CaveSim Programs for Texas Elementary Schools

Prepared by Dave Jackson, CaveSim creator and lead educator. Contact Dave: dave@cavesim.com

Above, awestruck at a program in Los Alamos, NM, 2017

Teacher quote: “CaveSim was amazing. I had students come up to me the next day, give me a big hug and say ‘Thank you Ms. Jones for having the cave at our school. It was so fun.’ The students were able to understand cave formations, organisms and cave safety. You and the other cave experts were fantastic. You were able to share important content related to earth science and life science. Each part of the presentation was aligned to our science standards. They particularly loved climbing through the cave and the ‘tower’. Mike was great. Thanks for all that you do. We would love to see you back next year.” **— Patricia Jones, teacher, Houston Elementary, Austin ISD**

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Summary

Thanks for your interest in CaveSim! The centerpiece of our program is a mobile CaveSim system, which we'll bring from Colorado to your school in a 24' trailer. The cave is filled with stalactites, critters, and artifacts (all artificial). Students get a computerized score based on how carefully they avoid the stalagmites and other objects as they explore. We'll also bring you many TEKS[1]-aligned hands-on lessons. Our elementary programs are tailored specifically to ES TEKS, and cover many subjects including science, math, engineering, PE and art.

Programs are led by MIT-trained CaveSim inventor Dave Jackson. Dave and his wife Tracy (both real cavers) have taught CaveSim programs around the US since 2010. Tracy has a Masters in Teaching from Colorado College. Dave and other CaveSim staff teach the programs.

In addition to learning a wide range of classroom subjects, students also learn that they can do what Dave and Tracy have done: take what they've learned in school and use it to follow their passions to make the world just a little bit better. We look forward to bringing CaveSim to your school to engage your students in a whole new way, and we're excited about working with you.

Texas schools that have done and loved our programs

Austin: Austin HS, McCallum HS, Andrews ES, Baranoff ES, Barrington ES, Barton Hills ES, Blanton ES, Boone ES, Brentwood ES, Cowan ES, Hill ES, Houston ES, NYOS, Pecan Springs ES, Sanchez ES, T.A. Brown ES, Wooldridge ES; Georgetown: Frost ES; Hays: Dahlstrom MS; Granbury: Brawner Intermediate; Baccus ES; Lake Travis: Lakeway ES; Hutto MS; New Braunfels: Memorial ES; Dripping Springs: Sycamore Springs ES; Conroe: Creighton ES; Del Valle Elementary.

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[1] Texas Essential Knowledge and Skills educational standards. See https://tea.texas.gov/curriculum/teks/

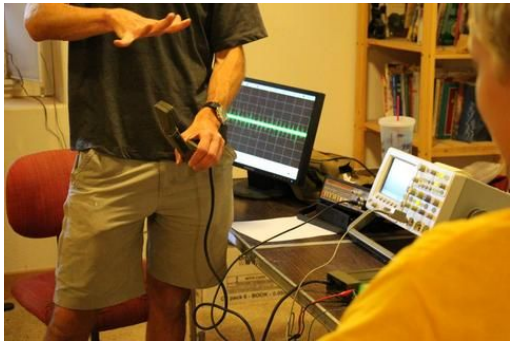
Standard Program Components (with TEKS alignment)

Standard components are included in the cost of the program. Programs are typically conducted by having students work with us at a series of different stations/lessons, as follows:

CaveSim program element: Horizontal Cave Exploration	Corresponding TEKS	Photos of past CaveSim programs
In CaveSim mobile cave (contains 60' of passage with multiple levels in a 24' trailer). While wearing helmets, students explore the cave in small groups and:	§116.4. Physical Education, Grade 2. b) 5) B) select and use appropriate protective equipment in preventing injuries such as helmets, elbow/knee pads….	 *Thrilled to be exploring CaveSim in Glenwood Springs, CO, 2018. Photo by Chelsea Self, Post Independent.*
• Try to avoid bumping into artificial cave formations. Students learn that oil and water do not mix, and that touching formations can cover them with skin oil, which stops the formations from growing.	§112.16. Science, Grade 5, b) 5) A) classify matter based on measurable, testable, and observable physical properties, including... solubility in water	
• Look for cave biota (critters, all artificial), and discuss the cave ecosystem after they exit the cave. CaveSim staff teaches about the cave food web, including the amazing lampshade spider, which eats fungus gnats, which eat fungus, which eat deceased bats, etc.	§112.14. Science, Grade 3 b) 9) A) observe and describe the physical characteristics of environments and how they support populations and communities of plants and animals within an ecosystem. Also §112.15. Science, Grade 4, a) 1) C) and §112.16. Science, Grade 5, b) 9) B)	
• Learn about how cave passage forms. CaveSim staff talk about special bacteria that use enzymes to eat limestone (breaking chemical bonds to get energy). We can also discuss the formation of sinkholes (common in Texas), and the benefits / dangers that they afford humans. Demo available upon request: dissolution of carbonate rocks using weak acid.	§112.16. Science, Grade 5, (7) Earth and space…: (A) explore the processes that led to the formation of sedimentary rocks and fossil fuels; and (B) recognize how landforms... are the result of changes to Earth's surface by wind, water, or ice. (9) Organisms and environments....: (A) observe the way organisms live and survive in their ecosystem by interacting with the living and nonliving components;	
• CaveSim staff explain how aqueous cave formations (helictites, soda straws, gypsum) form. Topics covered: water flow is usually downhill due to gravity; water can flow against gravity due to capillary action (examples: water climbing up a towel, water flow inside cave formations). Students grow vocabulary with "capillary action." • Look for modern equipment in the cave, including rescue cache & vertical caving ladder (etrier). Students learn that the etrier (rope ladder) is named after the French word for stirrup. Students expand vocabulary with the word "cache."	§110.16. English Language Arts and Reading, Grade 5, b) 2) [also §110.11- 15, grades K-4] Reading/Vocabulary Development. Students understand new vocabulary….	 *Elementary students in Cascade, CO explore the mobile cave.*
• Look for indigenous cave artifacts and rock art, and discuss the importance of such artifacts to native people and to archaeologists and anthropologists. Hear a real-life story about a CaveSim staff member's experience with artifacts while exploring caves in Mexico. Students discuss why we don't take native artifacts or damage native art. The differences between graffiti and art are discussed. • Available upon request: prior to entering the cave, students are asked to make cave paintings with black paint on butcher paper. Students are encouraged to reflect on their paintings and write a few sentences about what story their picture tells. During exploration of the mobile cave, students are given extra time in the cave to make sketches of the cave paintings that they find. After they exit the cave, students are given time to write a few sentences on their sketch to tell a story about what they saw in the cave paintings. As a group, students are invited to share the stories that they wrote.	§113.11. Social Studies, Kindergarten b) 14) B) obtain information about a topic using a variety of valid visual sources such as pictures, symbols,... and artifacts §117.111. Art, Grade 3 b) 1) A) explore ideas from life experiences about self, peers, family, school, or community and from the imagination as sources for original works of art. §117.114. Art, Grade 4 b) 1) A) explore and communicate ideas drawn from life experiences about self, peers, family, school, or community and from the imagination as sources for original works of art. §117.117. Art, Grade 5 b) 1) C) discuss the elements of art as building blocks and the principles of design as organizers of works of art.	
Space required: the 24' trailer is typically kept outside. See www.cavesim.com/site-logistics for more details. In inclement weather, we may close the trailer and do indoor activities.		

CaveSim program element: Vertical Caving	Corresponding TEKS	Photos of past CaveSim programs
On CaveSim portable 12' A-frame w/ crash pads:		
• While wearing helmets, students use a Bosun's chair, ropes, and pulleys to learn about mechanical advantage afforded by 1:1 and 5:1 pulley systems, and learn that work is unchanged when a mechanical advantage is introduced. Students work together to lift a fellow student up the tower using the different systems. Students use their understanding of fractions to determine that the 5:1 pulley system reduces the required lifting force by a factor of 5.	§112.12. Science, Grade 1 b) 6) C) demonstrate and record the ways that objects can move such as in a straight line, zig zag, up and down, back and forth, round and round, and fast and slow. §112.14. Science, Grade 3 b) 6) C) observe forces such as magnetism and gravity acting on objects. §111.5. Math, Grade 3. b) 3) C) explain that the unit fraction 1/b represents the quantity formed by one part of a whole that has been partitioned into b equal parts where b is a non-zero whole number; §112.15. Science, Grade 4 b) 6) D) design a descriptive investigation to explore the effect of force on an object such as a push or a pull, gravity, friction, or magnetism. §112.16. Science, Grade 5 b) 6) D) design a simple experimental investigation that tests the effect of force on an object.	 *Above, a student in Colorado uses mechanical advantage to lift herself up the A-frame.* *Below, students in Montana work together under direct supervision from staff to lift a fellow student .* 
• CaveSim staff use harnesses and mechanical ascenders to ascend the A-frame. CaveSim staff discuss the ascender mechanics, as well as equipment safety and the important differences between caving and rock climbing equipment. Students learn the words "ascend," "descend," "vertical", and "horizontal." Students learn about current events in vertical caving, including ongoing efforts in Mexico to find the world's deepest cave. Students learn that some of the cavers who help with CaveSim have been over 6000' underground.	§110.16. English Language Arts and Reading, Grade 5, b) 2) [also §110.11- 15, grades K-4] Reading/Vocabulary Development. Students understand new vocabulary….	
• With the help of students, CaveSim staff demonstrate the power of friction to rapidly destroy Nylon rope. Before the demonstration, students are encouraged to develop hypotheses about what will happen when two ropes are rubbed together, and then develop hypotheses about which rope will break first. After the two ropes are rubbed together rapidly and the larger rope breaks, students are encouraged to try to figure out why the larger rope broke. CaveSim staff explain the outcome by introducing the concept of "concentrated" (because of the way the experiment is done, the heat is *concentrated* in just one spot on the larger rope, and spread out on the smaller rope, hence the melting of the larger rope). • With the help of students, CaveSim staff demonstrate the power of friction to allow a person to ascend a rope using the Prusik knot. Depending on available time, students learn to tie the Prusik, the Alpine Butterfly, the Lark's Head, and/or other knots.	§112.15. Science, Grade 4 b) 6) D) design a descriptive investigation to explore the effect of force on an object such as a push or a pull, gravity, friction, or magnetism.	
Space required: typically outdoors on flat ground. May also be placed indoors where ceiling height is >12'6". Footprint is 8' x 9'.		

CaveSim program element: Carbide Demonstrations	Corresponding TEKS	Photos of past CaveSim programs
To illustrate chemistry and physics concepts, CaveSim staff bring working carbide lamps and carbide to programs. Demonstrations can include: • CaveSim staff light a working carbide lamp by placing carbide and water in the lamp to produce a small (and safe) quantity of flammable gas. The resultant gas (acetylene) burns to produce light and heat, but the lamp body also becomes warm because of the exothermic reaction between the carbide and water. Students can touch the lamp body to get a better understanding of the concept of an exothermic reaction. Older students gain an understanding of the concept of reflectors by observing the behavior of the reflector on the lamps. New vocabulary explained by CaveSim staff: “exothermic,” with connection drawn to “exoskeleton.” • CaveSim staff place carbide and ice in an open pan. As the ice melts, the water reacts with the carbide, producing the aforementioned acetylene gas. CaveSim staff discuss states of matter (solid ice turns to liquid water as it’s heated by the carbide, and then to vapor as it boils). For older students, the concept of limiting reactants is introduced. By watching the exciting reaction occur, students gain a more intuitive understanding of the concept of a chemical reaction. New vocabulary taught by CaveSim staff: “reaction”, “reactant.” • Science experiment safety is emphasized (e.g., firmly close containers when not in use). • Fire safety is emphasized, with an emphasis on who is allowed to make a fire (a responsible adult), what must be present (a method of extinguishing the fire), where the fire should be made (in a safe container away from other fuel sources). <u>Space required</u>: typically conducted outdoors, but cannot be done in the rain. May be done indoors in an appropriate lab setting where a small quantity of smoke may be safely produced without setting off alarms or creating hazardous conditions. The smoke produced in this activity is equivalent to the smoke produced by extinguishing about a dozen birthday candles.	§112.14. Science, Grade 3, b) 5) C) predict, observe, and record changes in the state of matter caused by heating or cooling such as ice becoming liquid water, condensation forming on the outside of a glass of ice water, or liquid water being heated to the point of becoming water vapor. 6) A) explore different forms of energy, including mechanical, light, sound, and thermal in everyday life. §112.15. Science, Grade 4, b) 6) A) differentiate among forms of energy, including mechanical, sound, electrical, light, and thermal. §112.16. Science, Grade 5, b) 6) C) demonstrate that light travels in a straight line until it strikes an object and is reflected or travels through one medium to another and is refracted. §110.16. English Language Arts and Reading, Grade 5, b) 2) [also §110.11- 15, grades K-4] Reading/Vocabulary Development. Students understand new vocabulary…. §112.11-16. Science, K-5, b) 1) A) identify, discuss, and demonstrate safe and healthy practices as outlined in Texas Education Agency-approved safety standards during classroom and outdoor investigations, including wearing safety goggles or chemical splash goggles, as appropriate, washing hands, and using materials appropriately.	 *Above, carbide lamp demonstration by CaveSim staff at a program in Colorado.* *Below, stock photo of the lamps we use.* 
CaveSim program element: Cave Rescue Phones	**Corresponding TEKS**	**Photos of past CaveSim programs**

Hands-on lessons about basic circuits using a pair of wired cave rescue phones. Activities include:		
• We bring two cave rescue phones to our programs. The phones are connected by wire, which allows us to discuss basic circuits, and demonstrate that a circuit requires at least one complete loop to function. Students can disconnect and reconnect wires for hands-on learning about conductors and insulators. Students talk with each other over the phones. CaveSim staff discuss the relationship between wire length, electrical resistance, electrical energy dissipation in the wire, and phone volume. Electrical circuits involving the earth as one of the conductor are discussed. • New for 2019/2020: Students make their own form of cave phones, using vibration to communicate over a distance. Students are encouraged to understand the analog between the mechanical waves in this activity and the electrical waves in the preceding activity. • New for 2019/2020: Students use a stainless steel drum to propagate waves through water. Students make observations about the interaction between sound and mechanical energy. Students are encouraged to make connections between this activity and the vibrations that travel between their home-made phones in the preceding activity.	§112.15. Science, Grade 4, b) 6) A) differentiate among forms of energy, including mechanical, sound, electrical, light, and thermal; (B) differentiate between conductors and insulators of thermal and electrical energy; (C) demonstrate that electricity travels in a closed path, creating an electrical circuit. §112.16. Science, Grade 5, b) 6) A) explore the uses of energy, including mechanical, light, thermal, electrical, and sound energy; (B) demonstrate that the flow of electricity in closed circuits can produce light, heat, or sound;	 *Two friends enjoy talking on the cave rescue phones during a 2013 CaveSim program in Colorado.*
• Available upon request: Demonstrations with an oscilloscope (see https://whatis.techtarget.com/definition/oscilloscope) by CaveSim owner Dave Jackson, who has designed high speed computer chips for oscilloscopes. The oscilloscope produces a graphical representation of voltage on the cave rescue phone wire vs. time, which allows students to visualize their vocal energy on a screen. We discuss graph axes, and the relationship between time-based and frequency based graphs. Resonances/oscillation of electrical and sound signals are also discussed. This activity is typically done for middle/high school, but can be adapted to older elementary students.	§112.16. Science, Grade 5, b) 2) G) construct appropriate simple graphs, tables, maps, and charts using technology, including computers, to organize, examine, and evaluate information.	 *A CaveSim staff person teaches students about electricity and magnetism using cave rescue telephones and electronic test equipment (oscilloscopes).*
Space required: typically outdoors for convenience, but can also be done in any classroom or indoor setting. Oscilloscope demo must be done indoors if raining. The oscilloscope has a VGA output, which can be projected to a smartboard, projector, or computer monitor for better viewing by students.		
CaveSim program element: Bat games and lessons	**Corresponding TEKS**	**Photos of past CaveSim programs**

Bat skeleton and guano demonstrations and lessons: • Discussion of similarities and differences between bat wing structure and human hands. Discussion of evolutionary pressures that may have created the similarities and differences. • Discussion of bat tail structure and usage of the tail in steering, balance, and in catching insects. • Discussion of different types/sizes of bats, and the role that they play in helping humans. Real-life lesson about bat eradication by farmers and the impact on their crops. • Photographic and/or video demonstration of the ongoing White Nose Syndrome (WNS) epidemic that has killed nearly 6 million bats in the last ~10 years. For older grades, lesson about the WNS fungus (Pseudogymnoascus destrucans) and how it eats (metabolizes) bats alive. • Discussions about **Texas history** and the role that Texas caves played in the civil war (as sources of saltpeter for the production of gunpowder). Space required: typically done by the trailer to engage students as they wait to explore. Can also be done anywhere inside. **Bat echolocation game**: Two at a time, students take turns roleplay a bat and a moth. The bat (blindfolded) tries to locate and tag the moth using only the "bats" voice and their hearing. The other students form a circle to contain the two students playing the bat and moth. Students learn about echolocation, and gain personal confidence. Space required: may be played indoors or outdoors. If outdoors, a safe surface must be used (to allow a blindfolded student to move in a small circle of other students without tripping on uneven ground. **Bat Migration Challenge game**: Working individually or in groups (depending on grade level), students act out the lives of bats as they encounter daily challenges and opportunities. Students learn about the ways in which humans can act to help or harm bats. Space required: may be played indoors or outdoors.	§112.13. Science, Grade 2, b) 9) Organisms and environments. The student knows that living organisms have basic needs that must be met for them to survive within their environment. §112.15. Science, Grade 4, b) 10) A) explore how structures and functions enable organisms to survive in their environment; (B) explore and describe examples of traits that are inherited from parents to offspring such as eye color and shapes of leaves and behaviors that are learned such as reading a book and a wolf pack teaching their pups to hunt effectively. §112.16. Science, Grade 5, b) 9) A) observe the way organisms live and survive in their ecosystem by interacting with the living and nonliving components; (B) describe the flow of energy within a food web, including the roles of the Sun, producers, consumers, and decomposers; (C) predict the effects of changes in ecosystems caused by living organisms, including humans, such as the overpopulation of grazers or the building of highways. 10) A) compare the structures and functions of different species that help them live and survive in a specific environment such as hooves on prairie animals or webbed feet in aquatic animals; and (B) differentiate between inherited traits of plants and animals such as spines on a cactus or shape of a beak and learned behaviors such as an animal learning tricks or a child riding a bicycle.	 *CaveSim program lead Dave Jackson teaches kids about bat biology in Glenwood Springs, CO. Photo by Chelsea Self, Post Independent.*
CaveSim program element: Squeezebox and Math	**Corresponding TEKS**	**Photos of past CaveSim programs**
We bring an adjustable-height wooden box through which students can crawl to safely test their ability to navigate tight spaces. Students use a tape measure to quantify how tight a space they can move through. Space required: typically set up near the stretcher (see above). Any indoor or outdoor setting is fine.	§111.3. Math, Grade 1, b) 7) D) describe a length to the nearest whole unit using a number and a unit §111.4. Math, Grade 2, b) 9) D) determine the length of an object to the nearest marked unit using rulers, yardsticks, meter sticks, or measuring tapes; §111.6. Math, Grade 4, b) 3) F) evaluate the reasonableness of sums and differences of fractions using benchmark fractions 0, 1/4, 1/2, 3/4, and 1, referring to the same whole. §111.7. Math, Grade 5, b) 7) Geometry and measurement. The student applies mathematical process standards to select appropriate units, strategies, and tools to solve problems involving measurement. The student is expected to solve problems by calculating conversions within a measurement system, customary or metric.	 *Students at a 2018 Austin PARD program use a tape measure to quantify their squeezebox skills.*
CaveSim program element: Rescue Stretcher	**Corresponding TEKS**	**Photos of past CaveSim programs**

CaveSim program element: Rescue Stretcher	Corresponding TEKS	Photos of past CaveSim programs
We bring a cave rescue stretcher (Sked) to our programs. Students take turns getting into the stretcher. With the direct supervision of CaveSim staff, the student in the stretcher is carried through and around obstacles by fellow students. Students learn teamwork, communication, and leadership. Space required: any indoor or outdoor setting. May be done in classrooms or even hallways.	§116.4. Physical Education, Grade 2. b) 1) A) travel independently in a large group while safely and quickly changing speed and direction; F) demonstrate a variety of relationships in dynamic movement situations such as under, over, behind, next to, through, right, left, up, or down; 2) A) use equipment and space safely and properly; 5) F) describe appropriate reactions to emergency situations common to physical activity settings such as universal safety precautions and dialing 911. §116.5. Physical Education, Grade 3, b) 1) A) travel in forward, sideways, and backwards and change direction quickly and safely in dynamic situations; E) demonstrate proper body alignment in lifting, carrying, pushing, and pulling; §116.6. Physical Education, Grade 4, b) 7) D) demonstrate effective communication, consideration and respect for the feelings of others during physical activities such as encourage others, allow others equal turns, and invite others to participate. §116.7. Physical Education, Grade 5, b) 7) Social development. The student develops positive self-management and social skills needed to work independently and with others in physical activity settings. The student is expected to: (A) follow rules, procedures, and etiquette.	 *With supervision from CaveSim staff, kids get ready to lift and carry a friend in the stretcher.*

The value of education: As an inventor and educator, Dave encourages students to study hard, find their passion, and understand that education is very important in life. During each program, Dave uses his personal story (including getting multiple degrees from MIT) to teach students that education leads to great success and adventure.

Right, Dave gives a keynote presentation in Lake George, CO.

Labs

Standard programs (above) can be enhanced by adding our labs. Labs provide an in-depth educational experience in a specific subject, like biology or engineering. We never use kits because our goal is to teach students that engineering and science projects are accessible to them without the use of pre-prepared materials. We emphasize conservation by using post-consumer recyclable materials in our engineering labs. Labs require extra funding for materials and staff time. Contact us for pricing.

Engineering Lab: Students create circuits using LEDs, switches, batteries, and other components to create an LED light system. They get hands-on experience with soldering (with supervision from CaveSim staff), and then design and make their own caving flashlight enclosure from recyclable materials. After creating their lights, students test their work in water to see if their lights are waterproof. Students have the chance to revise their designs if needed.

Subjects covered: Electromagnetics, product design, material science, and mechanical engineering.

Recommended time: 55 to 90 minutes. Recommended class size: Up to 25 students. Recommended grade levels: 5th grade and up



Above, students work on the Engineering Lab

Biota Lab: Students culture cave biota in Petri dishes, and learn that single-celled organisms can demonstrate intelligence. Students choose from multiple experiments, and discuss the factors that impact the outcome of their experiments.

Subjects covered: Experiment design, scientific method, and biology concepts.

Recommended lab time: 30 to 45 minutes, with a follow-up on a second day (with or without CaveSim staff present).

Recommended class size: Up to 30 students. Recommended grade levels: 4th grade and up.

High school students at a two-day program in Oklahoma get ready to inoculate their Petri dishes.

Karst Lab: Students get to make their own karst topography (cave landforms) using safe household materials. Students learn hydrology, geology, basic chemistry, landforms, states of matter.

Recommended lab time: 30-40 minutes.
Recommended class size: Up to 30 students.
Recommended grade levels: Spring-semester 3rd grade and up

Formation Lab: Students make their own cave formations (think stalactites) using safe household materials. Students learn hydrology, geology, basic chemistry, states of matter.

Recommended lab time: 30-40 minutes.
Recommended class size: Up to 30 students.
Recommended grade levels: 2nd grade and up

Above, 5th graders in Colorado work on the Karst Lab

Waves and Energy Lab: After watching a demo with real cave rescue phones, students make their own version using cups and string. Students conduct several experiments with their phones and record their observations. Students learn about waves, energy, and graphing.

Recommended lab time: 30-40 minutes.
Recommended class size: Up to 30 students.
Recommended grade levels: 2nd grade and up

Pricing and FAQ

How much do programs cost? This depends on factors like travel distance, number of days, and number of students. Our average price this year is $1658/day. Please contact us for a quote.

Are deposits or contracts required? No. We will reserve your program date(s) once we agree on a price and you send us an email stating that you want us to visit your school at the agreed-upon price.

How are payments made? By check, made out to CaveSim LLC, as specified on the invoice that we'll email you. W9 available upon request.

Does CaveSim carry insurance? Yes. Once you commit to working with us, please let us know if you need a Certificate of Additionally Insured.

Are permission slips required? Yes. Paperless and printable versions in both English and Spanish are available: www.cavesim.com/waiver.

How much space is needed? Is power required? See www.cavesim.com/pages/site-logistics

Is this an outdoor activity? Typically yes. The cave stays inside the trailer (we don't move it into your school). Some activities can be moved inside in inclement weather (the tower can be moved indoors if you have 13+ foot ceilings in some part of your school). In light to moderate rain/snow, we put up tents to protect students and the cave.

Is the cave heated and air conditioned? Yes. Please provide access to 1 working 20A outlet in summer, and 2 outlets (15A and 20A) in winter.

How much setup and takedown time are needed? Typically 1.5 hours for setup, and 1 hour for takedown.

How many students can participate in a day? For elementary, 150-200. For MS/HS, 100-150. Educational value and number of students are inversely related. We're excited about working with you to size your groups for the best possible educational experience.

Does CaveSim do multi-day programs? Yes. We have done as many as four days at one school.

Contact us: Email jacksondmit@cavesim.com or call 914-330-7824.

Safety and special needs

Teachers/staff can explore the cave, and students with special needs (physical or otherwise) may be assisted by school staff, students, and/or CaveSim staff. While each student is different, numerous wheelchair-bound students have explored CaveSim. Some students may have more difficulty avoiding cave formations, and our only requirement is that each student understand their goal of not touching the formations (for the safety of the system and students). Students who are unable to understand the careful-caving goal may participate in our other activities. CaveSim has night-vision cameras which allow us to check on students as they explore. We also have five access points to allow us to let participants out of the trailer if needed.

We follow the BSA's Youth Protection policy, which includes no 1:1 student/adult interaction.

Challenge by choice

Most students love exploring CaveSim. Occasionally we have a student who is unsure, uncomfortable, or afraid. We encourage him/her to set a goal for themselves and see if they can attain that goal. We teach challenge by choice, and have plenty of activities for students to try.

Classroom management

We've been doing our programs since 2010, and our staff includes former classroom teachers, so we have a good handle on classroom management. Because we spent over two years creating CaveSim, we set expectations at the start of the program: we expect students to respect the equipment and everyone involved in the program. We rarely experience discipline problems, but when we do we ask students to either change their behavior or take a break from the activity until they are ready to participate properly. Our goal is to work as a team with you, so please feel free to communicate with us about any issues that you foresee.