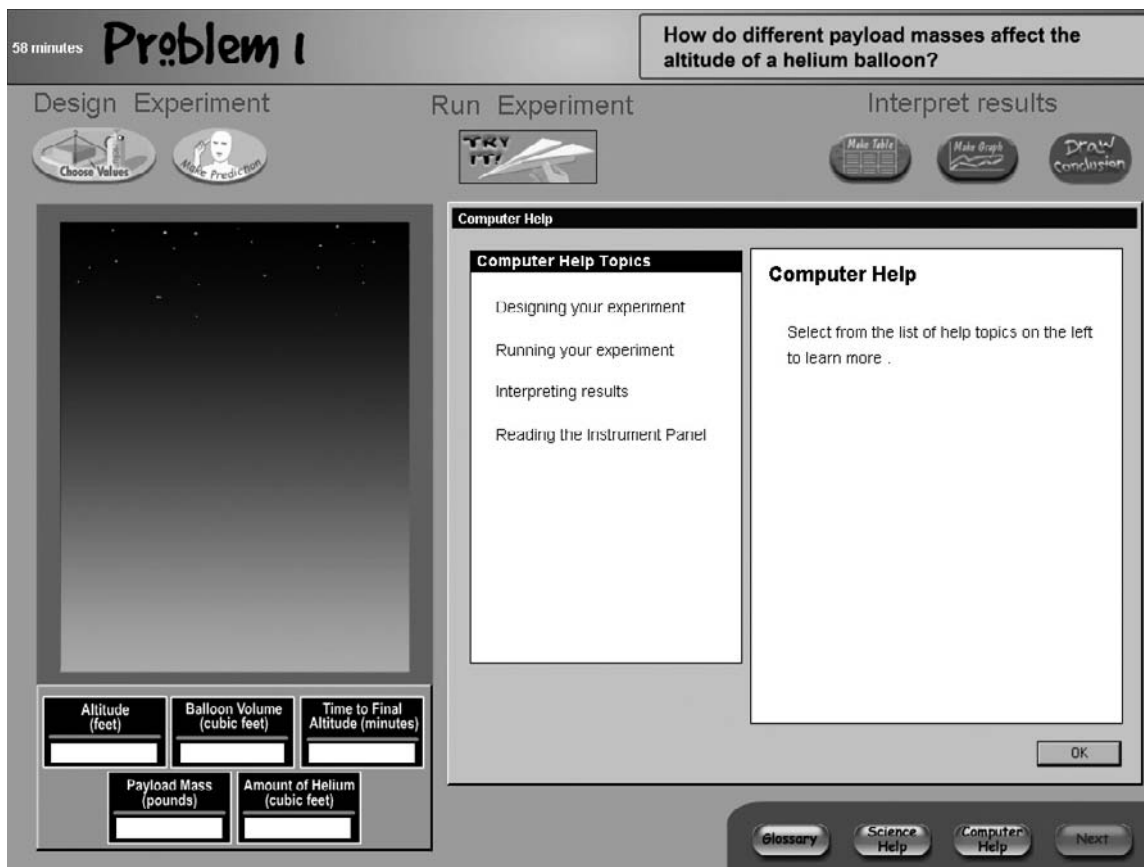


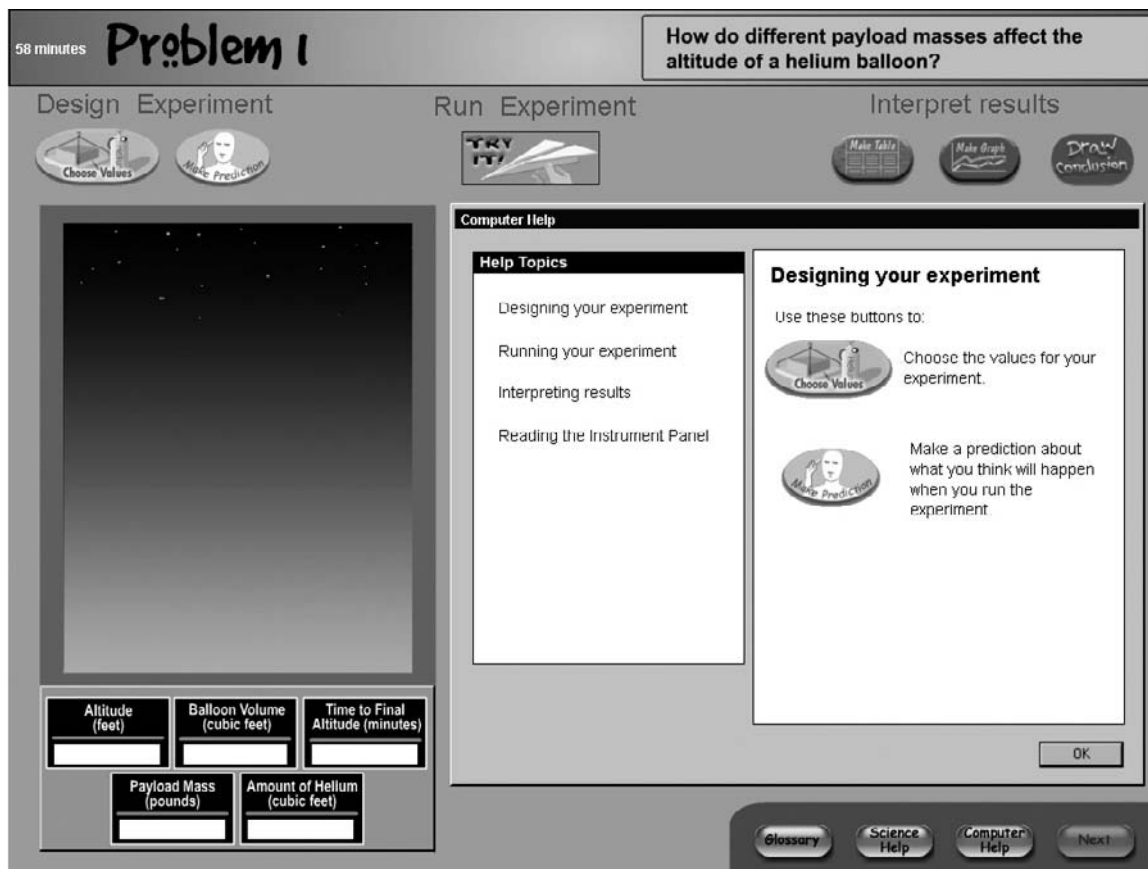
Figure E-12. Computer screen showing the TRE Simulation Computer Help topics menu, grade 8: 2003



NOTE: TRE = Technology-Rich Environments.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Problem Solving in Technology-Rich Environments Study.

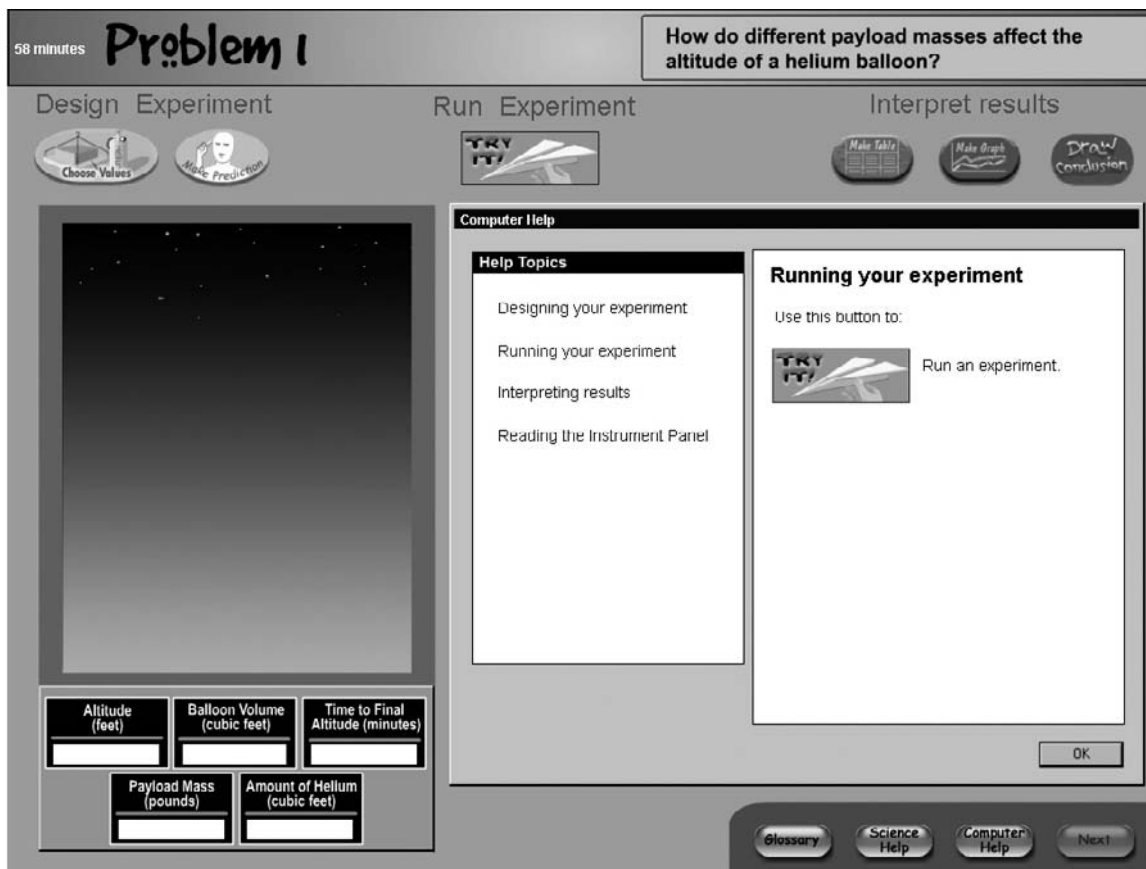
Figure E-13. Computer screen showing help for the first TRE Simulation Computer Help topic, grade 8: 2003



NOTE: TRE = Technology-Rich Environments.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Problem Solving in Technology-Rich Environments Study.

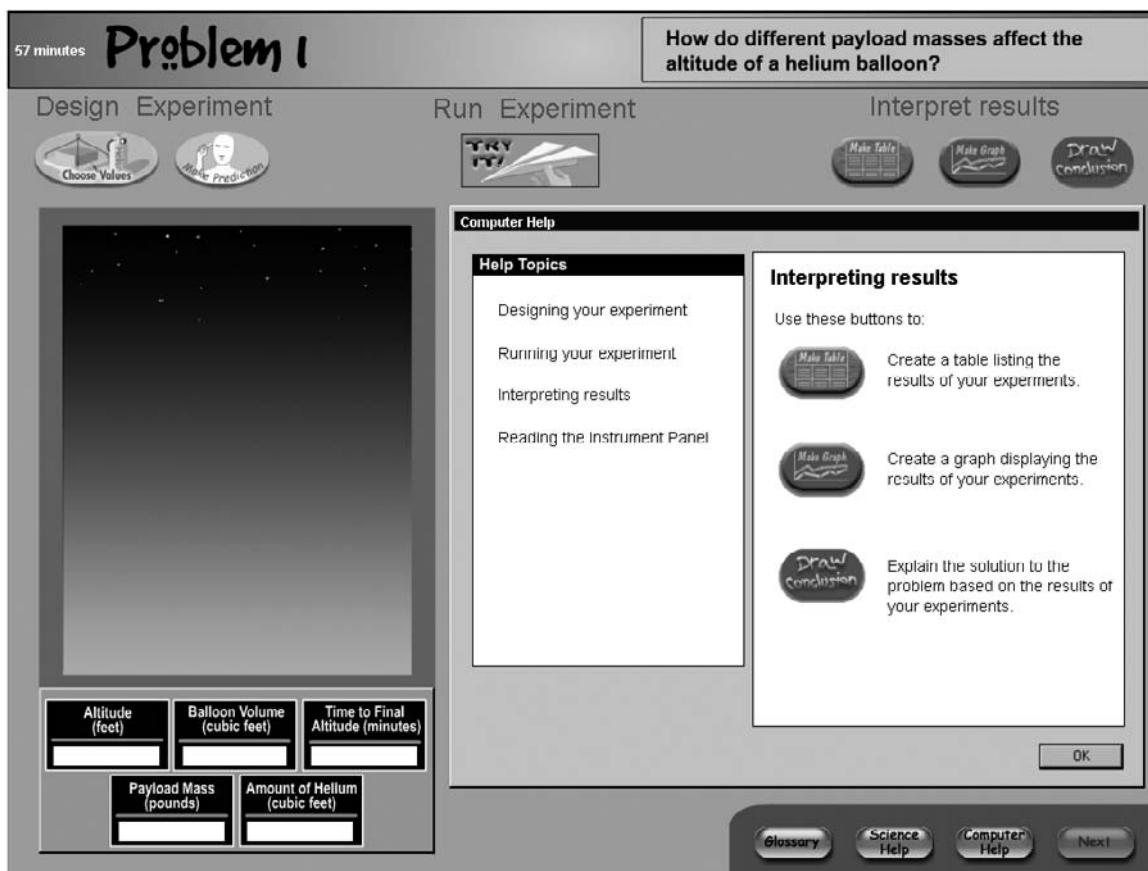
Figure E-14. Computer screen showing help for the second TRE Simulation Computer Help topic, grade 8: 2003



NOTE: TRE = Technology-Rich Environments.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Problem Solving in Technology-Rich Environments Study.

Figure E-15. Computer screen showing help for the third TRE Simulation Computer Help topic, grade 8: 2003



NOTE: TRE = Technology-Rich Environments.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Problem Solving in Technology-Rich Environments Study.

Figure E-16. Computer screen showing help for the first part of the fourth TRE Simulation Computer Help topic, grade 8: 2003

Problem 1 57 minutes

How do different payload masses affect the altitude of a helium balloon?

Design Experiment **Run Experiment** **Interpret results**

Choose Values Make Prediction TRY IT Make Table Make Graph Draw Conclusion

Computer Help

Help Topics

- Designing your experiment
- Running your experiment
- Interpreting results
- Reading the Instrument Panel

Reading the instrument panel

The panel displays indicate the following:

- Altitude (feet)** The altitude the balloon reaches during an experiment.
- Balloon Volume (cubic feet)** The final volume the balloon reaches during an experiment.
- Time to Final Altitude (minutes)** The time it takes the balloon to reach its final altitude during an experiment.

Next > OK

Altitude (feet) Balloon Volume (cubic feet) Time to Final Altitude (minutes)

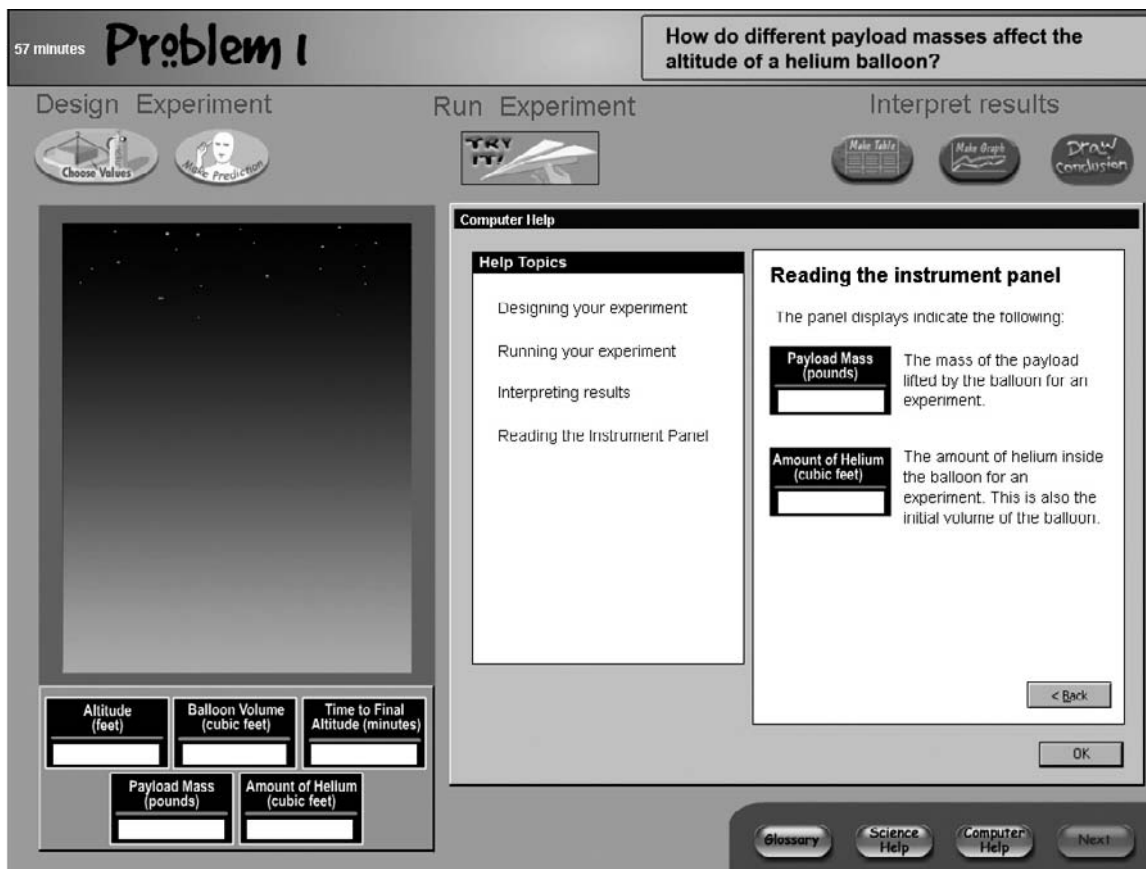
Payload Mass (pounds) Amount of Helium (cubic feet)

Glossary Science Help Computer Help Next

NOTE: TRE = Technology-Rich Environments.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Problem Solving in Technology-Rich Environments Study.

Figure E-17. Computer screen showing help for the second part of the fourth TRE Simulation Computer Help topic, grade 8: 2003



NOTE: TRE = Technology-Rich Environments.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Problem Solving in Technology-Rich Environments Study.

Figure E-18. TRE Simulation tutorial screen 1 showing the problem to be solved, grade 8: 2003

60 minutes **Practice**

How do different payload masses affect the altitude of a helium balloon?

Design Experiment Run Experiment Interpret Results

Choose Values Make Prediction TRY IT Make Table Make Graph Draw Conclusion

Tutorial

This screen shows the simulation tool you will be using to solve the problem.

You can see the problem at the top of the screen.

Altitude (feet) Balloon Volume (cubic feet) Time to Final Altitude (minutes)

Payload Mass (pounds) Amount of Helium (cubic feet)

Glossary Science Help Computer Help Next

NOTE: TRE = Technology-Rich Environments.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Problem Solving in Technology-Rich Environments Study.

Figure E-19. TRE Simulation tutorial screen 2 showing the task bar for solving the problem, grade 8: 2003



NOTE: TRE = Technology-Rich Environments.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Problem Solving in Technology-Rich Environments Study.

Figure E-20. TRE Simulation tutorial screen 3 showing the experiment display window, grade 8: 2003

59 minutes **Practice**

How do different payload masses affect the altitude of a helium balloon?

Design Experiment
Choose Values Make Prediction

Run Experiment
TRY IT!

Interpret Results
Make Table Make Graph Draw Conclusion

Tutorial
Your experiments will run in this window.

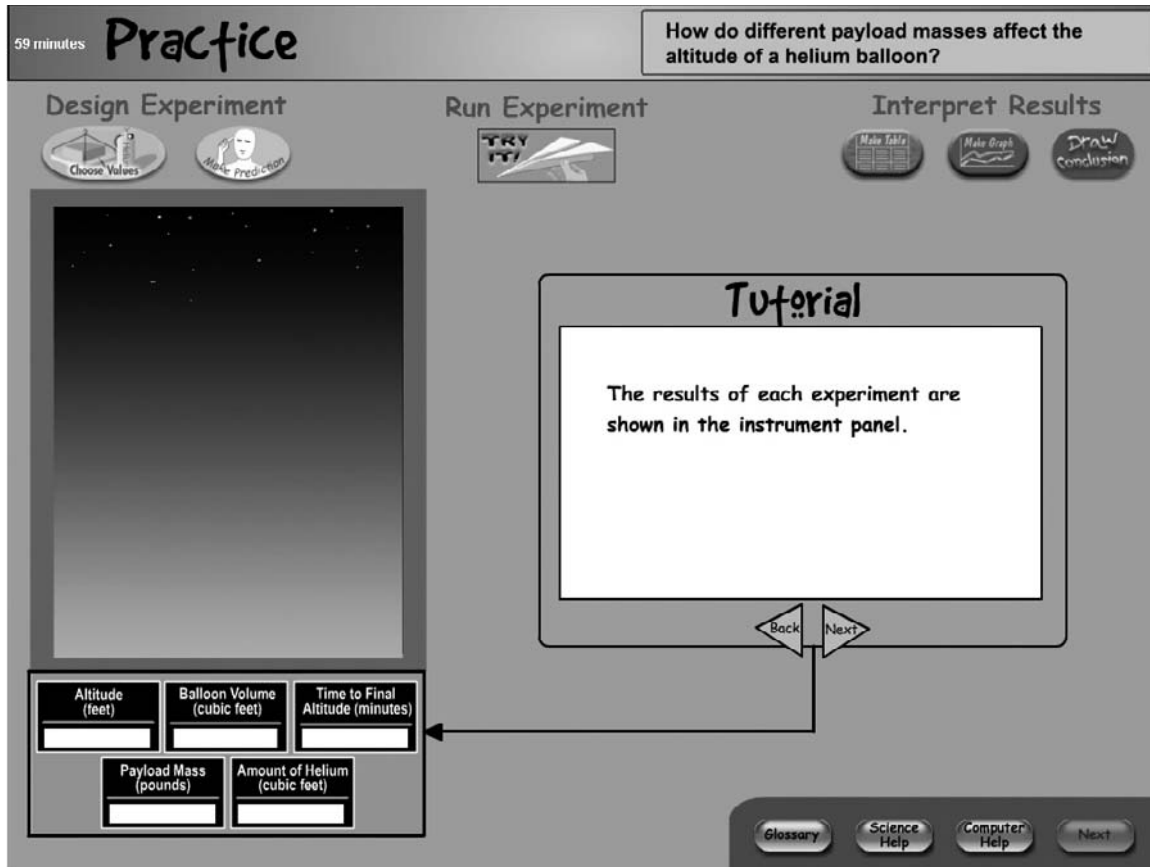
Altitude (feet) Balloon Volume (cubic feet) Time to Final Altitude (minutes)
Payload Mass (pounds) Amount of Helium (cubic feet)

Glossary Science Help Computer Help Next

NOTE: TRE = Technology-Rich Environments.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Problem Solving in Technology-Rich Environments Study.

Figure E-21. TRE Simulation tutorial screen 4 showing the instrument panel to show data, grade 8: 2003



NOTE: TRE = Technology-Rich Environments.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2003 Problem Solving in Technology-Rich Environments Study.