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# Glorious mud: The cheapest, friendliest art material in the world

by Kiko Denzer

Give children dirt and water, and they make mudpies. They know that the best art material is underfoot — easy, available, friendly — and dirt cheap! But don't stop at mud pies! Earth makes all manner of 'functional art,' from model villages (on the playground, or on a table top), to play sculptures, decorative murals, and low-relief sculpture to benches, birdhouses, and even labyrinths for quiet meditation. Schools with gardens are making wood-fired ovens for pizza, bread, and garden harvest parties. You can even make a full-size hut or house — or cover up ugly industrial walls with murals to make your school more welcoming.

Large-scale projects can involve and galvanize a whole community, and broad participation transforms teaching from a specialized classroom activity to an authentic community endeavor where children not only learn basic skills, but also absorb the essential experience of participating in a social and physical whole. If it "takes a village to raise a child," it takes children, parents, and elders — all living, working, and playing together — to make a village. However, since most of us live in cities built by licensed, bonded, insured professionals, we forget the power of our combined creativity. Mud revives that memory, and makes a village possible.

PHOTOGRAPH BY KIKO DENZER



Mud is also cheap, renewable, and as temporary or permanent as you like. Hose down what you don't want to keep, and put it in the garden. To make the work permanent, you can build a roof over it, or coat it with oil or other water-resistant finishes.

## The science of mud

First, dig: in your own playground, on a construction site, a road bank, at the graveyard (really!), or in someone's garden — ask permission as needed. It's best to go deep — right down to subsoil. Add water (make it moist like pottery clay), and knead 'til you can roll it into a snake, crayon-size to finger-thick. It should bend without breaking; if it's really high in clay it will easily make coil pots and little sculptures.

So-called 'topsoil' grows great gardens, but further down, you'll usually find lighter-colored, heavier stuff. This is where clay lives. Dig further, and you'll eventually find rock. Life begins and ends in these layers underfoot, from which rise mountains, rivers, oceans — and all the plants and animals! If ecology means 'knowing home,' then knowing home begins with playing in the mud.

## The history of mud

While you work, tell the children the essential stories about dirt, those stories by which the human race has combined experience with knowledge to make art, science, and culture. For instance, there are only two things on the planet that wouldn't be here without water. One, of course, is life. The other, however, is clay!

Kids at the Muddy Creek School near Corvallis, Oregon, built their hug hut out of garden prunings and local mud. In two weeks, we built the hut (temporary), a permanent bench, and part of a challenge walk. The kids learned enough to be able to pass on their knowledge and skills to the next generation of artists, so that they can build a new hut of their own.

Kiko Denzer works in earth, wood, stone, concrete, and other media, and also teaches in schools and other settings. He has written two books on earthen arts and building, which he publishes himself as Hand Print Press. He also publishes the best-selling craft book, *Making Things*, by Ann Wiseman, who happens to be his mother. Their motto, "What we learn to do, we learn by doing," is attributed to Aristotle, but has been handed down by countless parents, teachers, friends, and makers of all cultures through all the ages of human development. It remains only as true as we make it.



## Beginnings Workshop

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Clay is what you get when you mix rocks and time with — water! The history of the planet is written in clay; scientists say that if we spread it all out, clay would cover the whole planet in a mile thick blanket!

While the earth spins in the sky, rain washes and wears at the rocky surface, breaking mountains into boulders, boulders into cobbles, cobbles into pebbles, pebbles into sand, and sand into tiny mineral flakes. All those flakes drift and slowly sink through water. As they settle out, they separate themselves by weight, size, and shape. The resulting combination of sand, silt, and clay varies from place to place, but everywhere it makes life “mud luscious and puddle wonderful” (e. e. cummings) — perfect for art.

Most civilizations built with earth, and in fact, most people on the planet still live in houses wholly or partially made of earth. Our word *adobe* comes from Arabic, ‘al-toba,’ for ‘the mud.’ But people also built with earth in the British Isles, where they made walls by plopping blobs of sticky mud and straw one on top of the other. In England, this is called ‘cob,’ from a word that means ‘lump.’ (See below for titles of many wonderful books illustrating different peoples and their houses.)

Nearly every culture has stories about people made of mud or clay. In Hebrew, for instance, ‘Adam’ means ‘red clay,’ and even modern science speculates that life may have arisen from primeval ooze on a strong, crystalline framework of clay particles.

### Mud for building

I find that children respond best when I present a project as a job of work, rather than a class. The teacher becomes foreman for the job (or, if you hire an outside mud dauber, the foreman is a teacher). Start with observation, inspiration, suggestion, and design.

Bernhard Masterson, a sculptor and builder, worked with the City Children Child Development Center in Portland, Oregon, to help preschool teachers and children design and build this lovely play area with dragon bench. He says, “The center was building a new



play area and the older students came up with ideas for the infant and crawler space. We worked with a cob model mix in the classroom to come up with some truly inspired ideas. I combined many of the students’ ideas to create the cob creature. During construction, the children got to help too.”

PHOTOS COURTESY BERNHARD MASTERSON

Ed Raduazo, an avid gardener and former patent officer in Washington, DC, spends his retirement making mud with children of all ages. One of his favorite projects for younger children is to make earthen birdhouses, sized for local songbirds. The process involves parents and other adults, and results in real houses for birds that may be losing habitat to urban development. Children help adults to make the scrapwood frame, and the rest follows easily. Ed has also helped schools and groups to make real, kid-sized earthen playhouses.



Walk around the site with the children. Talk to them about where they play, their favorite games and special spots, other places they’ve been and things they’ve seen. “What would you like this playground to look like? What would make it beautiful, interesting, special?”

Look at books and pictures with the children — playgrounds, beautiful places, ways of life in other cultures — perhaps tie the discussion in with other stories that are central to your school or community.

All this makes a jumping-off place for design, and design begins immediately when you give the children paper and pencils, markers, crayons. Invite imagination and wild ideas. If you have time, space, and material, mix up a small batch of plaster to model with, or use playdough, or buy regular modeling clay. Expand ideas into three dimensions.

Once you have drawings and/or models to look at, invite everyone (children, community members, other



teachers, and staff) to look at everything. Start quietly, but encourage discussion. Ask questions:

- “How would you build that?”
- “How long do you think it would take us?”
- “Can we do it with the materials we have?” (for example, mud, stone, sticks – whatever you have on hand – although I try to encourage simple limits and simple solutions.)

As you ask the questions, limits will become clear to all. Younger children are usually happy to follow your lead and get to work. Some of the best work I’ve seen has been drawn or modeled by four and five year olds.

Once you have a design, organize your materials and site so you have storage, mixing space, and work space. If you have all day, take time to play, rest, tell stories. But it’s easy enough to organize the work to fit into most school schedules. Most jobs will break down into something like the following:

1. Material prep (unloading, organizing, mixing batches)
2. Roughing in (applying plaster, building rough forms, getting the structure right)
3. Adjusting the design according to new ideas and intuitive responses to the site and project
4. Finish work (finish plasters, decorative inlay and mosaic, color)
5. Weather- and or water-proofing (including roofs and water-resistant finishes – some or all of which may make good places to invite adult and other community volunteers – but keep the children involved as much as possible, otherwise it’s easy to professionalize the village and shut down the learning opportunities.)
6. Document (have someone coordinate photo collection to make a scrapbook; if you have older classes making movies, invite them!)
7. Celebrate!

can put on boards for individual art panels or apply directly to your walls as part of making or decorating your own house. Plaster is just mud and sand mixed with fine fiber (newspaper pulp is easy; herbivore dung is traditional; dryer lint and other ‘waste’ also works, as do things like cattail fluff). Barefoot mixing is most fun, and greatly simplified by spreading your materials on a big tarp – to mix, just stand in the middle of the mud, pick up the corner of a tarp, walk backwards, and pull! It also helps contain the mess.

In general, 3 parts sand, 1 part subsoil, and ½ part fine, wet fiber is a good ratio that’s easily adjustable, and easy to adjust, but if you have the time, determine your own optimal mix by making test bricks (this also provides a great math lesson): Mix different batches of sand and soil, from pure soil up to 70, 80, or even 90% sand. Make a brick of each batch, and let them dry; which seems strongest? (Pure soil often makes a really strong brick, but remember that it also shrinks, which is why we add sand. If you’re working with older children, you can measure brick length when wet and again when dry, and calculate shrink rates.)

If you want to build earthen walls, benches, or huts, add longer straw to your mud, instead of or in addition to the fine fiber. The whole process is just like cooking: make a batch or two of pancakes from scratch, and you’ll see how to adjust your recipe by adding a bit of this or that, depending on what you’ve got. If you’ve got more clay or sand or straw, use it! Adjust accordingly, see how it works, and keep experimenting!

### Mud for art

I often begin my work with children with simple exercises in pattern designs like these, which are easy at any age. Start with paper; then use pure mud as pigment, and scratch through it with a stick, or apply a second color over it. Combine them to make beautiful murals to decorate the entrance to your school.

The whole process is just like cooking: make a batch or two of pancakes from scratch, and you’ll see how to adjust your recipe by adding a bit of this or that, depending on what you’ve got.

Try mixing up some beautiful, smoochy mud plaster that you

Kids at the Fairplay School in Corvallis, Oregon, designed and installed this mural to make a more welcoming entrance. The project took 2 weeks. The design was composed of student work, starting with life drawings that they abstracted into repeating patterns.



PHOTOGRAPH BY KIKO DENZER



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## Mud for pleasure

Leave enough time so that cleaning and tidying are fun, and so you have time to admire what you've done. Examine the work. Enjoy just looking at it. Then invite the rest of your village to a party, to celebrate and welcome the new creation. As Kahlil Kibran said, "Work is love made visible," so it's only natural to sing about and celebrate our loves. Your documentation is your love story, so share it proudly!

## Art, joy, and mud

The joys of mud go deep, in ways equally intellectual and sensual — ways that may, I hope, excite teachers from every discipline, from fine arts to science, math, and all the humanities. Of course, mud calls out to the child in everyone, but the child is father (and mother) to each man and woman, so from Aristotle to Einstein, Abraham to Tolstoy, our knowledge comes out of our common experience — and love for — the earth under our feet. Love and history feed our understanding of where and who we come from, like the roots of our family tree. But root and branch, we make our story from the materials at hand (and underfoot), processed and shaped to serve the whole community.

Properly and traditionally defined, this is the history of art. Literally, art means "to fit together," and shares a common root with such words as 'harmony,' 'order,' 'reason,' and 'arithmetic.' For a human endeavor to survive, to be recordable as 'history,' it must fit — to endure: words must fit not only the music, they must fit the truth; paintings must tell the truth, not only to the painter, but to the audience.

The joys of this kind of art go far deeper than simply making something pretty or expressing yourself. Real, deep joy restores us to what art historian Ananda Coomaraswamy calls a "normal view of art," in which every member of society may master some art by which to make what needs to be made, and say what needs to be said — whether they're making sculpture

or houses; singing off-Broadway, raising a family, or arguing a case before the Supreme Court.

There is no pleasure like participating in the creation of something both useful and beautiful. To see a playground structure or a mural take shape in the hands of excited, happy, and cooperative students is like watching your child mature before your eyes. Greater joy hath no man or woman . . .

## Further reading about mud (and other houses in other cultures for inspiration)

Ameniya, N. (2004). *Wonderful houses around the world*. Bolinas, CA: Shelter Publications.

Blier, S. P. (2003). *Butabu: Adobe architecture of West Africa*. New York: Princeton Architectural Press.

Bourgeois, J. L., Davidson, B., & Pelos, C. (1996). *Spectacular vernacular: The adobe tradition*. New York: Aperture Foundation, Inc.

Kahn, L. (2005). *Shelter*. Bolinas, CA: Shelter Publications.

Kahn, L. (2004). *Homework: Handbuilt shelter*. Bolinas, CA: Shelter Publications.

Komatsu, E., Steen, A., & Steen, B. (2003). *Built by hand*. Layton, UT: Gibbs Smith.

Van Wyk, G. N. (1998). *African painted houses: Basotho dwellings of Southern Africa*. New York: Harry N. Abrams, Inc.

## How to

Denzer, K. (2005). *Dig your hands in the dirt: A manual for making art out of earth*. Blodgett, OR: Hand Print Press.

Denzer, K., & Field, H. (2007). *Build your own earth oven*. Blodgett, OR: Hand Print Press.

Evans, I., Smith, M., & Smiley, L. (2002). *The hand-sculpted house*. White River Junction, VT: Chelsea Green Publishing.



Kids at the Hoover School with the mural they designed and applied at the entrance to their school. The designs celebrate local flora they're studying as part of a habitat restoration project on school grounds.

PHOTOGRAPHS BY KIKO DENZER

