

Science Curriculum Embedded CAPT Performance Tasks  
Human Population Dynamics

Anticipated Month/Day	Assignment / Unit of Study	Product	LMC Skill/Information Literacy Skill	Technology Literacy Skill
	<b>Human Population Dynamics</b> Research and evaluate population growth data from charts and tables in two different countries—one underdeveloped and one developed. Research three factors that affected population changes in one country Research a technological advance that affects population change from 2005-2025 in one country. Take a position whether the advance of technology has a positive or negative effect on population dynamics in one country. Support conclusions with evidence Cite sources	Communicate research findings in a PowerPoint. Create a Works Cited page.	<b>Task definition (1)</b> Define the steps of the information problem in this multi-tasked assignment Define key words in the statement of the task such as: underdeveloped and developed. <b>Information Seeking Strategies (2)</b> Use strategies for searching the Student Research Center Database for Country reports Use World Book online for population factors Use strategies for searching Google effectively and efficiently <b>Information use (4)</b> Read and interpret scientific data in graphs and tables. <b>Synthesis (5)</b> Explain the factors that influence projected changes in human population in one country based on indicators from census information. Use the note fields of each slide to articulate conclusions about population changes based on data displayed in the slide. Articulate conclusions and provide explanations about population dynamics based on interpretations of tables and graphs. Communicate about science using a PowerPoint, using relevant science vocabulary, supporting evidence and clear logic.	<b>Technology use for communication</b> Create a PowerPoint Copy two graphs onto a slide Create a text field in a slide and copy a table into the text field Use the note fields of each slide to articulate conclusions about population changes based on data displayed in the slide Print the PowerPoint with visible note fields. Effectively and efficiently locate and access information in databases and on the free Internet.

## Energy Uses in CT

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	<b>Energy Uses in CT</b> 1. Select a fuel source (coal, natural gas, nuclear, hydroelectric or wood-waste). 2. Identify whether the fuel source is renewable or non-renewable. 3. Given two comprehensive web sites, research the advantages and disadvantages of that fuel source. 4. Create a chart on trends in energy use in CT from the data in an Excel spreadsheet 5. Interpret the chart to answer the question: Does the trend in use of one fuel source support Connecticut's initiative to significantly decrease the use of non-renewable resources by the year 2010?	1. List the advantages and disadvantages of a fuel source from a list of fuel sources. 2. Create a chart on trends in CT energy use. 3. Write a paragraph analyzing the trend in CT of one fuel source.	<b>Task definition (1)</b> Define the steps of the information problem in this multi-tasked assignment Define key words in the statement of the task such as: renewable and non-renewable energy sources <b>Information use (4)</b> Read and interpret scientific data Research the advantages and disadvantages of one fuel type using the suggested web sites Navigate and read for meaning using a comprehensive web site that requires going beyond the home page. <b>Synthesis (5)</b> Communicate about science in different formats, using relevant science vocabulary, supporting evidence and clear logic Interpret the chart to defend a position about CT's use of renewable and nonrenewable energy sources Articulate conclusions and provide explanations based on research data. Communicate about science by depicting data in a chart using relevant science vocabulary, supporting evidence and clear logic.	<b>Technology use for communication</b> Copy and paste a spreadsheet into a blank Excel program Create a chart Use Word to list advantages and disadvantages of one energy type Use word to write a paragraph <b>Technology use for productivity</b> Determine the need to print in landscape format for some web sites <b>Process information from electronic sources</b> Navigate comprehensive web sites to find relevant information

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CT Brownfield Sites

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	<b>CT Brownfield Sites</b> 1. Explore environmental issues that are close to home by using the DEP List of Contaminated or Potentially Contaminated Sites in Simsbury and/or Hartford. 2. Using the web site of the Hamden Middle School Remediation Project determine types of contamination and the hazards that the contaminants present. 3. Formulate a question about the Hamden Middle School site that may be answered through scientific investigation. 4. Design a scientific investigation using the supplied template.	Complete the worksheets. Design a scientific experiment using the template.	<p><b>Task definition (1)</b> Identify questions that can be answered through scientific investigation            Design a scientific experiment to answer your question            Identify independent and dependent variables.</p> <p><b>Locate and access information (3)</b> Find information within the DEP site or the Hamden Middle School site.</p> <p><b>Information use (3)</b> Gather background information to answer questions on the worksheet.            Read about a model scientific investigation for to remediate a Brownfield site in CT—Hamden Middle School.</p> <p><b>Synthesis (5)</b> Design your own investigation using the template provided.</p> <p>.</p> <p>Note: students do not actually conduct the experiment</p>	<p><b>Technology use for productivity</b>            Tile windows to read multiple windows at once            Minimize or maximize windows            Copy and paste a word template to P drive and then complete the template.            Use Edit: Find to locate information on a lengthy web page  <b>Process information from electronic sources</b>            Navigate comprehensive web sites to find relevant information</p> <p>Note: Adobe Reader needs to be installed on all computers to read government documents.</p>

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Synthetic Polymers

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	<b>Synthetic Polymers</b> Students evaluate credibility (reliability and relevance) of 4 web sites concerning the risks versus benefits of using plastics. Using their answers in the supplied template, students make a judgment as to the reliability and relevancy of each of the 4 web sites.	A worksheet on the criteria for judging reliability and relevance of a web site. One paragraph on each web site that indicates an overall judgment of the value of the web site.  Note: The suggested web sites are chosen to demonstrate bias and unreliability.	<b>Information seeking strategies (2)</b> Evaluate the value of a web site for authority, accuracy, bias, appropriateness, scope and timeliness. .	<b>Evaluate electronic sources</b> Locate information on given web pages to determine name of the web site, url, author, date, point of view, and reliability. Determine if the site has documentation to support the information presented. Determine if links are relevant and working.

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Bioengineered Food

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	<p>Bioengineered Food</p> <p>1. Students take a position in support of or in opposition to mandatory labeling of genetically altered food based on scientific evidence found in four required websites.</p> <p>2. Students either design a persuasive brochure, create an outline of a persuasive essay or write a persuasive essay</p>	<p>Brochure, sentence outline or persuasive essay</p> <p>Works cited page</p>	<p><b>Task Definition (1)</b> Identify the characteristics of persuasive writing: Identify the characteristics of a quality brochure Identify the hierarchy of an outline. Create a thesis supported by three position statements. Support each position with facts, evidence, examples, or statistics.</p> <p><b>Location and access (3)</b> Locate relevant information on a web site Identify relevant links</p> <p><b>Information use (4)</b> Read, interpret, and examine the credibility and validity of scientific claims in the four suggested web sites.</p> <p><b>Synthesis (5)</b> Summarize information from several web sites Communicate about science using a brochure, outline or essay using relevant science vocabulary, supporting evidence and clear logic</p>	<p><b>Technology use for communication</b> Develop a story board to follow in the design and layout of a persuasive brochure Create a tri-fold brochure using Word Create an outline using Inspiration or Word</p> <p><b>Technology use for productivity</b> Tile windows to have a document and a web site appear side by side or one on top of the other Print in color Print back to back</p>