LHS GEMS River Cutters

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Information	Program Description
Ages 12 and up.	River Cutters allows students an opportunity to learn about the geologic forces that shape the earth. Using student-created models, they will observe thousands of years of erosion in minutes and visualize an entire river system. In addition, erosion and pollution will be addressed as well as water sheds.
Curriculum Format	Each lesson can be presented in 45-60 minutes. Teaching Guide with complete instructions is provided. Teaching Kit with materials needed to present lessons is provided. User may need to provide standard classroom supplies (pencils, scissors, glue). If a lesson requires perishable items (e.g. milk), user is responsible for these purchases.

Lesson	Overview
One: Exploring a Model River	Students cut their first model river and learn how river systems are created over time.
Two: Discussing River Features	Referring to their drawings on their model river, students learn the names of geological features that can be found in and around a river system.
Three: Time and the River	This activity provides a variety of ways that students visualize geologic time by comparing historical and geological events thus, answering the question, How long does it take to make a river?
Four: Dams and Toxic Waste	This investigation shows how rivers change over geologic time and how human intervention, be it bad or good, can change river systems.
Five: Discussing the Results of River Models	Real life connections are made as students realize how humans have a large impact on river systems and the environment.
Six: River Experiments: Age or Slope?	Students conduct controlled experiments to compare the difference between two rivers and if the differences are due to the age of the river or the slope of the terrain.
Seven: Designing Your Own Experiments	Students have the opportunity to apply what they have learned by designing their own investigation through posing a question, planning and conducting the experiment and reporting their results.