNCH	LUNCH	LUNCH	LUNCH
<p>Pinball Machine Examine the storage and transformation of energy as you build your own wooden pinball machine.</p> <p>Simple Machine Challenge Use given objects to create your own simple machine. Can you build a machine with a pulley, lever, wheel and axle?</p>	<p>Camera Obscura Spend the afternoon building a camera first used in 300 B.C. Experiment with light and reflecting objects as you turn the 2-D into 3-D!</p> <p>Camera Obscura 2 We'll make a few additions to our camera obscura in order to create a projector.</p>	<p>Robot Drum Build the first ever robot...a wooden drum that Leonardo designed which was meant to do the job of a person during wartime.</p> <p>Sound Scavenger Hunt Hunt for sound waves as you learn about Leonardo's experiments with musical instruments.</p>	<p>Marble Staircase Your challenge: to build a marble stairway to get the marble from the top of your staircase to the bottom – but be careful your marble does not gain too much momentum and fly off!</p>	<p>Castle You cannot build a catapult without testing it. Create a sugar cube castle which protects against invading enemies then see if you can knock it down. Go against friends to knock other castles down in this sweet tasting competition.</p>

**All the activities done throughout the week are based on the inventions and work of Leonardo Di Vinci. The toys built during camp are wooden; assembly with small hammers is necessary. For the safety of our campers we ask campers be between 8 and 11 years of age to attend.