Tools and Resources for Educators --
Teaching Computational Thinking in Geoscience with MATLAB

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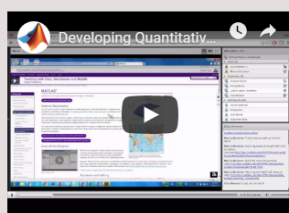
Workshops to Web:

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Online Resources:

The *Teaching Sciences with MATLAB* page points to 8 discipline-specific pages for educators that curate teaching materials, from textbooks to toolboxes to video tutorials, in additional to pointers for getting started teaching **Computational Thinking**.

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100+ Peer-Reviewed...

There are over 100 educator-contributed and peer-reviewed teaching activities on the SERC web site. In this videocast, 3 faculty summarize their contributed teaching activities, including learning objectives, teaching strategies, and tips for educators.

Teaching Activities Collection

- Exemplary MATLAB Activities (link)
- Geoscience Specific Collection (link)

Example Activity

Signal processing and earthquake triggering

This teaching activity in the SERC MATLAB activity collection is a great example. It includes video.

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Making Learning Fun:...

In this video, a Physics Ph.D and MATLAB expert demonstrates how to make learning physics and exploration in MATLAB enjoyable for students and teachers and even addictive. He demonstrates how via a combination of teaching through modeling programming live and **MATLAB Live Editor**.

MATLAB
A computing playground for science students
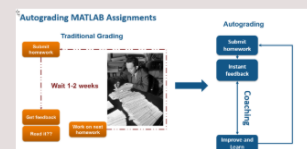
Paul.Kassebaum@mathworks.com
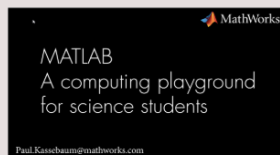
Real-Life Example:

Analyze Temperature with NASA Data

Using subject matter that is inherently interesting, such as weather and the rising average temperature in this example, is one way to grab student interest. Using an exploration canvas/notebook-style is another, like this **MATLAB Live Script** pulled from a faculty-contributed MATLAB teaching activity.

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Assessment: Autograde...

Assessment is time consuming. Plus, timely feedback is a key ingredient to successful learning.

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Convert Your Course,...

There are lots of materials to help you get started teaching Computational Thinking skills to students of all levels. If you're already teaching it, peer-contributed resources can help you update your course.

Integrating Computational Thinking into Your Curriculum

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