

### **Site Topography Modeling**

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**Educational Goals:** To introduce a technique for building models that illustrates the natural topography of an area, and to introduce students to the concept of scale.

**Description:** Students develop a scaled site topography model

**Time:** 15 minutes reviewing per session.

**Materials:** 1/32-inch thick Chipboard (one-ply), approx. 30"x40" sheets, dried flowers, an architect's and an engineer's scale, glue, scissors, topographic maps (USGS is a good source)

**Additional Resources:** None

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**Activity:** Presentation / Group / Individual Activity

In preparation for the class, the chipboard should be precut into six inch by six inch squares. The fastest way to accomplish this is to use a mat or utility knife and a steel, straight edged ruler. The quantity of chipboard you will need will depend on the size of your classes. You'll need a minimum of ten squares for each student, more for the more creative students. You should be able to cut about thirty squares from each sheet of chipboard.

Show students the topographic maps and at least one model you've prepared in advance. Students can prepare their models based on the actual topographic maps you've brought to class or on an imaginary topography. Since human beings often change the topography of an area to accommodate a building, imagining topography is a skill well developed by landscape architects and civil engineers.

Once the basic topography is established, the models can be decorated with trees (dried flowers), lichen or some other moss-like substance, scaled down people or buildings, or colored (blue for water). You can discuss the concept of scale by mentioning that in order to execute a design, it would be impractical to draw full size drawings. Instead, drawings must be scaled down to a manageable size. The rough scale of the models the students will be working on is  $1/32" = 1'-0"$ , or 1/384th scale. If they are available, students can be provided with architect's scales with which to build their models, though it is not absolutely necessary. Rulers can be used.

Students can take home their models and further embellish them if they wish. The students could build a larger scale site as a future class project, once again, real or imaginary. Larger scale buildings, trees, etc. would accordingly be placed on the model.