



Natural hazard demonstrations for teaching

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This paper presents several teaching demonstrations for large classes that have been developed or gathered from other sources in the general area of natural hazards. There are many methods of teaching, but as university lecturers, particularly for large class sizes, we find ourselves too often presenting material to students by direct speaking, or some combination of blackboard, whiteboard, slide projector, digital projector, and overheads. Many techniques exist to actively involve students in large classes so that teaching is not just 'receiving of information', including (a) breaking up students into small group discussions during lectures, (b) encouraging students to actively participate in class through comments, questions and 'show of hands', (c) group 'role playing' exercises, (d) hands-on activities, and (e) class demonstrations. This paper concentrates on the latter, class demonstrations. As a teaching tool, students often become much interested and more excited about what they are learning if use is made of 5-10 minute class demonstrations, even if only peripherally related to the subject at hand. Resultant discussion with questions and comments by students keeps both the students and the lecturer (in this case the author) motivated and intrigued about the subjects being discussed. Days, weeks, and months later, the students remember these 'demonstrations', but to set these up takes time, effort, and resources of equipment, although not necessarily a large amount of the latter. Several natural hazards demonstrations are presented here, most inexpensive, that have been used in front of large university classes and smaller 'break-out groups', and which are also appropriate for secondary-school students. The natural hazard demonstrations included here are (a) earthquakes, (b) mass movements, (c) tsunamis, (d) volcanoes and (e) weather. Also presented is an extensive bibliography of many other examples of natural hazard teaching demonstrations that exist, pulling into one location a large set of demonstrations explained and available (often via the internet) on the subject.