

Be a Scientist! (BSCI) CTY Course Syllabus

Required book, Everything You Need to Know About Science Homework by Anne Zeman and Kate Kelly.

Day / Time	What (goals)	How (activities)
<p>Day 1</p> <p><u>Morning</u> - Introductions and pre-assessment</p> <p><u>Afternoon</u> - Be a Scientist</p> <p><u>Homework</u> - Bring 3 rocks. Read handout on rocks.</p>	<ul style="list-style-type: none"> • Assessing prior knowledge • Scientists and what they do 	<ul style="list-style-type: none"> • What do scientists do? • What types of scientists can you name? • 5 Senses Activity
<p>Day 2</p> <p><u>Morning</u> - Be a Geologist</p> <p><u>Afternoon</u> - Be a Sedimentologist</p> <p><u>Homework</u> - Complete rock cycle journey</p>	<ul style="list-style-type: none"> • The Rock Cycle • Sediments • Making comparisons, note-taking, reading comprehension, observations, recording data 	<ul style="list-style-type: none"> • Mineral and Rock Identification • Candy bar Lab • Observe and Draw Soils
<p>Day 3</p> <p><u>Morning</u> - Be a Seismologist</p> <p><u>Afternoon</u> - Be a Volcanologist</p> <p><u>Homework</u> – Read pp. 53, 54, and 67. Write down 5 important facts.</p>	<ul style="list-style-type: none"> • Earthquakes • Volcanoes • Note-taking, critical thinking, making models, hypothesizing, predicting 	<ul style="list-style-type: none"> • Plate Movements Lab • Cornstarch Lab • Models of Volcanoes
<p>Day 4</p> <p><u>Morning</u> - Be a Soil Scientist</p> <p><u>Afternoon</u> - Be a Glaciologist</p> <p><u>Homework</u> – Complete erosion lab report</p>	<ul style="list-style-type: none"> • Soil Formation • Glacier Formation, Movement, and Erosion • Observing, Analyzing data, Predicting, Experimentation, Critical Thinking 	<ul style="list-style-type: none"> • Erosion Lab • Melting Glaciers
<p>Day 5</p> <p><u>Morning</u> - Be a Hydrologist</p> <p><u>Afternoon</u> - Be a Meteorologist</p> <p><u>Homework</u> - Water Cycle Story</p>	<ul style="list-style-type: none"> • Water Cycle • Weather precipitation • Extreme Weather • Experimentation, Observing, Predicting, Graphing 	<ul style="list-style-type: none"> • Water Cycle Lab • Cloud types • Weather Maps • Create Own Tornado in bottle

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<p>Day 6</p> <p><u>Morning</u> - Be a Climatologist</p> <p><u>Afternoon</u> - Be an Oceanographer</p> <p><u>Homework</u> – Finish graphs. Write a 5-8 sentence summary of the color/heat lab</p>	<ul style="list-style-type: none"> • Global Warming • Waves, Currents, Underwater Structures • Researching, Experimental Design, Communicating Data 	<ul style="list-style-type: none"> • Global Warming news • Climate Changes • Heat absorption lab • Currents Lab • Wave Activity
<p>Day 7</p> <p><u>Morning</u> - Be a Zoologist</p> <p><u>Afternoon</u> - Be an Evolutionist</p> <p><u>Homework</u> – Complete own diary story</p>	<ul style="list-style-type: none"> • Types of Animals & Habitats • Adaptations • Observing, Critical Thinking, Comparisons, Modeling, Inference 	<ul style="list-style-type: none"> • Worm investigation • Diary of a worm • Owl adaptations activity
<p>Day 8</p> <p><u>Morning</u> - Be an Entomologist</p> <p><u>Afternoon</u> - Be a Physiologist</p> <p><u>Homework</u> - Gather plant specimens. Read pp. 23, 26, 28-29, 35-36.</p>	<ul style="list-style-type: none"> • Body Systems • Characteristics of Insects • Planning, Classifying, Collecting Data, Classification 	<ul style="list-style-type: none"> • Height and hand length activity with graph • Meet the Beetles Book • Collect Insects, Draw Illustrations and Pose Questions
<p>Day 9</p> <p><u>Morning</u> - Be a Botanist</p> <p><u>Afternoon</u> - Be an Ecologist</p> <p><u>Homework</u> – Read pp. 37-45 and 103-104. 5 facts.</p>	<ul style="list-style-type: none"> • Plants • Ecosystems • Inferring, Observing, Classifying, Critical Thinking 	<ul style="list-style-type: none"> • Dissect a flower • Create Class Museum
<p>Day 10</p> <p><u>Morning</u>- Be a Physical Engineer</p> <p><u>Afternoon</u> - Be a Mechanical Engineer</p> <p><u>Homework</u> – Summarize one activity in 5-10 sentences. Read pp. 97-100.</p>	<ul style="list-style-type: none"> • Newton's Laws • Motion and Forces • Inertia • Predicting, Compare, Design, Reflect, Evaluate 	<ul style="list-style-type: none"> • Balloon-Powered cars • Balloon races on a string • Study ramps and masses of rolling objects

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<p>Day 11</p> <p><u>Morning</u> - Be a Chemist</p> <p><u>Afternoon</u> - Be a Chemist</p> <p><u>Homework</u> – Read pp. 107-113. Write 10 facts.</p>	<ul style="list-style-type: none"> • Atoms • Acids and Bases • Chemical Reactions • Exploring, Experimentation 	<ul style="list-style-type: none"> • Rainbow Lab • Alka Seltzer lab • Acid/Base Lab • Chem Reactions Lab (temp) • Soda and Mentos demo
<p>Day 12</p> <p><u>Morning</u> - Be a Thermochemist</p> <p><u>Afternoon</u> - Be an Astrophysicist</p> <p><u>Homework</u> – Read pp. 114-124</p>	<ul style="list-style-type: none"> • Thermodynamics • Planets, Solar Systems, Big Bang Theory • Creating, Experimentation 	<ul style="list-style-type: none"> • Temperature scales and conversions • Methods of heat transfer • Create your own planet
<p>Day 13</p> <p><u>Morning</u> - Be a Physicist</p> <p><u>Afternoon</u> - Be a Physicist</p>	<ul style="list-style-type: none"> • Sound • Light • Magnetism • Electricity • Observing, Experimenting, Inferring, Predicting 	<ul style="list-style-type: none"> • Sound vs. Light • Tuning Fork Lab • Electricity Lab
<p>Day 14</p> <p><u>Morning</u> - Post-assessment</p> <p><u>Afternoon</u> - Choose your field</p> <p><u>Homework</u> - Write your biography</p>	<ul style="list-style-type: none"> • Reflecting, Assessing Understanding 	<ul style="list-style-type: none"> • Drops on a penny lab • Draw yourself as a scientist • Write biography of yourself as a scientist
<p>Day 15</p> <p><u>Morning</u> – Practice presenting yourself as a scientist</p> <p><u>Afternoon</u> – Open house</p>	<ul style="list-style-type: none"> • Conclusions 	<ul style="list-style-type: none"> • Biography presentations to families