DIFFICULTY: MEDIUM
(0) 5 VOLUNTEERS
(b) 4 HOURS

## MATERIALS

## PREP

(1) $4 \times 4 \times 8 \mathrm{ft}$ board - if bench is set in concrete, use (1) $4 \times 4 \times 12 \mathrm{ft}$ board instead

## BUILD

(4) $4 \times 4 \times 13^{\prime \prime}$ pieces - if bench is set in concrete, use $4 \times 4 \times 29$ " pieces instead
(2) $4 \times 4 \times 8^{\prime \prime}$ piece
(2) $2 \times 4 \times 48^{\prime \prime}$ pieces
(4) $2 \times 4 \times 15^{\prime \prime}$ pieces
(4) $2 \times 6 \times 15^{\prime \prime}$ pieces
(8) $2 \times 2 \times 45^{\prime \prime}$ pieces
1.5Ibs $2.5^{\prime \prime}$ deck screws

2lbs 3" deck screws
Sanpaper

## TOOLS

## PREP

Miter saw
Tape measure
Pencil
Carpenter's square
Safety glasses

## BUILD

Tape measure
Pencil
Hammer
Drill
Screwdriver bit
1/8" drill bit
Safety glasses

## PREP LIST

1. Sort materials into piles by like items to ensure you have materials needed to complete project. $\square$
2. Take the $4 \times 4 \times 8 \mathrm{ft}$ board. Cut into (4) $4 \times 4 \times 13^{\prime \prime}$ pieces and (2) $4 \times 4 \times 8^{\prime \prime}$ pieces - if you will be setting the bench in concrete, take the $4 \times 4 \times 12 \mathrm{ft}$ $\square$ board and cut into (4) $4 \times 4 \times 29$ " pieces and (2) $4 \times 4 \times 8$ " pieces.
3. Take (1) $2 \times 4 \times 8 \mathrm{ft}$ board. Cut into (2) $2 \times 4 \times 48^{\prime \prime}$ pieces.
4. Take the second $2 \times 4 \times 8 \mathrm{ft}$ board. Cut into (4) $2 \times 4 \times 15^{\prime \prime}$ pieces.
5. Take the $2 \times 6 \times 8 \mathrm{ft}$ board. Cut into (4) $2 \times 6 \times 15^{\prime \prime}$ pieces.

6. Take all (4) $2 \times 2 \times 8 f t$ pieces. Cut each one into (2) $2 \times 2 \times 45^{\prime \prime}$ pieces, for a total of (8) $2 \times 2 \times 45^{\prime \prime}$ $\square$ pieces.
7. Angled Cuts: Take all (4) $2 \times 6 \times 15^{\prime \prime}$ pieces. Measure 1.5" down from the top of each piece and $1.5^{\prime \prime}$ across from the bottom. Draw a line between the two marks and cut along the line.
$\square$ This should be a $20^{\circ}$ angle. Repeat on the other side to create a trapezoid. Repeat for the rest of the $2 \times 6 \times 15^{\prime \prime}$ pieces.

DIFFICULTY: MEDIUM
(O) 5 VOLUNTEERS
(1) 4 HOURS

## MATERIALS

PREP
(1) $4 \times 4 \times 8 \mathrm{ft}$ board - if bench is set in concrete, use (1) $4 \times 4 \times 12 \mathrm{ft}$ board instead

## BUILD

(4) $4 \times 4 \times 13^{\prime \prime}$ pieces - if bench is set in concrete, use $4 \times 4 \times 29^{\prime \prime}$ pieces instead
(2) $4 \times 4 \times 8^{\prime \prime}$ piece
(2) $2 \times 4 \times 48^{\prime \prime}$ pieces
(4) $2 \times 4 \times 15^{\prime \prime}$ pieces
(4) $2 \times 6 \times 15^{\prime \prime}$ pieces
(8) $2 \times 2 \times 45^{\prime \prime}$ pieces
1.5Ibs $2.5^{\prime \prime}$ deck screws

2lbs 3" deck screws
Sanpaper

## TOOLS

## PREP

Miter saw
Tape measure
Pencil
Carpenter's square
Safety glasses

## BUILD

Tape measure
Pencil
Hammer
Drill
Screwdriver bit
1/8" drill bit
Safety glasses

## BUILD LIST

1. Sort materials into piles by like items to ensure you have materials needed to complete project. $\square$
2. Make the frames by positioning (2) $2 \times 4 \times 15^{\prime \prime}$ end pieces between (2) $2 \times 4 \times 48^{\prime \prime}$ pieces to make a rectangle. The $2 \times 4 \times 15^{\prime \prime}$ pieces should be inside the $2 \times 4 \times 48^{\prime \prime}$ pieces. Position the ends so $\square$ that the edges are flush. Drill $1 / 8^{\prime \prime}$ pilot holes through the sides and into the ends. Fasten with 3" screws.
3. You will be building your deck bench upside down. Set the $2 \times 2 \times 45^{\prime \prime}$ slats inside the frame and space them out evenly. There should be a gap of approximately $3 / 8^{\prime \prime}$ in between each slat. Drill $1 / 8^{\prime \prime}$ pilot holes through the $2 \times 4 \times 15^{\prime \prime}$ pieces $\square$ into the $2 \times 2 \times 45^{\prime \prime}$ pieces at both ends and fasten with a $3^{\prime \prime}$ deck screw. Repeat until all the seat slats are in place.
4. Before attaching the (2) $2 \times 4 \times 15^{\prime \prime}$ stretchers, measure $3.5^{\prime \prime}$ down and 7 " down from the inside corner of each $2 \times 4 \times 48^{\prime \prime}$ piece and make a mark. Position the stretchers between the marks. Drill $1 / 8^{\prime \prime}$ pilot holes through the stretchers into each slat and fasten with $2.5^{\prime \prime}$ screws. There should be one connection per slat.
5. Assemble the bench by positioning each leg - ( $4 \times 4 \times 13^{\prime \prime}$ OR $\left.4 \times 4 \times 29^{\prime \prime}\right)$ between the braces ( $2 \times 6 \times 15^{\prime \prime}$ ). The legs sit atop the stretchers while the braces attach to the outside of the $2 \times 4 \times 15^{\prime \prime}$ stretchers. Insert the $4 \times 4 \times 8$ " block in between the legs and braces for added stability. Attach all with $3^{\prime \prime}$ screws. Use two $3^{\prime \prime}$ screws at a diagonal to attach the blocks to each leg. Repeat for the other legs.
6. If you are setting your bench in concrete, use the assembled bench to mark where the legs will go into the ground. Dig 4 holes $6^{\prime \prime}$ in diameter and $16^{\prime \prime}$ deep. Set the bench into the ground $\square$ and use a level to ensure the bench is straight while filling holes with concrete.
7. Sand all surfaces to minimize risk of splinters.
