

## Growing Earthquake-Resilient Americans

FEMA Resources for Teachers and Kids

*Ultimately...the purpose...is to demystify earthquakes, and to counter the fatalism that frequently accompanies ignorance about natural phenomena.<sup>1</sup>*

From *Seismic Sleuths*

**A**s relatively infrequent but potentially cataclysmic events, earthquakes can sow a sense of fatalism and resignation among those they threaten. This can be countered through education about how seismic risks are reduced. Primary and secondary schools are important venues for such instruction, not only because of the unique access that they afford to emerging citizens, but also because children are no less vulnerable than adults to earthquake hazards and because tomorrow's earthquake professionals must be cultivated among today's youth.

The National Earthquake Hazards Reduction Program (NEHRP) is facilitating seismic education in schools through the production of resources designed for teachers and children. These efforts are led by the Federal Emergency Management Agency (FEMA) and the U.S. Geological Survey. This article highlights some of the earthquake-related materials that FEMA has developed for this important audience.

### Enlisting Tremor Troops and Seismic Sleuths

Two publications form the foundation of these resources: *Tremor Troop: Earthquakes—A Teacher's Package for K–6* (FEMA 159), and *Seismic Sleuths: Earthquakes—A Teacher's Package for Grades 7–12* (FEMA 253). These documents enable teachers at any grade level to present an engaging series of interactive lessons that build students' knowledge of earthquakes and how to reduce the risks that quakes pose for individuals, families, schools, and communities.

Organized into units tailored or adaptable for students in different grades, the publications describe what earthquakes are and why, how, and where they occur, as well as their physical impacts and what people can do, individually and collectively, to mitigate these effects. Both packages feature background information about each subject, step-by-step procedures for implementing each lesson, lists of

materials required, and master pages ready for reproduction as handouts and transparencies.

FEMA partnered with the National Science Teachers Association to develop the latest edition of *Tremor Troop* in 2002, and with the American Geophysical Union to produce the latest edition of *Seismic Sleuths* in 1995. Classroom teachers were heavily involved in the development of both publications.

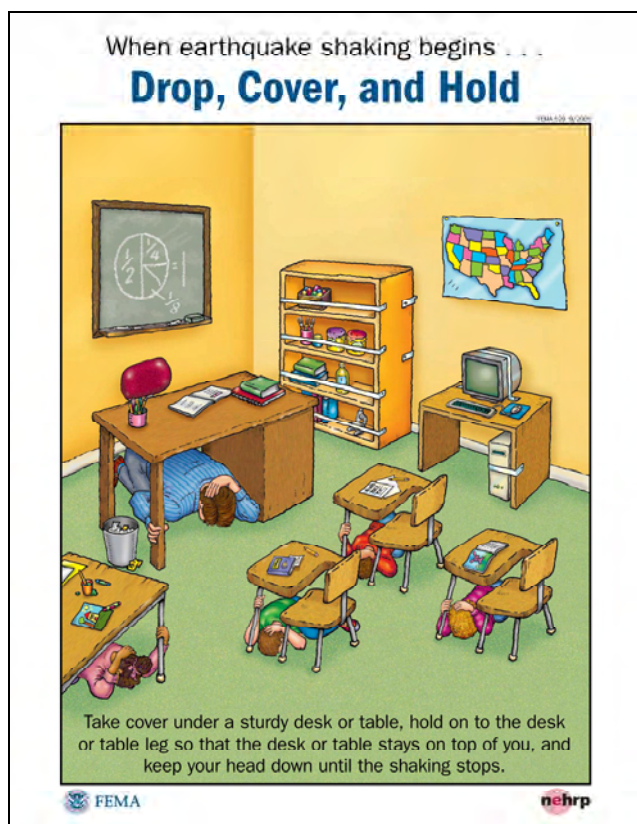


### Focusing on the Safety of Younger Children

FEMA has produced several other resources focused on protecting young children from earthquake hazards. *Earthquake Safety Activities for Children and Teachers* (FEMA 527), published in 2005, details classroom-based activities designed to ingrain in young children the practical knowledge and behaviors that can help them survive and cope with earthquakes and their aftermath. Using the procedures and handouts provided, teachers can empower students in grades K–6 to respond appropriately when earthquakes strike and to prepare for quakes by finding and mitigating potential indoor hazards and by assembling emergency supply kits. The “Drop, Cover, and Hold” handout featured in this publication is also available as a wall poster (see next page).

These essential earthquake response and preparedness lessons are reinforced in a different way by another

<sup>1</sup> American Geophysical Union, *Seismic Sleuths: Earthquakes—A Teacher's Package for Grades 7–12*, FEMA 253, 2<sup>nd</sup> Edition, October 1995, p. vi, <http://www.fema.gov/library/viewRecord.do?id=3558&fromSearch=fromsearch>.



*Drop, Cover, and Hold Poster* (FEMA 529), designed for use in schools. This English-language version is available from FEMA in print and downloadable formats. Downloadable versions are also available in the following languages: Japanese, Korean, Simplified Chinese, Spanish, Tagalog, Traditional Chinese, and Vietnamese.

FEMA publication, which was developed in cooperation with emergency management officials in the State of Washington. In the *Adventures of Terry the Turtle and Gracie the Wonder Dog* (FEMA 531), an illustrated storybook for grades 3–6 published in 2005, Gracie and her talking canine companions teach the students in Mrs. Hillary’s class how to prepare for and react to earthquake ground shaking, lessons that pay off by the end of the story.

Preschool children in day care are the focus of *Earthquake Preparedness: What Every Child Care Provider Needs to Know* (FEMA 240). This 2006 booklet explains in concise, practical terms what child care providers need to do before, during, and after earthquakes to protect the children in their care, their staff, and their facilities. It also helps pro-

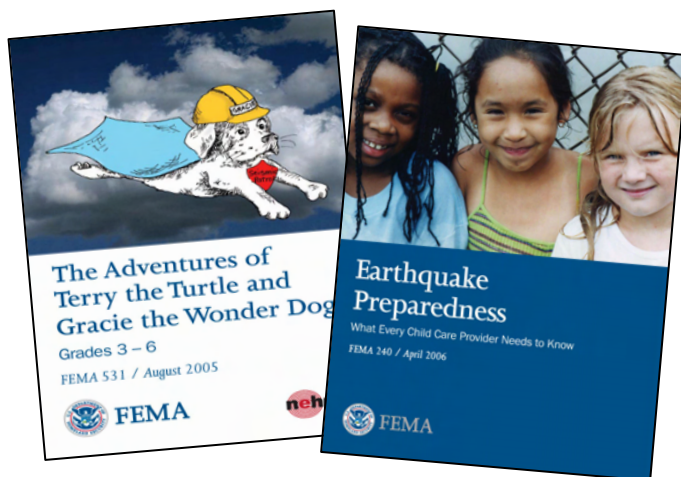
viders to anticipate, recognize, and cope with children’s reactions to quake-induced stress, and identifies sources that can be consulted for additional information.

### Getting These Publications

All of FEMA’s earthquake-related publications for teachers and kids can be downloaded from the online FEMA Library in portable document format (i.e., as PDF files). Click on the title of the publication at <http://www.fema.gov/plan/prevent/earthquake/schools.shtm>. This will take you to the library record for that resource, which will include a link for downloading.

FEMA also stocks some of these publications in print or on compact disc. To order free print copies (available for publication numbers 159, 253, 527, 529, and 531) or CD versions (for publication 159 or 253) from the FEMA Warehouse, follow the library checkout procedures or call the warehouse at 1-800-480-2520.

If you are interested in CD copies, please note that FEMA now offers a single CD containing all of the publications mentioned in this article. Free copies of this compilation, *Earthquake Publications for Teachers and Kids* (FEMA P-710CD), can be downloaded from the FEMA Library or ordered on CD from the FEMA Warehouse. This is one of three earthquake CD compilations offered by FEMA; the others are *Earthquake Publications for Individuals and Homeowners* (FEMA P-711CD) and *Earthquake Publications for Community Planners and Public Policy Makers* (FEMA P-712CD).



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