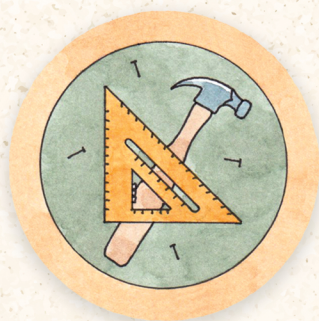


The GIRL'S Guide to Building a Fort

OUTDOOR + INDOOR ADVENTURES FOR HANDS-ON GIRLS



THREE SUMMER-FUN ACTIVITIES



Andrews McMeel
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THE TEN-MINUTE VOLCANO

Every second, there are chemicals interacting around us and even inside our bodies. These reactions are usually too subtle for us to notice, but sometimes we can see them if we combine the right chemicals. In this experiment, you'll see what happens when vinegar and baking soda react to one another and make a lot of carbon dioxide. You can do this science experiment outside if it's a nice day or in a big bowl or sink inside. (Warning: it could get messy, in the best way!)

MATERIALS

- 2 (16-ounce) plastic cups
- ½ cup vinegar
- ⅔ cup dish soap
- Food coloring in any color
- Modeling clay (optional)
- 4 tablespoons baking soda
- ⅔ cup water

INSTRUCTIONS

1. Mix the vinegar, dish soap, and 2 to 3 drops of food coloring in a 16-ounce cup. If you're using modeling clay to decorate, now is the time to mold it into the base of a volcano around the cup.
2. In a separate cup, mix the baking soda and water.
3. Pour the baking soda into the cup of vinegar, dish soap, and food coloring.
4. Stand back and watch what happens!

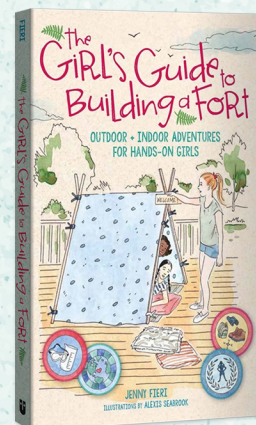


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GRAB A
GROWN-UP!

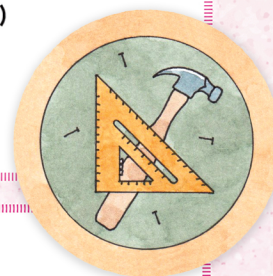
HANDS-ON
ACTIVITY

THE EASIEST TREE SWING

What do trapeze artists, wrecking balls, and swings all have in common? They have pendulum movement! This kind of movement is unique because it constantly goes back and forth between kinetic and potential energy, and this switching creates a steady swing. Want to test out the physics for yourself? Creating a pendulum is easier than you might think. In fact, you can build a DIY swing and have your own giant pendulum in about an hour! So, grab an adult and some supplies, and let's prove the power of the pendulum!

MATERIALS

- 1 (2 by 12 by 22-inch) wood board
- Drill with 11/16-inch bit
- Sandpaper
- Tape measure
- Braided rope (at least 36 feet long, depending on height of branch)
- Masking tape
- Marker



INSTRUCTIONS

1. If you're starting with a larger 2 by 12-inch board, such as a standard 2 by 12 by 96-inch board, have an adult cut it down to 22 inches in length. (Save the scrap for another swing or project!) Now you'll have a rectangle that is 12 inches wide and 22 inches long.
2. Using a 11/16-inch drill bit, drill a hole at each corner, leaving 1 to 2 inches of space between the hole and the sides of the board.
3. Sand the surface and edges of the board. No one wants a splinter, so sand until each side is smooth (see page 135)!
4. The length of rope you need will depend on the tree branch you choose, so pick out a sturdy branch at least 7 feet from the ground. Throw the rope over the tree branch twice so that it creates a loop around the branch and hangs down on both sides.
5. Cut the rope so that the ends just touch the ground.
6. Repeat steps 4 and 5 on the same branch about 20 inches away from the first rope.
7. Wrap tape around both ends of each rope. This keeps the rope from fraying.
8. Make a mark on each rope where you want the board to be suspended. The board should be high enough that you can sit and swing your legs comfortably.
9. Take each taped rope end and thread it through one of the board's four holes.
10. Tie a strong knot, like an overhand knot (see page 53) under each corner of the board. Use the mark you made earlier to help guide you on how high from the ground to place the knot.
11. Test out your swing. If it's level and the height's perfect, tie one or two more knots under the first ones to ensure maximum hold. Now you're ready to switch between kinetic and potential energy all day long!

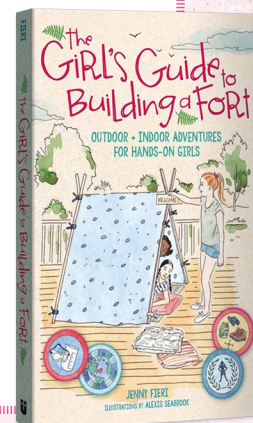
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EASY SETUP SOFTBALL

Did you know that people play softball in more than 140 countries? It's so popular because it builds teamwork, is easy to set up, and, most of all, it's super fun. If you want to knock one out of the park, all you'll need is an open space, a few supplies, and five friends to get a game going. So, collect some competitors, and get ready to play ball!

MATERIALS

- 4 cones (or any other place markers)
- Softball
- Bat
- Helmet for each player
- Glove for each player
- 6 players or more

SETUP

Use the four cones to mark the four points of a diamond. These cones are your bases, which are home, first, second, and third base.

Have one person stand at the center of the diamond. They're the pitcher and will throw the ball.

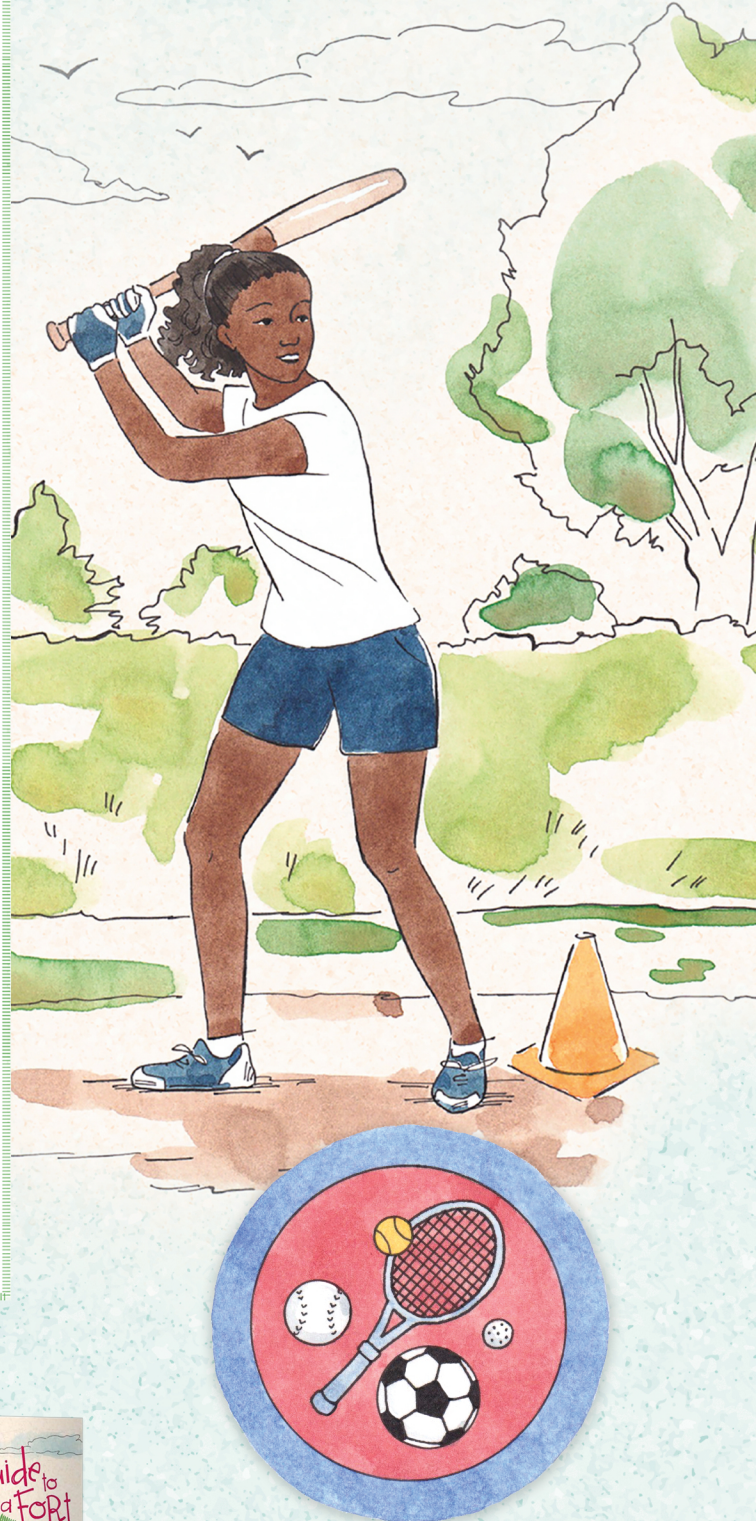
Have another player stand at a marker across from the pitcher (home base). They'll have the bat and be the batter.

The remaining players can spread out on the field. They'll be the base players and should stand close to a base.

SOFTBALL RULES

The pitcher must throw the ball underhand to the batter.

The batter has three chances to hit the ball. If they miss the ball, that's a strike. Once a batter has three strikes, they're out and the next player bats.



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