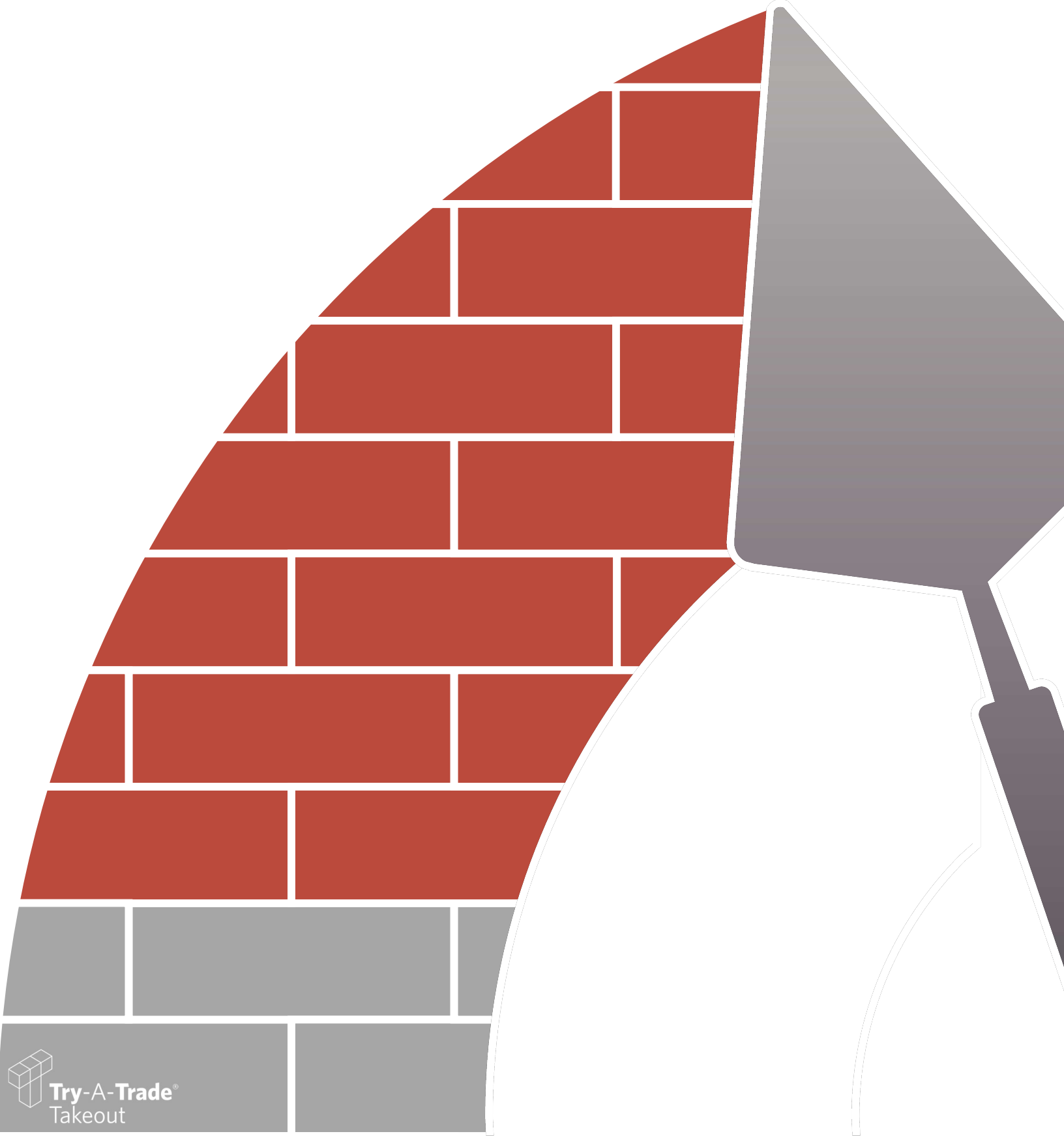


Brick Arch

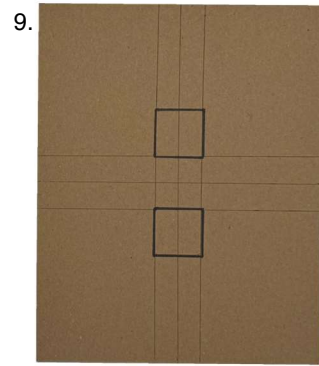
Bricklaying



Brick Arch

Provided materials:

1. Gloves
2. Grey wedge x1
3. Cinderblocks x8
4. Red wedges x10
5. Red bricks x12
6. Arch support
7. Pallet
8. Trowel
9. Base plate



Safety First.

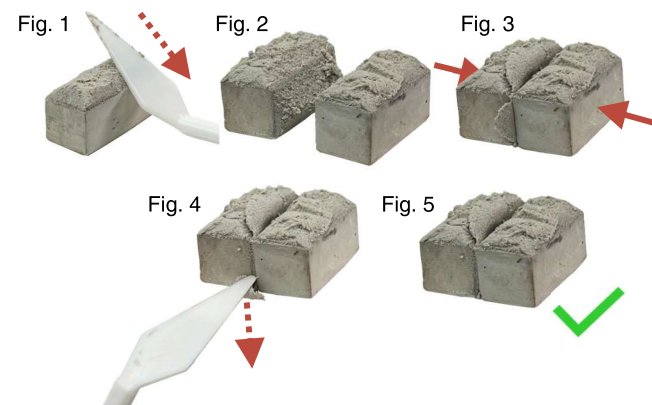
Before you begin, put on your work gloves.

Teacher Information

Prior to beginning this activity, mix ~4 parts water with 1 part of the provided mortar and mix well. If required, adjust the volume of water and mortar to obtain a smooth (but not runny) slurry. Distribute equal amounts to all participants and direct your class to stir often.

Bricklaying Methods and Techniques

1. Apply mortar to each brick, fanning it around the edges to ensure even distribution (Fig. 1). You should create a mound of mortar on every brick face that will contact other bricks. This process is known as “buttering”.
2. Push bricks firmly together so the mortar squeezes out the sides (Fig. 2, 3).
3. Drag the trowel tip along the joints to remove squeezed out mortar (Fig. 4, 5). Put excess mortar back into your stockpile for reuse.

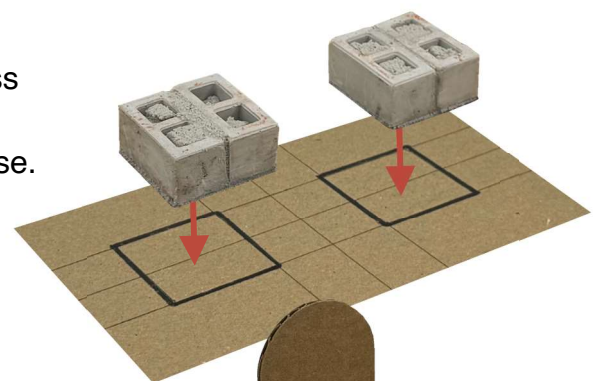
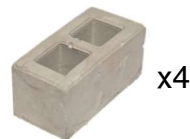


Maintain a clean workspace.

Put excess mortar back into your stockpile and clean your work area after each step.

Construction

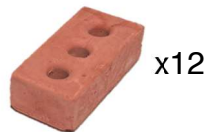
1. Apply mortar between a pair of cinderblocks and press them together. Next, apply mortar to their underside and align them with the squares on the cardboard base. Press firmly to set them in place on the base.



2. Repeat the process on the next layer, alternating the direction of the cinderblocks. Assemble the cardboard arch support by pushing the pieces firmly together until flush at bottom. Place the arch support between the columns to align the subsequent layers.



- After the first two layers of cinderblocks, lay 3 layers of red bricks with mortar between, continuing to alternate the direction of the bricks on each layer. By alternating direction on each layer you increase the strength of the final product.



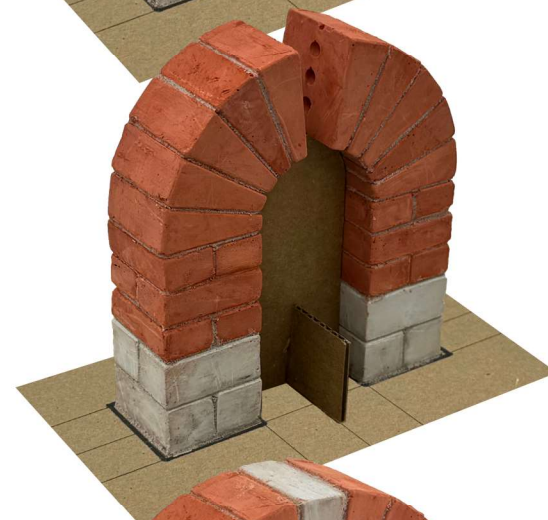
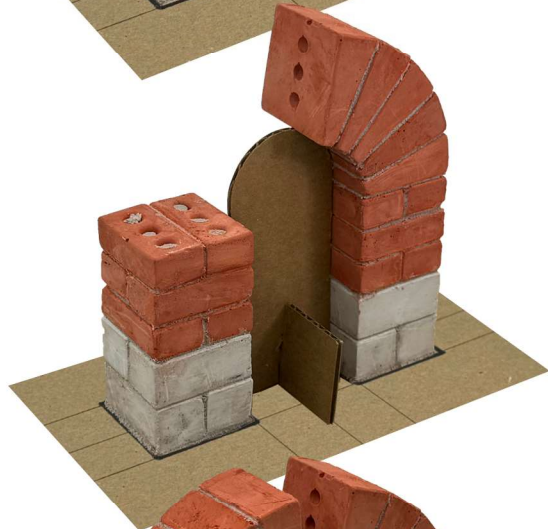
- Mortar and set 5 red wedge bricks on one side around the arch support. Apply mortar mainly around the edges. Support the column with your hand while pressing the bricks together.



- Repeat the previous step on the opposite side. A gap should remain at the top.



- Apply mortar to the grey wedge brick and insert it into the remaining gap. This final brick is typically called a "Keystone". In this design, the forces on the arch are distributed evenly in all directions, resulting in a very strong product.



Cleaning

If required, use a damp cloth to wipe away excess mortar on the bricks. Avoid using the same cloth on different brick colours as the dye may transfer.



Find PDF versions of these instructions at:
skillsalberta.com/resources/try-a-trade-take-out

Try-A-Trade® Takeout Program

Activity: Brick Arch

V4

Skill Area: Bricklaying

CTS Cluster: TMT

Brick Arch

Bricklaying

Project

Students follow plans to mortar and set an arch made from miniature bricks & cinderblocks.



Schooling

- Three-year apprenticeship.
- Red Seal Journeyperson.

Jobs

- Bricklayers prepare and lay brick and other masonry units to construct and repair structures such as walls, partitions, patios, arches, fireplaces and chimneys.
- Average salary: \$86,045.00/year
- Average wage: \$40.97/hour

More information:



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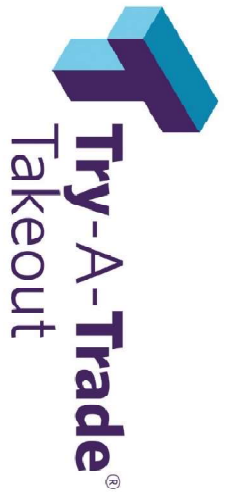


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