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Interactive Online Diagrams

Tuesday | 1:30pm-2:40pm | Coffman Memorial Union Mississippi Room
Share-a-thon Part of Share-a-thon

Demonstration

Several online interactive diagrams will be demonstrated and explained.

Abstract

Many concepts used in the study of igneous and metamorphic rock are abstract and challenging for students to learn and for teachers to teach. Experienced petrologists work with graphs and diagrams that help them visualize and understand important data and, therefore, use those diagrams in their teaching. Students do not always find these diagrams to be intuitive and helpful. The features and mechanics of the diagrams can be an impediment to learning the principles of petrology. However, thoughtful programming using HTML and JavaScript can be used to create interactive online diagrams that give students captivating and informative control over puzzling diagrams. Familiar interactive tools such as mouseover effects that use coordinate values, sliders to change parameter values or to juxtapose images, buttons to change what is shown, etc. can be adapted to topic-specific pages. Using a standard web browser, we will show a variety of interactive diagrams such as phase diagrams that let students change temperature and pressure, photomicrographs that let students explore mineral composition data or zoom in for details, and graphs that let students watch temperature or chemistry change with a time slider. You will wish you had these tools as a student. (http://www.science.smith.edu/~jbrady/petrology/index.php -- username: jbrady-guest -- password: ReadMyT3xt)

Context

The website is a resource for students and instructors to use in the context of a course in igneous and metamorphic petrology.

Why It Works

Although there are many teaching and learning resources online, most are primarily descriptive and few have the interactivity that we will demonstrate. Our interactive diagrams are specific to petrology, but the student-engaging features we will show could be used to create helpful diagrams in other fields.

Presentation Media

Lightning talk - Interactive Online Diagrams (MP4 Video 7.1MB Jul12 22)

Presentation Media

Lightning Talk PowerPoint (PowerPoint 2007 (.pptx) 38.4MB Jul11 22)

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