



SketchUp *in the Classroom*

Created by CUE and WestEd for Google



Get the tool: <http://sketchup.google.com>



What is it?

Google SketchUp is modeling software that empowers students to be 3D designers. SketchUp is a great tool for constructing 3D models of buildings, trees, cars, and anything students can imagine. You can use it as a stand-alone tool, or in conjunction with Google Earth and the 3D Warehouse.

Why use it?

Students can use SketchUp to:

- Visualize geometry and other mathematical concepts.
- Create model buildings and learn about architecture.
- Design full-scale 3D environments.
- Easily share designs with others via the Web.

Teachers can use SketchUp to:

- Engage students using their knowledge of their bodies and the 3D world around them.
- Recreate historical settings.
- Illustrate theoretical concepts (such as chemical reactions).

Instructional Ideas

Elementary. Draw 3D packages for new food products that students invent. The packaging could include titling and marketing slogans, nutritional information, ingredients, and recipes. Focus on principles such as measurement, perspective, ratio and scale.

Middle School. Create full models of medieval castles. Decorate the rooms with furniture and wall hangings from the period. Focus on historical accuracy, geometric principles, lighting, and basic physics.

High School. Create full, detailed models of real homes, the school, or your town, then place the models in Google Earth. Focus on accuracy, detailed architectural design, mapping, the iterative design process, and user feedback.



Expert Tip



Everything you need to get started with Google SketchUp can be accessed from within the application. The first thing you should do is watch the Quick Start videos by clicking on “View Tutorials” in the Help menu.

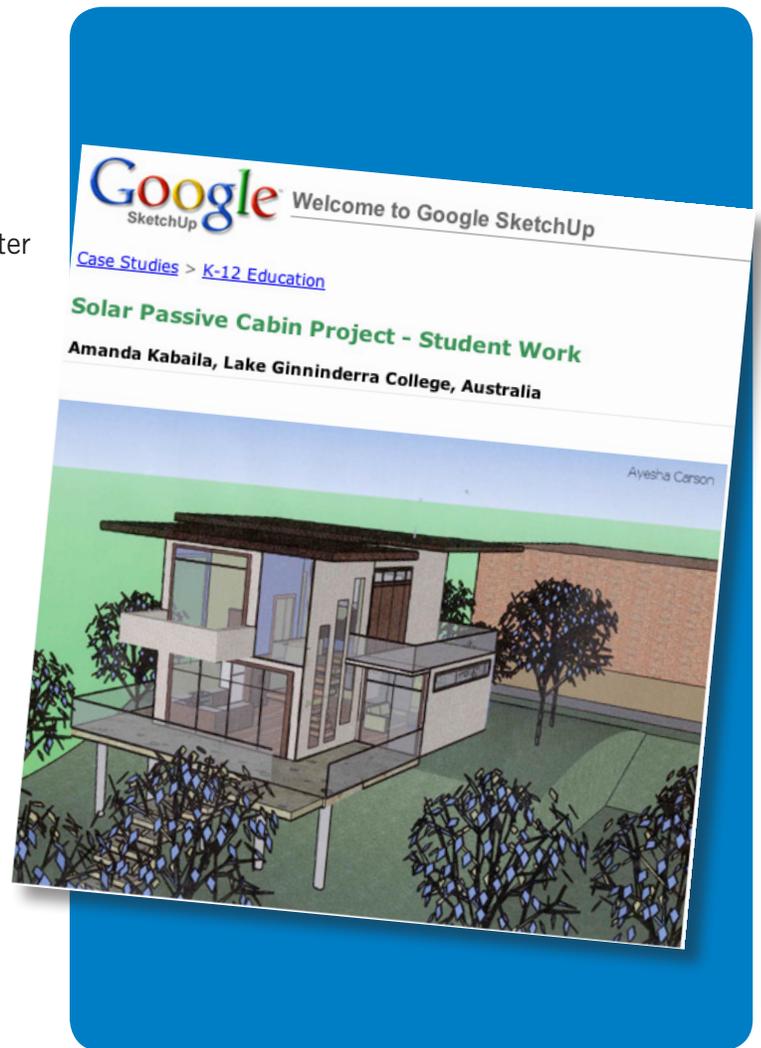
SketchUp in Action

Project: Build a “Solar Passive Cabin”

Grade/Subject: 11th and 12th Grade, Computer Design

School: Lake Ginninderra College, Australia

For this project, students were asked to design a “green cabin” for a real rock star. He wanted ideas for an environmentally friendly house that would sit on Lake Ginninderra. There were strict criteria: it could be no larger than 150 sq meters maximum with one bedroom and a recording studio. The students used SketchUp to design the whole house, including furniture and features right down to the pictures on the wall. One student, inspired by designs in the Caribbean, even built an imaginary extension that could hang over the lake. One of the keys to the project was having a real “client” to design for.



Additional Resources

More on SketchUp

SketchUp in Education - The official page with a gallery and case studies:

<http://www.google.com/sketchup/customers/education.html>

A SketchUp in Education Presentation with Student Samples

<http://tinyurl.com/5bjonz>

More student examples - created by 6th graders!

<http://tinyurl.com/4okvmv>

Complementary Tools

Google Earth

<http://earth.google.com>

Google 3D Warehouse

<http://sketchup.google.com/3dwarehouse>