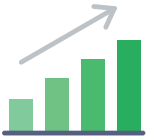


STEMscopes Alabama is a customizable, blended learning STEM curriculum that puts the power in the hands of teachers. With over two million student-users, STEMscopes Alabama owes its success to a crowdsourcing platform where classroom teachers lead by content and pedagogy experts build lessons. Combine **digital** and **print** resources and easy-to-use materials **kits** to adapt to any learning and teaching style.



### Real STEM Learning for Real Results

STEMscopes Alabama has a track record of success. Data from nearly 500,000 students shows that STEMscopes students outperform students using other curricula. Special populations and bilingual students also outperform those using other curricula.

- > Built on the 5E + Intervention and Acceleration (5E+IA) lesson model
- > Continuously updated curriculum and content: new features are added constantly



### Everything in One Place

Gone are the hours of tedious lab setup, scouring for resources, and leveling materials for student needs. STEMscopes Alabama takes care of that for you, so you can focus on teaching.

- > Track student progress, assign quizzes, or extend learning beyond the classroom with a STEM video
- > Differentiate like never before with modern PBLs, intervention labs, art integration, engineering, vocabulary development activities, leveled ELA and math activities, and more
- > Inquiry-based investigations done right: teacher background, facilitation, setup videos, materials lists, and journaling for fast and easy setup



### Intuitive Design

The STEMscopes Alabama point and click, drag and drop platform makes it easy to implement on day 1. Teacher support, professional development, and teaching tools are integrated throughout.

- > Assign work to students in seconds—receive reports and provide feedback to students just as fast
- > Dynamic and constantly improving content based on your feedback. STEMscopes Alabama evolves weekly based on your suggestions and in-classroom expertise.

The 5E (engage, explore, explain, elaborate, and evaluate) model has long been a staple of quality science instruction. STEMscopes Alabama takes the 5E a step further by adding intervention and acceleration resources to help both struggling and advanced learners get the focused instruction they need to be successful.

Hook your students, develop inquiry and context through rich hands-on activities, deliver academic vocabulary through video and text, differentiate with crosscurricular connections, and assess your students in both unique summative projects and traditional tests.

➔ Start using STEMscopes Alabama today. **Activate a FREE trial at [STEMpreview.com](http://STEMpreview.com).**

IC Viruses

SCDE Transcription and Translation

7.8A Catastrophic Events

Student Expectation

Key Concepts

7.8A: Catastrophic Events  
Earth and Space

READING SCIENCE

Catastrophic Events  
Lexile 800L

- The surface of Earth is always changing. The changes can slowly happen over time. Sometimes they can happen quickly, without warning. These rapid changes can badly damage an ecosystem. Tornadoes, hurricanes, and floods are all examples of catastrophic weather events that cause rapid changes.
- Spring brings warm, wet air that makes new life bloom and grow. Unfortunately, these are the same conditions that can form a deadly tornado. A tornado can form as part of a thunderstorm when warm, moist air becomes trapped under a layer of cold, stable air. A rotating column of air reaches from the base of the thunderstorm down to the ground. A tornado acts like a giant vacuum cleaner. It will damage everything in its path. Wind speeds can be as high as 300 miles per hour. Tornadoes can uproot trees, kill animals, and cause catastrophic damage to buildings. Nothing in the path of a tornado is safe. The damage done to an ecosystem by a tornado can take a very long time to repair.
- Hurricanes also damage an ecosystem in a variety of ways. Hurricanes are very large and violent tropical storms. They develop over warm ocean water. A hurricane brings high winds and heavy rains when it moves over land. This can destroy trees, plants, and animals. Sometimes, saltwater can flood into areas of fresh water, such as lakes and streams. This can kill large numbers of fish. The flood water may also contain pollutants that can kill animals. Barrier islands protect the coast. A hurricane causes large amounts of erosion to these islands. Barrier islands can be shifted or eroded away. On land or in water, a hurricane can cause truly catastrophic damage.
- Like tornadoes and hurricanes, floods can also have a catastrophic affect on the ecosystem. Heavy downpours of rain can drop more rain than the soil can hold. Floods can also happen when large amounts of snow melt suddenly. The ecosystem cannot absorb the water fast enough. Rivers and streams overflow. Flat areas of land, canyons, and valleys experience flash floods. Plants and animals can be washed away by fast-moving water. Flood water can carry pollution into habitats. Mud carried by fast-moving flood waters can later form thick layers over plants and animals. Fish and other aquatic animals can be swept out of their habitats. They will not find their way back when the flood waters recede. A flood can do a lot of damage to an ecosystem.

Accelerate Learning

Mount Nyiragongo

7.8A Catastrophic Events

Student Notebook

READING SCIENCE

Catastrophic Events  
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Mount Nyiragongo

7.8A Catastrophic Events