

Welcome to the
20TH ANNUAL GEODE FEST
September 27, 28 & 29, 2024

FIRST CHRISTIAN CHURCH PARKING LOT
3476 MAIN ST., KEOKUK, IOWA 52632



www.keokukiowatourism.org

WRISTBANDS: All participants must have wristbands! *The fees are \$25.00 per adult (16 years of age and older) and \$5.00 per youth (15 years of age and younger).* Your Geode Family Fest Fee allows you admission to the Thursday night orientation, 1 morning guided hunt and 1 afternoon guided hunt on Friday and Saturday, and 1 morning guided hunt on Sunday. A Thursday evening orientation will be held for first-time attendees inside the First Christian Church Fellowship Hall from 7pm to 7:30pm. Early check-in will also be held inside the church's Carbide Lane Door B from 7pm to 8pm. Your first stop at the event is to check in at the Welcome Center Tent and receive your Official Event Admission Wristband. The Official Event Admission Wristband should be on your person during the entire event.

GEODE HUNTING SITE SELECTION: After regular check-in, go to the Geode Hunt Site Selection Tent. You are required to select a site to hunt, approximately one hour prior to the actual hunt. Volunteers will assist you in determining the most appropriate site for you and/or your group. Each site will be labeled "Easy", "Medium" or "Hard" with a brief description. Site selection is done prior to every hunt.

THE HUNT: The hunts will be held, weather permitting. You are responsible for your own transportation to and from the hunt site. A Hunt Guide will lead a caravan of hunters to the site. Announcements will be made when it's time for your caravan to leave. Your caravan & Hunt Guide lead vehicle will be color coded. Turn your flashers on while traveling in the caravan & follow all traffic laws. If you lose your group, return to the First Christian Church Parking Lot and you will be given an alternative site.

You will be walking in fields, streambeds, rivers, sand and mud. For you and your children's safety, please wear shoes or boots. You will be responsible for bringing your collected geodes to the main area of each hunt site.

Suggested Items for the hunts

Full tank of gas • Bottled water & snacks • 5-gallon buckets (*can be purchased at the Welcome Center*)
Weather-related clothing, boots, old shoes • Sunscreen, bug repellent

Optional collecting tools

Garden trowel • Long-handled screwdriver • Pick axe • Shovels • Rock hammer • Rock chisel • Prybar

There is an additional charge of \$25.00 per 5-gallon bucket of geodes collected from each site. A few sites may instead charge an amount per pound or by type of geode, payable at the site to your guide or property owner at the end of each hunt.

GEODE CRACKING/BREAKING AT THE HUNT SITE IS NOT ALLOWED

Emergency Phone #: 911 or Geode Fest Director, Kirk Brandenberger @ (319) 795-1917

2024 SCHEDULE OF ACTIVITIES: Read the attachment for more information about the Geode Fest Weekend

CONTESTS & PRIZE DRAWINGS: The adult and children (15 & under) contests and prize drawings will begin at 5:15 p.m. Friday and Saturday and 12:15 p.m. on Sunday at the First Christian Church Parking Lot. The contest categories to be awarded are *prettiest, oddest, largest, smallest, rarest, this mud's for you* and *ugliest*.

All participants are required to maintain good safety behavior during the entire weekend. No alcohol allowed. No Pets allowed.

2024 GEODE FEST SCHEDULE OF ACTIVITIES

FIRST CHRISTIAN CHURCH, 3476 MAIN ST., KEOKUK IOWA

Thursday, Sept. 26:	7:00 p.m. to 7:30 p.m. 7:00 p.m. to 8:00 p.m.	Orientation at First Christian Church Fellowship Hall Check-In Open/First Christian Church (Carbide Lane Door B)
Friday, Sept. 27:	6:15 a.m. to 7:45 a.m. 6:30 a.m. to 7:45 a.m. 7:45 a.m. 8:00 a.m. 8:05 a.m. to 8:45 a.m. 11:00 a.m. 11:00 a.m. to 12:45 p.m. 12:45 p.m. 1:00 p.m. 1:05 p.m. to 1:45 p.m. 4:00 p.m. 4:00 p.m. to 6:00 p.m. 5:15 p.m. 6:00 p.m.	Check-In Open/Welcome Center Tent Morning Hunt Site Selection Open / Site Selection Tent <i>(Sign up, identify your hunt Leader and flag color of your group)</i> Prepare to Leave for Morning Hunt Sites First Guided Caravan Leaves for Hunting Site Remaining Guided Caravans Leave for Hunting Sites Pay Landowners for Geodes Collected Return to First Christian Church Parking Lot Check-In Open / Welcome Center Tent Afternoon Hunt Site Selection Open / Site Selection Tent <i>(Sign up, identify your hunt Leader and flag color of your group)</i> Vendor Area Open Prepare To Leave for Afternoon Hunt Sites First Guided Caravan Leaves for Hunting Sites Remaining Guided Caravans Leave for Hunting Sites Pay Landowners for Geodes Collected Return to First Christian Church Parking Lot Vendor Area Open Contests and Prize Drawings Begin End of First Day of Geode Fest
Saturday, Sept. 28:	6:15 a.m. to 7:45 a.m. 6:30 a.m. to 7:45 a.m. 7:45 a.m. 8:00 a.m. 8:05 a.m. to 8:45 a.m. 11:00 a.m. 11:00 a.m. to 12:45 p.m. 12:45 p.m. 1:00 p.m. 1:05 p.m. to 1:45 p.m. 4:00 p.m. 4:00 p.m. to 6:00 p.m. 5:15 p.m. 6:00 p.m.	Check-In Open / Welcome Center Tent Morning Hunt Site Selection Open / Site Selection Tent <i>(Sign up, identify your hunt Leader and flag color of your group)</i> Prepare to Leave for Morning Hunt Sites First Guided Caravan Leaves for Hunting Site Remaining Guided Caravans Leave for Hunting Sites Pay Landowners for Geodes Collected Return to First Christian Church Parking Lot Check-In Open / Welcome Center Tent Afternoon Hunt Site Selection Open / Site Selection Tent <i>(Sign up, identify your hunt Leader and flag color of your group)</i> Vendor Area Open Prepare To Leave for Afternoon Hunt Sites First Guided Caravan Leaves for Hunting Sites Remaining Guided Caravans Leave for Hunting Sites Pay Landowners for Geodes Collected Return to First Christian Church Parking Lot Vendor Area Open Contests and Prize Drawings Begin End of Second Day of Geode Fest
Sunday, Sept. 29:	6:15 a.m. to 7:45 a.m. 6:30 a.m. to 7:45 a.m. 7:45 a.m. 8:00 a.m. 8:05 a.m. to 8:45 a.m. 11:00 a.m. 12:15 p.m. 1:00 p.m.	Check-In Open / Welcome Center Tent Morning Hunt Site Selection Open / Site Selection Tent <i>(Sign up, identify your hunt Leader and flag color of your group)</i> Prepare to Leave for Morning Hunt Sites First Guided Caravan Leaves for Hunting Site Remaining Guided Caravans Leave for Hunting Sites Pay Landowners for Geodes Collected Return to First Christian Church Parking Lot Vendor Area Open Contests and Prize Drawings Begin End of Geode Fest

AMOUNT: _____ PAID BY: CASH Or CHECK - CHECK #: _____

2024 GEODE FEST REGISTRATION FORM

Instructions: Please complete one Registration Form and Waiver Agreement & Medial Release Form per group (or individual). Geode Family Fest Fee is \$25.00 per adult (16 years of age or older) and \$5.00 per youth (15 years of age or younger) payable to Keokuk Area CTB by check or cash (no debit or credit cards) and mail by **September 15, 2024 to:**

Keokuk Area Convention & Tourism Bureau
428 Main Street / Keokuk, IA 52632

(Please Print)

Main Name: _____

Mailing Address: _____

(Street)

(City)

(State)

(Zip Code)

Cell Phone # During Geode Fest (Include Area Code): _____

E-Mail Address: _____

of Adults (16 Years of Age and Older) in your group: _____ x \$25.00 = \$_____

of Youth (15 Years of Age and Younger) in your group: _____ x \$5.00 = \$_____

WAIVER AGREEMENT & MEDIA RELEASE FORM

In consideration of being allowed to participate in any way at the 2024 Geode Family Fest which is hosted by the Keokuk Area Convention & Tourism Bureau and its related events and activities, I and/or the minor participant, for myself, and on behalf of my heirs, assigns, personal representatives and next of kin, the undersigned:

Assume all risks and accept personal responsibility for any damages due to injury, permanent disability or death.

Release, waive, discharge and covenant not to sue the Keokuk Area Convention & Tourism Bureau, the City of Keokuk, IA and their affiliated organizations, their representative administrators, directors, agents and other employees of the organizations, other participants, sponsoring agencies, sponsors, advertisers, their heirs, all of which are hereinafter referred to as "Releasees", from demands, losses or damages on account of injury, including death or damage to property, caused or alleged to be caused in whole or in part by the negligence of the Releasee or otherwise.

I hereby authorize and give my full consent to the Keokuk Area Convention & Tourism Bureau to copyright and/or publish any and all photographs and video in which I appear while attending the activities of the Geode Fest. I further agree that the Keokuk Area Convention & Tourism Bureau may transfer, use or cause to be used, these photographs and video for any exhibitions, public displays, publications, commercials, art and advertising purposes, and television programs without limitations or reservations.

By signing this waiver and release, it is understood that I/We have given up substantial rights by signing it, have not changed it orally and sign it voluntarily.

This is to certify that I, as parent/guardian with legal responsibility for this minor participant(s), do consent and agree to his/her release as provided above of the Releasees, and, for myself, my heirs, assigns and next of kin, I release and agree to indemnify and hold harmless the Releasees from any and all liabilities incident to my minor child's involvement or participation in this event as provided above, even if arising from their negligence.

WAIVER AGREEMENT & MEDIA RELEASE SIGNATURE SECTION

Main Name (Please Print)

Signature

Date

I REPRESENT THESE MINORS (15 YRS AND YOUNGER)

(Please Print Names. Use back of sheet, if needed.)

Names & SIGNATURES OF OTHER ADULTS (16 YRS OF AGE OR OLDER) IN YOUR GROUP

(Use back of sheet, if needed.)

Line 1: Print Other Adult Name. Line 2: Signature / Date.

Line 1: Print Other Adult Name. Line 2: Signature / Date.

Line 1: Print Other Adult Name. Line 2: Signature / Date.

of Adults in your group including Main Registrant: _____

of Youth in your group Represented: _____

TOTAL # IN YOUR GROUP: _____

About Geodes

Iowa geodes have long been objects of curiosity, their sparkling interiors containing some of the most beautiful crystals to be found anywhere in the Midwest. Although geodes are known from many localities around the world, one of the most productive and famous collecting regions is encompassed within a 35-mile radius of Keokuk, Iowa. Rock collectors commonly refer to geodes from this region as "Keokuk geodes." In keeping with the world-renowned status of the Iowa geodes, the Iowa General Assembly declared the geodes as the official "State Rock" in 1967.

The word "geode" is derived from Latin meaning "earthlike," a reference to their rounded shape. Most Iowa geodes are roughly spherical, often lumpy or cauliflower-like in external form, with diameters typically ranging between about two and six inches. However, specimens up to 30 inches are known. The most prized geodes have hollow interiors, although many geodes are solid objects in which crystal growth has filled most or all of the interior volume. Although the distinction may seem subtle, it is important to contrast geodes with other crystal-lined cavities or "vugs." Geodes differ from vugs in possessing an outer mineral layer which is more resistant to weathering than the host rock. As such, complete geodes commonly weather out of rock exposures and accumulate in stream bottoms. Crystal-lined vugs would not weather in such a manner.

Geodes from the Keokuk area contain a variety of minerals, but quartz is dominant in most. Quartz is silicon dioxide, the primary mineral in ordinary sand. Beautiful transparent to white quartz crystals cover the walls of many geode cavities. These crystals become larger and fewer in number towards the center of the geode, and terminate in characteristic pointed hexagonal pyramid shapes. Micro-crystalline quartz, or chalcedony, whose component crystals are too small to be seen with the naked eye, forms the outer shell in all "Keokuk geodes." Chalcedony layers also encrust the interior walls of many geode cavities, covering the surfaces of the earlier-generation quartz crystals in a variety of colors, including white, gray, blue, yellow and orange. Calcite is a common and attractive calcium carbonate mineral in many geodes, which occurs in a variety of crystal habits and colors. An additional 17 minerals have been identified in "Keokuk geodes." Some of the more noteworthy include: kaolinite, a white clay mineral; dolomite in saddle-shaped crystals; pyrite or fool's gold, an iron sulfide; and sphalerite, a blackish zinc sulfide.

Iowa's renowned "Keokuk geodes" can be found in specific stream drainages and excavations in parts of southeastern Iowa (especially in Lee, Henry, and Van Buren Counties), including the area near Geode State Park. Most geodes are derived from strata of the lower Warsaw Formation, a widespread rock unit of Mississippian age. Muds deposited in a shallow sea about 340 million years ago were primarily calcium carbonate and clay, and were subsequently lithified to form the shales, shaley dolomites, and limestones that we see today. Fresh geodes can be dug out of exposures of the lower Warsaw Formation, where they are concentrated in certain layers. Where water and streamflow have eroded these strata, concentrations of geodes may accumulate in stream channels. Although the bulk of Iowa's geodes are derived from the Warsaw Formation, geodes also are known from other formations of Devonian and Mississippian age at scattered localities in eastern and central Iowa.

The origins of geodes have vexed geologists for a considerable time, and many hypotheses have been put forward. The most recent geologic research, however, agrees on three general points: 1) Geode precursors were concretions (nodules formed by outward growth around some nucleus) which grew within soft, unlithified sediment. 2) The outer shells of these concretions were replaced subsequently by chalcedony. 3) The interiors of the concretions were dissolved, leaving a hollow space into which quartz crystals could grow. The composition of the original concretions is unclear, though geologists propose they were either limestone or anhydrite, a fairly soluble calcium sulfate mineral related to gypsum.

The minerals now seen inside geodes were transported in groundwater solutions and then precipitated as replacements of the geode walls or as crystalline growths within their hollow interiors. The ultimate source of the mineralizing waters remains speculative. Many common geode mineral, especially quartz, are only weakly soluble. Therefore, substantial volumes of water had to migrate through the lower Warsaw strata to precipitate the observed minerals.

Collecting geodes can be both fun and educational. Once you've located exposures of lower Warsaw strata or a geode-bearing stream course, all that's required is a little patience and a good bricklayer's or rock hammer. A sharp blow with a hammer is usually sufficient to crack open individual geodes, exposing their crystalline interiors to daylight for the first time. Remember that most geode-collecting localities are on private land, and permission must be secured before entering.

Additional information is found in Horick, P.J., 1974, The Minerals of Iowa: Iowa Geol. Survey, Educ. Series 2, 88 p.; Sinotte, S.R., 1969, The Fabulous Keokuk Geodes: Wallace-Homestead Co., Des Moines, 292 p.