Scientific Method and Sixth Grade Physics – Judy Butler and Jan Mons, Waters Grant Project, Glynn County Schools, Brunswick, GA

In 1998 Georgia curriculum objectives were revised moving the physical science objectives to sixth grade. Glynn County sixth grade teachers were faced with the new challenge of teaching the properties and formulas of physical science.

STELLA simulations were utilized to allow our sixth grade students to the make the application of physical science principles to real life . The CCSUSTAIN STELLA® physical science models (1993) were adapted to meet this need. Students do not build the models, but use them to investigate the relationships between distance, rate, time, velocity, acceleration, friction, gravity, and other basic physical science concepts. Each model is accompanied by a problem/question which students investigate using a standardized scientific method worksheet. This worksheet enables the students to study the relationships, graph them, and develop appropriated formulas to explain the phenomena. In addition, hands-on classroom activities were conducted to reinforce the phenomena under investigation.

This continues to be a work in progress, but continues to be successful through this second year of use. Most students in this program have had no previous experience with ST/SD tools and concepts, so this have proved to be a successful way to introduce additional students and teachers to systemic thinking.

This year (1999-00) we added a culminating activity by adapting the high school Bungee Jumping Unit , found on the Creative Learning Exchange Website, to the sixth grade curriculum. The „final exam‰ for the students at the completion of this unit involved the application of all the concepts learned throughout the year to the design of a cord and harness.