

Sidewalk Chalk

Materials needed:

Plaster of Paris (Can be purchased at any hardware store)

Paper cups or other molds (Small Dixie cups work well, or you can get candy molds or any other mold at a craft store. If you are going to use molds you will need something to mix in first, saved yogurt or other food containers work great.)

AMD residuals or other colorant (You can purchase Abandoned Mine Residuals from EPCAMR at <http://epcamr.org/store/>, you can also just use tempera paint to make chalk and not cover this water pollution lesson)

Water

Coffee stirrers or plastic spoons

Provided Resources:

AMD Fact Sheet

Things to do ahead:

Make your own chalk first to see how much water and color is needed. The amount of water can vary day to day based on humidity, so sometimes you just need to experiment. Also test how long it takes to harden. Final chalk should appear dry on the surface, and you should not be able to move the cup sides. You can note that the cup gets slightly warm as the plaster hardens. All warmth should have dissipated before you remove the cups.

What to do:

Lesson on AMD: If using the abandoned mine drainage residuals it is best to give a short lesson on how AMD forms, and how the residuals form. If you are interested in one of these lessons please contact Trout Unlimited at 570-748-4901

Make Chalk: If using Dixie cups as final mold.

1. Give each student a cup and have them write their name on the cup, use permanent marks so it stays on.
2. Next fill the cup about 2/3 full with dry Plaster of Paris. Mix in about a half a cup of water and have the students stir it using the stirrers.
3. The final mixture should be like cake batter. If there is not enough water add a bit more, if it is too liquid add more plaster.
4. Once the plaster is all mixed add your colorant.

5. Have the students set the cups aside for 15 minutes, or the time it took for your test chalk to harden.
6. Tear off the cup and let students use their chalk, if the chalk is still a little damp let it sit for a few more minutes.

If making using a mold.

1. Follow steps 1-4 in a plastic mixing bowl or container.
2. Pour your mixed plastic into your mold.
3. Allow to harden and then pop out of mold.

This activity was written by Trout Unlimited's Eastern Abandoned Mine Program. If you have questions about this method, or AMD lessons please contact Rebecca Holler at rholler@tu.org or by phone at 570-748-4901.