

Dear Lincoln County R-III Families,

The Missouri Revised Statute 160.455 (RSMo 160.455) mandates the distribution of this information to all students during each school year. We are sending this information home in order to fulfill the RSMo 160.455 requirement. Please take a moment to review the enclosed information with your family as a precautionary measure.

In no way are we anticipating or forecasting earthquakes in our areas. We are simply meeting a requirement from the Missouri Department of Elementary and Secondary Education. Our District recognizes the necessity of a planned safety program and has adopted an emergency plan (Policy and Regulation 5240). All Board of Education policies can be reviewed on our District's website at www.troy.k12.mo.us/BOE.

As always, we thank you for your partnership. Should you have any questions or concerns regarding this information, please reach out to your child's building administrator.

Yours in Education,

Mark S. Penny, Ed.D.

Superintendent of Schools

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Why Earthquakes Occur

An earthquake is ground shaking caused by a sudden movement of rock in the earth's crust. Such movements occur along faults, which are thin zones of crushed rock separating blocks of crust. When one block suddenly slips and moves relative to the other along a fault, the energy released creates vibrations called seismic waves that radiate up through the crust to the earth's surface, causing the ground to shake.

✓Collapse All Sections

What Are Earthquakes And Why Do They Occur?

Earthquakes may last only a few seconds or may continue for up to several minutes. They can occur at any time of the day or night and at any time of the year. They are caused by stress that builds up over time as blocks of crust attempt to move but are held in place by friction along a fault. (The earth's crust is divided into large plates that continually move over, under, alongside or apart from one another atop the partly molten outer layer of the earth's core.) When the pressure to move becomes stronger than the friction holding them together, adjoining blocks of crust can suddenly slip, rupturing the fault and creating an earthquake.

To learn more about the science of earthquakes, visit the <u>U.S. Geological Survey</u> (<u>USGS</u>) <u>Earthquake Hazards Program</u>. USGS collaborates with FEMA and other agencies in support of the <u>National Earthquake Hazards Reduction Program (NEHRP)</u>.

✓ How Do Earthquakes Affect People?

Although thousands of earthquakes occur in the United States each year, most are too small to affect us. Earthquakes of larger magnitude, however, which release more energy during fault ruptures, can be hazardous, exposing us to the risk of harm or loss.

The stronger ground shaking generated in such events is unlikely to affect people directly (other than by startling or frightening them). It is what these ground motions can do to the natural and man-made environments around us that can significantly affect us by endangering our lives, property and livelihoods.

Intense ground shaking can generate many sources of potential harm or loss. In the natural environment, such hazards include the following:

- Landslides or avalanches.
- **Surface faulting**, in which the surface of the ground along one side of a fault is displaced horizontally or vertically in relation to the ground on the other side.
- **Tsunamis**, which can be triggered by earthquake-induced underwater landslides or by surface faulting that occurs on the floor of the ocean.
- **Liquefaction**, in which loosely packed, water-logged soils temporarily lose strength and stiffness and behave like liquids, causing the ground to sink or slide.
- Flash floods, which can be caused by liquefaction near rivers or lakes.

These hazards, as well as the ground shaking that may produce them, can also create a variety of hazards in the built environment. Buildings—or their components or contents—can be collapsed, toppled, broken apart, tossed around or rendered inoperable or unusable. The same can happen to lifeline infrastructure systems and their components, including those related to transportation, such as roads, bridges, railways, ports and airports and those related to utilities, such as distribution lines for water, wastewater, electric power, telecommunications, natural gas and liquid fuels. Damage incurred among these hazards, such as broken gas or water pipes, can itself be hazardous, generating further damage by igniting fires or flooding buildings.

People can be affected in three major ways by earthquake hazards. They can be injured or killed by falling or collapsing objects, by objects thrown into the air or by earthquake-induced fires or flooding. They can incur direct economic losses, either personal or business-related, resulting from damage to existing property. Also, they can temporarily lose the ability to generate income, due to business and employment interruptions or terminations brought about by damage to private property or public infrastructure.

Although larger earthquakes can affect people in serious ways, that does not mean that all people are likely to be affected. The likelihood of a large earthquake occurring varies widely from place to place, as can the size and severity of its impact on people. Go to Your Earthquake Risk to learn about where and why people are more (or less) likely to be affected.

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What To Do Before, During, and After an Earthquake

Recent earthquakes remind us that we live on a restless planet. But there are many important things we can do before, during, and after an earthquake to protect ourselves, our homes, and our families.

Before an Earthquake

It is important for individuals, families, organizations, and communities to identify their risk, make a plan, create a disaster kit, and remove, relocate, or secure anything that can:

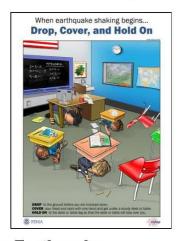
- Fall and hurt someone
- Fall and block an exit
- Fall and start a fire
- Require a lengthy or costly clean-up

During an Earthquake

DROP to the ground; take **COVER** by getting under a sturdy table or other piece of furniture; and **HOLD ON** until the shaking stops. If there isn't a table or desk near you, cover your face and head with your arms and crouch in an inside corner of the building.

DO NOT RUN OUT OF THE BUILDING DURING THE SHAKING AS OBJECTS MAY BE FALLING OFF THE BUILDING AND CAUSE SERIOUS INJURIES OR DEATH.

For more information, visit <u>Ready.gov</u> and <u>ShakeOut</u>.



After an Earthquake

Safely evacuate. Please note that aftershocks could happen. These additional shaking events can be strong enough to do additional damage to already weakened structures and can occur in the first hours, days, weeks, or even months after the main earthquake. Have a professional engineer or local building official inspect the structural integrity of your home and/or building for potential damages. This should also include:

- Inspecting your chimney for unnoticed damage that could lead to fires. Even a few cracks not obvious at first glance can create an unsafe condition the next time the fire place is used.
- Checking for gas, electrical, sewer, and water line damages to avoid fire and hazardous leaks.

Also visit <u>Earthquake Publications for Individuals and Homeowners</u> and <u>FEMA Earthquake</u>.



