

## **Tile Coaster Activity**

**Age level:** K – 3<sup>rd</sup> grade

**Time required:** 1 hour

**Adult supervision required:** Yes, general skills

### **Introduction**

In this activity children will make drink coasters using 2" tile. A 4" x 4" tile array will be cut from a sheet. They will grout the tiles, bake the grout, and secure it to a cork backing. The children may then be given colored markers and acrylic paints to decorate the coaster, if desired. Figure 1 shows a completed, undecorated coaster.



Figure 1. Tile Coaster

## Material List

2" tile	4 ea. per coaster
4" x 4" cork square	1 ea. per coaster
Flour	
Salt	
Water	
Paints and markers	

Four-inch square, self-adhesive cork sheets and square-foot tile sheets are procured for the activity (Figure 2).

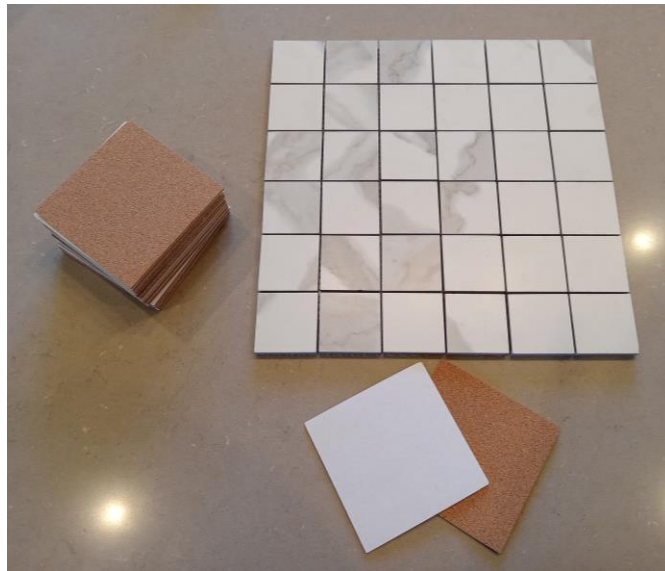


Figure 2. Tile sheets and cork backing.

## Fabrication

The 2" square tile typically comes in 12" x 12" sheets that can be cut into nine 4" squares. Trim the backing around the squares (Figure 3).

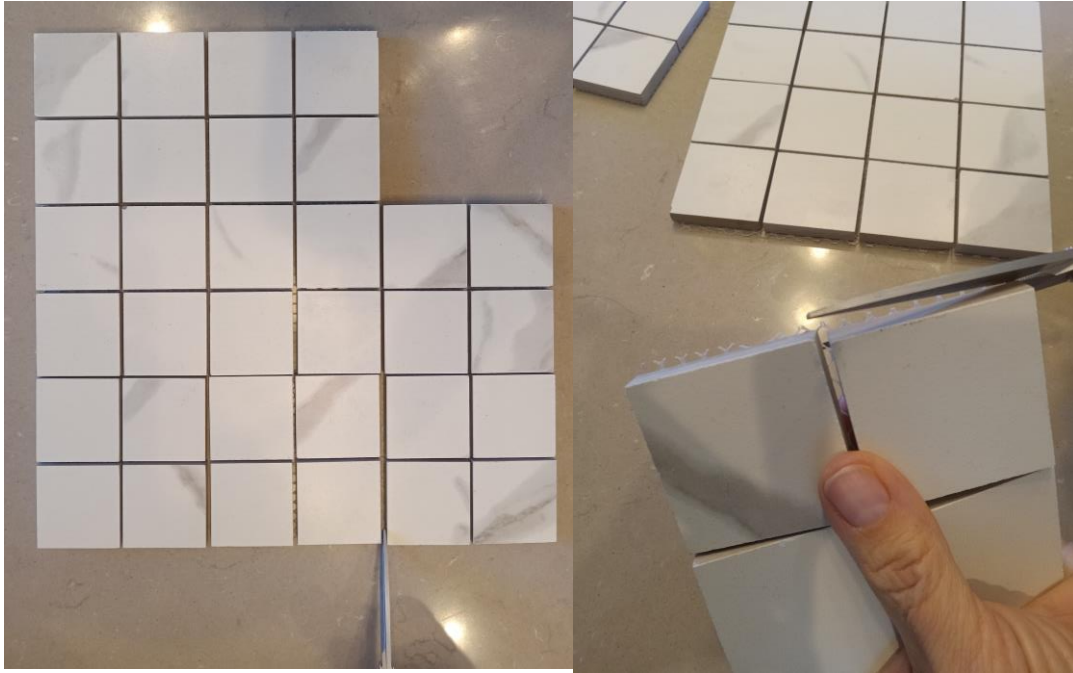


Figure 3. Cut tile sheets into 2-tile by 2-tile squares and trim the backing

Give each child four squares to make a complete set of coasters (Figure 4).

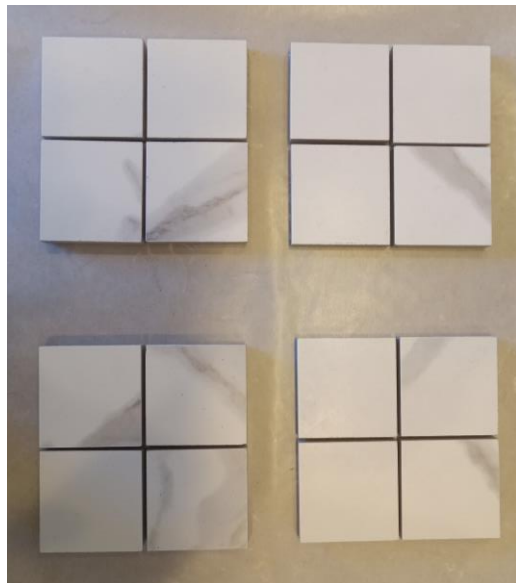


Figure 4. Material for a set of coasters

## Grouting

The grout is made from a mixture of flour, salt, and water. Measure 1/4 cup flour, 1/8 cup salt and 1/8 cup water (or scale up in the ratio of 2:1:1 for larger quantity). See Figure 5. Mix thoroughly to make enough grout for several sets of coasters (Figure 6).



Figure 5. Grout ingredients

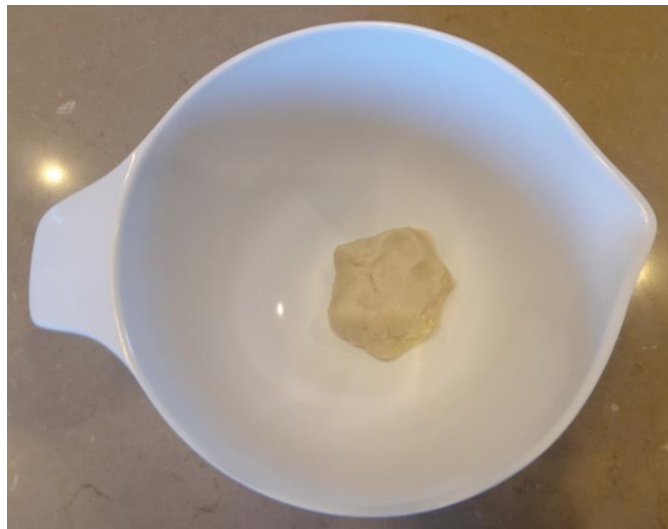


Figure 6. Prepared grout

Massage the grout into the spaces between the tiles (Figure 7).



Figure 7. Force grout into spaces between tiles

Ensure that the grout fills the entire gap. Completely wipe tiles to remove excess grout and grout film with a damp paper towel before baking (Figure 8).

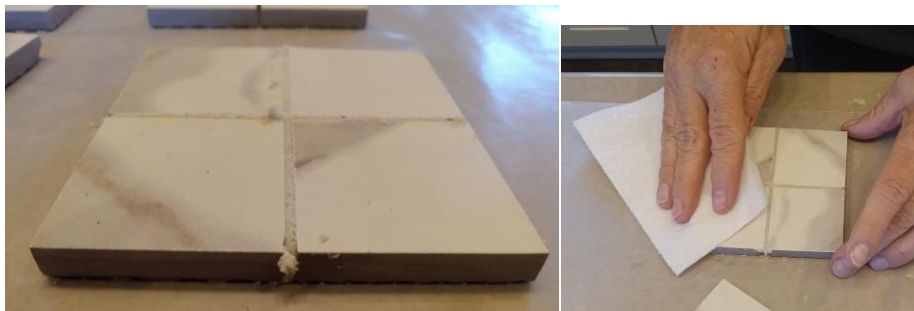


Figure 8. Completely fill the gaps and remove excess grout

Carefully transfer grouted tiles to baking sheet and dress the joints (Figure 9).

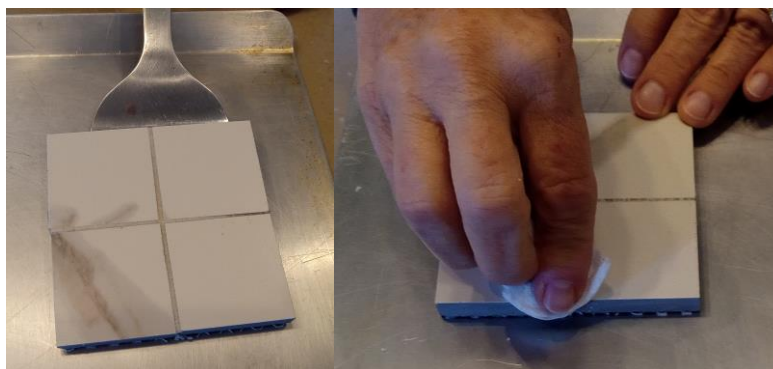


Figure 9. Prepare to bake grouted tiles

Bake the coasters at 200°F for 20 minutes or leave to harden overnight.

## Cork Backing

Trim the cork squares to 3 5/8" x 3 5/8" (Figure 10).



Figure 10. Trim the cork sheets

Remove the backing from the adhesive side (Figure 11).

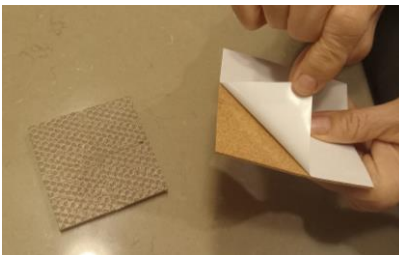


Figure 11. Peel off the backing

Secure the cork centered on the bottom of the coaster (Figure 12).

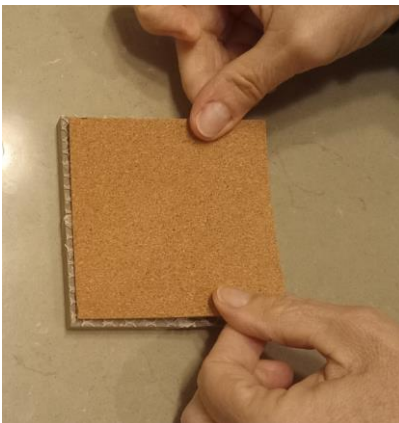


Figure 12. Center the cork on the bottom of the coaster

Provide permanent markers for the children to decorate the coasters, if desired.