VISUAL TOOLS FOR STUDENT PROJECTS

Communicating Critical Thinking

[Diagram of Mammoth population changes over time]

[Diagram of cooling/heating factors]

[Diagram of water temperature and room temperature difference]

[Image of students working on a project]

[Table of Mammoth births and deaths over time]

[Graph showing Mammoth population over time]
This booklet is a collaborative project of the Creative Learning Exchange and The Gelfand Family Charitable Trust.

These and other materials about critical thinking using systems thinking and system dynamics are available from the Creative Learning Exchange website: www.clexchange.org.

Much of the material within the booklet is taken from the following publications of the Creative Learning Exchange:

- *Critical Thinking Using Systems Thinking and Dynamic Modeling*, based on the work of Barry Richmond, Jeff Potash and John Heinbokel
- *Rubrics for Understanding*, developed for DynamiQueST

Compiled with the help of Alan Ticotsky
This booklet is designed to help teachers and students create and complete all kinds of projects (in science and other curricula) which clearly show and explain the critical thinking incorporated within the project.

I. Creating the question or the topic

Creating the question or the topic for student projects can be the most agonizing part of the whole process. Having students brainstorm ideas, either singly or in groups, is productive. These are a few questions and guidelines that may help. Encourage students to stay within the general subject area of the project assignment.

- What interests you in the subject area?
- What interesting stories or articles have you seen or heard recently that may be pertinent?
- What science questions are in the news lately?
- What is important within the subject area?
- What don’t people know?
- What could you experiment with?

Once a topic is chosen, it is time to vet the idea to discover its relevance and accessibility to a project.

- Is there a clearly stated purpose?
- Does the question have a manageable focus?
- Is the scope of the project doable within the time frame involved?

Many of the most interesting topics and questions involve systems and relationships. Some questions to ask:

- What is changing over time?
- What are the connections among factors or elements?
- Are the boundaries of the system clear and reasonable?
- How can the topic or question be tested experimentally or with a model?
II. Communicating thinking with visual tools

Behavior-over-time Graphs (BOTGs)

Many projects will track one or more variables over time. BOTGs will draw observers’ attention to the quantitative analysis being done and highlight data in a straightforward, visual format. Plotting two or more variables on the same BOTG can help establish a correlation or causal relationship.

*Example:* Graphs of atmospheric CO$_2$, temperature, and other data could highlight student research into climate trends.

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**Global Average Temperature and Carbon Dioxide Concentrations, 1880–2006**

Source: Michael Ernst, Woods Hole Research Center, from *How We Know What We Know About Our Changing Climate*

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Feedback Loops—Closed Loops showing Causality

Most projects have a central thesis, or a hypothesis, explaining research or experimentation. A feedback loop that traces causal connections in the topic being studied can be an introduction, a summative diagram, or a unifying visual representation of the presenter’s thinking.

*Example:* A student investigating the proliferation of energy drink use among teenagers could support an argument based on research that connects advertising and marketing, the number of companies producing energy
drinks, the popularity or decline of other drinks for teenagers, and other factors. These data could be presented visually as BOTGs, and their causal connections represented as a reinforcing loop.

This loop is not based on research or factual reporting and is simply a visual example:

![Reinforcing loop diagram]

**Stock and Flow Maps—Structural maps of the system**

Stock and flow diagrams present a clear representation of the operational functioning of a system. As an example, the stock and flow diagram below traces heat loss from a cup of hot liquid.

![Stock and flow diagram of heat loss]

A student doing experiments with different design solutions for insulating a drink cup or other container could use the diagram to explain the basic thermodynamics involved, and then present performance data based on experimentation. Using STELLA software, students can also build computer models to run simulations.
Computer simulations

In addition to the cooling model shown above, many other varied computer simulations are available for students. STELLA software provides a platform for students to build their own simulation models or adapt existing ones. For instance, a model simulating the effects of alcohol consumption on reaction time while driving would be a pertinent and relatively simple model to build. (One is also available from the Creative Learning Exchange.) Other models that lend themselves to project presentations are population simulations, spread of disease or ideas, behavior of a pendulum, and many others.

One interesting use of a computer simulation is to create a model using all the available data showing how an experiment might turn out. This could be done even without creating the experiment itself. Another approach might be to create an experiment and then either map with a stock/flow map, or model the results.
III. How to use the visual tools of systems thinking

Behavior-over-time Graphs (*BOTG*)

A behavior-over-time graph (*BOTG*) is a curve showing the trend or pattern of change of a variable or variables over time. It is a simple tool that can help people focus on patterns of change over time, rather than on isolated events, leading to rich discussions on how and why something is changing.

Below is an example of a *BOTG* of world population from United Nations data. As you can see from the graph, world population is growing at a significant rate. The graph of population not only illustrates that rise but is an effective visual tool to use as a basis for discussion about important questions such as why the population is rising and why it is doing so quickly.

![Behavior-over-time Graph](http://www.un.org/esa/population/publications/sixbillion/sixbilpart1.pdf)
BOTGs are used to:

- Identify and focus on the central, critical element(s) of the system we are exploring.
- Help us “think dynamically.” They help us to consider a particular element of the system as continuously evolving over the past, to the present, and into the future, not as static or simply a current or immediate event.

**How do BOTGs contribute to critical thinking?**

By using BOTGs, we can:

- Gain perspective to see beyond individual events to patterns over time;
- See repeating patterns in varying systems;
- Discover generic and repeating patterns;
- Utilize graphs to support communication and collaboration;
- Formulate further questions;
- Improve mental models of how the system is ‘behaving’;
- Think operationally about how systems work.
Feedback Loops—Closed Loops Showing Causality

*Feedback loops* (or circular causality) are used to show causal relationships and effects within a system.

The fundamental logic behind circular causality is that actions are both cause and effect, e.g., A affects B which affects C which then “feeds back” to affect A. Shown here is a causal loop diagram.

Two types of feedback form the basic building blocks for all types of complex systems, from personal health and finance to global issues of climate change and population dynamics. The first type of feedback loop is a *reinforcing loop*, which leads to exponential growth or collapse. An example of growth would be: if A increases, then B increases, and ultimately C also increases, which leads to a further increase in A, which…. The second type of feedback loop is a *balancing loop*, which strives to maintain stability. For example, if A increases, then eventually C is affected so that it causes a reduction in A, balancing or stabilizing the original change.

**How are Feedback Loops used?**

Population dynamics offers an illustration of both types of feedback loops. For instance, we can focus on the *inflow* and think of it as number of births per year. Now we can visualize a *reinforcing feedback loop* (“R”) where newly born individuals increase the overall population, causing (with an obvious delay!) additional births, a still larger population, still more births, and… you get the picture. This represents a *reinforcing loop* that generates exponential growth, looking much like the UN population data.
Alternatively, we can focus solely on deaths (no births or additions) and assume that a constant fraction of individuals die each year. In the first year we would see that these deaths reduce the population, leading to fewer deaths (because of the smaller population) the next year, a still smaller population, a still slower death flow, and so on. This process, unlike the reinforcing feedback loop, slows or limits the changes and causes the system to balance itself at a stable point, in this case when the population reaches zero. This is a balancing feedback loop.

Feedback loops help us:
- Visualize, represent, and communicate the critical internal relationships among the system’s parts that drive or control the system’s behavior.
- Identify relationships between patterns of behavior and system structure.

How Feedback Loops Contribute to Critical Thinking
As feedback loops are mastered, the following learning develops:
- Map the major influences on a system’s behavior;
- Identify causality that shapes recurring patterns of behavior;
- Analyze multiple and competing feedback loops;
- Focus thinking about policies or actions to be taken.
**Stocks and Flows**

Stocks and flows are two building blocks for representing the structure of a system. Stocks are the accumulations or repositories of “stuff” within the system: that “stuff” may be concrete (e.g., water reserves, debt, pollution, people) or it may be more “soft” and abstract (as, for example, attitudes or emotions, e.g., respect, trust, anger, frustration, self-esteem). As “stuff,” stocks are best thought of as the nouns in our mental models.

Flows are the pathways and the rates by which “stuff” moves in the system, causing change. They can add “stuff” to existing stocks (inflows); alternatively flows can drain “stuff” from existing stocks (outflows). We think of flows as “verbs,” the actions and changes in the system.

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**How are 'Stocks and Flows' used?**

A real-world example is global population and a celebratory headline announcing “World Population Growth ‘Falling’” (BBC, 23 March 2004). What are the implications of this ‘fall’ on the future size of the world’s population? A common and immediate response is to assume that the world’s overall population also will fall. But will it?

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If we think of population in dynamic terms as a stock, the inflow of that population is all the births and the outflow is all the deaths. The population in any one year is the number of people in the world at the beginning of the year, with all the births added and all the deaths subtracted for that year. That number (the population with the inflow of births and outflow of deaths for each year) would equal the total population for that year. If you subtract all of the deaths from the births for that year, you would have the net population added during a year of the Population Increment.
In this BOTG from a recent UN publication, notice how the population increment, which peaked in the 1980s, has begun to fall and is projected to fall even faster in the future.

**Note:** Even though the net population (births minus deaths) is falling, the total population of the globe (the solid line) will continue to grow (and at fairly substantial rates) for some time!

![Graph showing net population increments and population size over time](http://www.un.org/esa/population/publications/sixbillion/sixbilpart1.pdf)

By using the *stocks and flows* tool we are able to:
- Visually represent the core mechanism(s) of change in the system (e.g., If the inflow(s) of stuff exceeds the outflow(s), the stock will grow. If a previously growing stock begins to decline, its inflows were reduced and/or its outflows increased).
- Think about and discuss relationships within a system.
How Stocks and Flows Contribute to Critical Thinking

As *stocks and flows* are mastered, the following learning develops:

- Quantitative thinking is strengthened by more clearly recognizing the differences between rates of change and accumulations (e.g., as in the previous case of global populations or the similar falling "deficits" and total accumulations of "debt" in the bank account example).
- Appreciation that change in the system is controlled very close to home by actions that affect the central stocks in the system;
- Recognition that *stocks and flows* are generic tools and are the structure(s) with which to frame dynamic thinking in a wide range of systems;
- Development of a foundation for asking further questions about what controls or drives those *flows*. 
Computer Models and Simulations
System dynamics uses computer modeling to transform *stock/flow feedback* concept maps into fully operational simulations. These are mathematically-based models that extend our understanding by simultaneously computing all the modeled system’s many interdependent relationships over time—a task too complex for the human mind. These models, often presented with interfaces to facilitate their operation, offer the most comprehensive and rigorous way to test one’s understanding of how a given system works under different “what if” situations.

How are system dynamics computer models and simulations used?
Consider the UN’s projections for global population growth up to 2050. UN demographers base their projections (seen in previous sections) on two assumptions: (1) global annual birth rates will fall from 20 to 13 births per thousand, while (2) annual death rates (currently at 8.5 per thousand) will remain constant until 2025, then increase to 10 per thousand by 2050. Consider the following “what if” questions for which an objective computer model would be a powerful tool:
- “What if” birth rates don’t fall as expected? or
- “What if” death rates fall slightly (by 10%) rather than increase?

Using both stocks and flows as well as feedback loops, the following map emerges:

Simulations and models are used to:
- Manipulate and understand the systemic dynamics that are far beyond what we can undertake in our heads;
- Quantify our mental models and the assumptions we make and subject them to rigorous testing;
- Explore a variety of “what if” scenarios;
- Articulate variables within a system and understand their interaction.
Using the computer model (above) to perform the complex underlying mathematical calculations, our students (as young as 4th graders) and we can quickly explore the implications. The computer-generated BOTGs below illustrate the following.

- **Line 1 presents** the UN’s projections, based on their assumptions of lower births and higher deaths. As seen before, even though birth rates are falling, the population continues to rise.
- **Line 2 is generated** by assuming a constant birth rate, resulting in estimates of approximately 2 Billion more people than when birth rates are falling!
- **Line 3 is generated** by assuming the UN’s projections for falling births along with a 10% reduction in death rates, based on improved medical care. The result is a growth in population between the first two scenarios.
- **Line 4 is generated** by fraction birth and death rates that are constant. The resulting population projection is highest of all.

This leads to a further set of questions: What, within “the system,” would cause either the birth rate to remain constant or the death rate to fall? Models and simulations permit us to explore “what if’s,” and challenge our assumptions to better understand how real-world systems work.

How Models/Simulations Contribute to Critical Thinking Approaches to Complex Systems
Mastering the computer/simulation modeling tool fosters the following cognitive skills:

- Appreciation of how complex systems function in non-intuitive ways;
- Recognition of how much we can learn by exposing our assumptions, quantifying variables and by testing and revising our hypotheses;
- Application of deepened understanding to articulate further questions;
- Ability to address newly formulated questions with further exploration and manipulation of the simulations.
IV. Assessing Visual Tools for Communicating Critical Thinking

As student projects are developed, rubrics are often helpful to guide both the student and the teacher in assessing the use of the visual tools presented in this booklet. This section contains rubrics for:

- The project as a whole;
- Behavior-over-time graphs;
- Feedback loops drawn as causal loop diagrams;
- Stock/flow diagrams;
- Computer simulations.

While many rubrics have multiple levels, these were specifically designed by experienced teachers and experts in systems thinking to reflect best practice in the use of the tools. They can be used both as a checklist for students and teachers to make sure they are utilizing the tools in the most effective way to create critical thinking as well as an assessment instrument.
## Rubric for the Project

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>STANDARD</th>
<th>NOTES</th>
</tr>
</thead>
</table>
| **DEFINING THE QUESTION** | **Purpose**  
• The project has a clearly stated purpose.  
• The question is clearly defined in behavioral terms.  
• The question has a manageable focus—the boundaries of the system are clear and reasonable. |       |
| **Focus**                 | **Usefulness**  
• The initial mental model is briefly described. These are assumptions about how the system works and what is causing the behavior in question. Key elements of the system and their basic interrelationships are hypothesized.  
Throughout the project, the student reflects on questions like these:  
• How is your mental model changing?  
• Do any of your findings surprise you?  
• Where are you encountering difficulty? Where can you get the help or information you need?  
• Are things still missing from your project? How could it be improved?  
• Does your project remind you of another similar system or problem?  
• How can you use what you have learned?  
• What further questions can you ask now? |       |
| **COMPLETING THE PROJECT**| **Usefulness**  
• The project addresses the original question. It illuminates the behavior and provides insight into its causes.  
• If the project could not address the question (which is OK too), there is an explanation of what was learned in the process and what “next steps” are possible.  
• The presentation clearly communicates what was learned about the system. It is appropriate to the audience.  
• All elements of the project are clearly and accurately labeled.  
• Visual tools (graphs, pictures, tables, etc.) are used to support the presentation and analysis.  
• The display is neat and aesthetically pleasing. |       |

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## Rubric for Behavior-over-time Graphs

<table>
<thead>
<tr>
<th>CATEGORY</th>
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<tbody>
<tr>
<td><strong>VARIABLES</strong>&lt;br&gt;“What is changing?”&lt;br&gt;<strong>Horizontal Axis</strong>&lt;br&gt;(Time)</td>
<td>• The horizontal axis represents time.&lt;br&gt;• Scales are clearly labeled and related to the behavior. They can be numeric or descriptive. (e.g., Days of the month, 0–30; or “Beginning, Middle, End” of story.)&lt;br&gt;• The scale encompasses enough time to show the pattern of behavior.&lt;br&gt;• The vertical axis represents the variable being investigated.&lt;br&gt;• All variables are nouns, quantities that can increase or decrease with time. They can be “hard” (usually measured in standard units, e.g., degrees) or “soft” (usually not directly measurable but can be subjectively and relatively estimated, e.g., morale.)&lt;br&gt;• Scales are clearly labeled, reasonable, and related to the behavior. They can be numeric or descriptive. (e.g., Degrees Celsius, 0–100; or Morale, “Low, Medium, High.”)</td>
<td></td>
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<tr>
<td><strong>Vertical Axis</strong>&lt;br&gt;(Behavior)</td>
<td></td>
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</tr>
<tr>
<td><strong>THE LINE</strong>&lt;br&gt;“How is it changing?”</td>
<td>• The graph is a line graph.&lt;br&gt;• The line accurately depicts the behavior described, based on available data.&lt;br&gt;• The graph focuses attention on the pattern of behavior—changes over time, the slope, turning points, inflections, etc.—rather than only on specific events.&lt;br&gt;• Whenever possible, the graph shows lines for more than one related variable.</td>
<td></td>
</tr>
<tr>
<td><strong>USEFULNESS</strong>&lt;br&gt;“Why is it changing?”</td>
<td>• The graph leads to questions about the dynamics of the system and possible causes of the behavior.&lt;br&gt;• The written project summary includes an explanation of what the graph shows, including high points, low points, inflections, sudden changes, no change, etc.</td>
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Rubric for Feedback Loops drawn with Causal Loop Diagrams

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<tr>
<th>CATEGORY</th>
<th>STANDARD</th>
<th>NOTES</th>
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</table>
| VARIABLES (The words)          | • All variables are nouns, quantities that can increase or decrease over time. (Do not use “more” or “less”) Variables can be “hard” or “soft.”  
  • All variables represent factors believed to be important in determining the behavior in question.                                                                                   |        |
| THE ARROWS (Causal connections between variables) | • Each arrow represents a causal relationship between two variables.  
  • All polarities are labeled.  
    - “+” for “change in the same direction”  
    - “−” for “change in the opposite direction”  
    - “S” and “O,” or U-turn symbols may also be used.  
  • The diagram includes feedback loops. Positive (reinforcing) and negative (balancing) feedback loops are labeled.  
  • Connections are based on evidence, data, or reasonable hypotheses.  
  • Delays are indicated.  
  • Arrows show smooth causal flows through the diagram with a minimum of crossing lines |        |
| USEFULNESS                      | • The diagram leads to a better understanding of the feedback loops governing the behavior in question.  
  • A brief description tracing the feedback loops is included in the written project summary                                                                                          |        |
## Rubric for Stock/Flow Diagrams

<table>
<thead>
<tr>
<th>CATEGORY</th>
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</table>
| **STOCKS** *(Accumulations)*    | • Stocks are the dynamically significant accumulations in the system. They are quantities that can increase or decrease over time. They are expressed as nouns.  
• Stocks are the “memory” of the system. If time were stopped, stocks could be measured.  
• They are limited in number to allow insight into the behavior in question.  
• Stocks are changed only by flows. |       |
| **FLOWS** *(Actions or policies)* | • Flows express how many units of a stock flow into or out of the stock per unit of time.                                                                                                              |       |
| **AUXILIARY EQUATIONS** *(Converters)* | • Auxiliary equations break the flows down into more manageable or understandable components. They make explicit the factors that determine the behavior of the flows. |       |
| **FEEDBACK**                     | • The diagram shows circular causality (feedback) within the system.  
• Positive (reinforcing) and negative (balancing) loops are labeled.                                                                                                                                           |       |
| **USEFULNESS**                   | • The diagram is “operational.” The structure of the system is evident from the diagram.  
• The diagram provides insight into the possible causes of the behavior in question.  
• The diagram is easy to read with smooth causal loop connections and a minimum of crossing lines.  
• A brief explanation of the structure of the system is included in the written project summary.                                                                 |       |

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# Rubric for System Dynamics Models

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>STANDARD</th>
<th>NOTES</th>
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<tbody>
<tr>
<td>CONCEPTUALIZATION</td>
<td>• The model has a clear purpose stated in behavioral terms.</td>
<td></td>
</tr>
<tr>
<td>MODEL CONSTRUCTION</td>
<td>See the Rubric for Stock/Flow Diagrams to lay out the structure of the model.</td>
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</tr>
<tr>
<td></td>
<td><strong>The Equations (The Assumptions)</strong></td>
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<tr>
<td></td>
<td>• Equations describe causal relationships in mathematical terms.</td>
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<tr>
<td></td>
<td>• All variables represent real-world entities; they can be “soft” or “hard.”</td>
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<td></td>
<td>• Units are listed for each variable. Units balance in each equation and throughout the model.</td>
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<tr>
<td></td>
<td>• All equations are briefly documented in simple terms using the Document function.</td>
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</tr>
<tr>
<td></td>
<td>• Equations are simple and clear. Long or complex equations are broken into simpler converters for clarity. Every important variable has a name.</td>
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<td></td>
<td>• Equations are arithmetic. Non-linear relationships are expressed as graphic functions.</td>
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<td></td>
<td>• Graphic functions accurately capture complex non-linear relationships; curves are smooth.</td>
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<tr>
<td></td>
<td>• All parameters (constants) have reasonable real-world values.</td>
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<td></td>
<td>• Switches are used judiciously and sparingly.</td>
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</tr>
<tr>
<td>Simulation Mechanics</td>
<td>• The solution interval (DT) is 1/3 or less of the smallest time constant to produce a smooth curve.</td>
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<tr>
<td></td>
<td>• The length of simulation is chosen to show the complete pattern of behavior.</td>
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<tr>
<td>The Structure</td>
<td>• The model starts with a simple structure and builds in complexity. The development sequence is shown if the model is complex. Sectors may also simplify a complex model.</td>
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### Rubric for System Dynamics Models (continued)

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>STANDARD</th>
<th>NOTES</th>
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</table>
| **MODEL ANALYSIS**| • The model accurately captures the behavior in question. (This usually requires an iterative process of comparing the output to real-world values, identifying structures or parameters that need refinement, and simulating repeatedly.)  
  • The behavior of all model variables is examined for reasonableness.  
  • The model is tested under extreme conditions.  
  • Leverage points are identified by determining which parameters have the greatest impact and which have the least.  
  • Important causal loops are identified. Causes of the behavior are traced back through the loops.  
  • A causal loop diagram may be used to explain the feedback loops. (See Rubric for Feedback Loop Diagrams.)  
  • Graphs are used to show and interpret the behavior under varying conditions. Supporting graphs show the behavior of all important related variables.  
  • Scales are appropriate for ease of interpretation. |       |

**Presentation**

**USEFULNESS**

• The model provides useful insight into the problem in question. It is used to identify and test alternative policies or actions.  
• Sometimes a model cannot address the original question. If so, there is thought given to why, what might be missing, etc.  
• The written project summary includes a written explanation of what was learned from the model.  
  See Rubric for Understanding: Reflection on Learning, Presentation. |       |
Resources for Systems Thinking in K-12 Education

Creative Learning Exchange, www.clexchange.org
The Creative Learning Exchange (CLE) was founded to serve both as a curriculum clearing house as well as a networking hub for K-12 educators interested in using systems education in schools. The CLE runs a biennial conference on Systems Thinking and Dynamic Modeling in K-12 education on even years. Register on the website for the quarterly CLE newsletter. Contact: Lees Stuntz, stuntzln@clexchange.org

Systems Thinking in Schools provides educators with background information, examples, and guidance in the use of systems thinking and dynamic modeling in K-12 education. Contact: Tracy Benson, t.benson@watersfoundation.org

SoL Education Partnership, soledpartnership.org
A partnership of school districts and non-profits organization committed to the four pillars of sustainable change in education: system dynamics and systems thinking, education for sustainability, youth engagement, and organizational learning. Contact: LeAnne Grillo, leanne@spaces-for-change.com

Books on systems thinking/system dynamics
Potash, Jeff. Dollars and Sense: Stay in the Black: Saving and Spending (with J. Heinbokel) and Dollars and Sense II: Our Interest in Interest, http://www.clexchange.org/cleproducts/dollarsandsense.asp
Quaden, Rob, Alan Ticotsky and Debra Lyneis. The Shape of Change and The Shape of Change: Stocks and Flows, http://www.clexchange.org/cleproducts/shap eofchange_lessons.asp
Sweeney, Linda Booth. When a Butterfly Sneezes: A Guide for Helping Kids Explore Interconnections in Our World Through Favorite Stories, linda@lindaboothsweeney.net
**Links to Online Systems Thinking Resources**


**Waters Foundation**  [http://www.watersfoundation.org/](http://www.watersfoundation.org/)
- **Online simulations**: [http://stinschools.wikispaces.com/Online+Sims](http://stinschools.wikispaces.com/Online+Sims)

**Diana Fisher**  [http://ccmodelingsystems.com/](http://ccmodelingsystems.com/)
Student projects and links to her writing on mathematics and modeling:

**Seed Site**  [www.planetseed.com/](http://www.planetseed.com/)
- **Fishing Game** – [https://www.planetseed.com/](https://www.planetseed.com/)
- **Bathtub and Forest** – [https://www.planetseed.com/](https://www.planetseed.com/)

**Forio Simulation Showcase**  [http://forio.com/simulate/showcase/](http://forio.com/simulate/showcase/)
Free online accounts and ability to use and upload your own simulations

**isee systems, inc.**  [www.iseesystems.com](http://www.iseesystems.com)
STELLA® software and workshops.

**Insight Maker**  [http://insightmaker.com/](http://insightmaker.com/)
Free online resource for creating models

**Other websites of interest**

**The Gelfand Family Charitable Trust**  [http://gfct.us/](http://gfct.us/)
