

AN OVERVIEW OF TEACHING MINICAD

INTRODUCTION

THE MINIWORKBKBOOK TEACHER'S COMPANION came into existence due to the requests of many instructors of MiniCAD striving to enhance their ability to present and teach the program in the classroom environment. *THE MINIWORKBKBOOK* is basically an instructional guide for *THE MINITUTORIAL* and provides many tips and pointers that empower teachers who, more often than not, are just one or two steps ahead of their students.

An instructor can always get the information on their own by referencing *THE MINIMANUAL* and learning MiniCAD backwards and forwards, but time constraints typically prohibit accomplishment of this goal, at least before starting a class. So the intent of the *MINIWORKBKBOOK*, is to assist teachers, whether they already have an in-depth knowledge of the program or find themselves in the situation of, 'now that I have it what do I do with it,' and shorten the preparation time necessary for the class.

After many years of teaching new and experienced users in both intensive seminars as well as in the classroom environment, I have pulled from my experience the added information I use to supplement the lessons in *THE MINITUTORIAL* to both enhance the presentations and to challenge the students. I realize these little tidbits, not documented in *THE MINITUTORIAL* can be the difference between a ho-hum computer lab and a class where students are challenged into pushing their capabilities to learn. Each chapter will be a compendium of topics, hints and tricks, and other items that I have found useful for engaging the students and enhancing their learning experience as well as empowering the instructor.

Each chapter in *THE MINIWORKBOOK* correlates and works in conjunction with a chapter of *THE MINITUTORIAL*. More in-depth explanations, topics of presentations, issues and points to be aware of, and assignments as pertains to specific chapters are included. As a note, because MiniCAD works in the same manner on the Macintosh and Windows operating systems, it is quite feasible to teach one class with students using both platforms.

COURSE APPROACH

Generally I have followed a process when teaching in the classroom environment that I repeat with each chapter. This includes a mixture of hands-on lab time, presentations, reviewing student work, assignments, and demonstrations of completed chapters and assignments. Below, is an explanation of each aspect and how I approach it. Use it as your starting point and adapt it for your own teaching style and student needs.

In general, each chapter is based on the preceding chapter. If a student is having a difficult time with a lesson, it is usually because the information in the preceding chapter was not fully absorbed. The best method is to just have them repeat the earlier chapter. On the other hand, if you do not want them to fall too far behind, have them use the correct file from the floppy that comes with *THE MINITUTORIAL* to start the next chapter. As a general note, do make sure students are backing up on two separate floppies. I find that this requirement usually stops the excuse of 'the disk was bad' or at least keeps it at a minimum when assignments are due.

Presentation Topic

Once the majority of students are about halfway through a chapter, I will do a presentation using a computer with an overhead projector or have everyone sit around the largest monitor available. The presentation enhances what they are learning

and stimulates them to keep moving along. Many times it is demonstrating items that the students do not yet have the knowledge for, but gives the implicit message – if I can master this chapter then there are so many more exciting things that can be done.

The purpose is two-fold for these presentations. Since the initial part of learning a computer program can be tedious, and is quite similar to learning the grammar and sentence structure of a new language before you can talk, the presentation shows the challenge/reward of sticking it through. And for those students who are interested in the topic and moving ahead quicker, they will be able to pick up a few short-cuts which they always seem to delight in and for some reason these items are learned by almost everyone within a short period of time.

Suggested presentation topics with more in depth information will be provided under the section heading *Presentation Topic*.

Hands On – Tips & Hints

Generally, each chapter is started by having the students working on their own with *THE MINITUTORIAL* at their work station. This allows time to observe each student and provide individualized hints on an as-needed-basis. If the lab is informal enough many times students will assist each other when they get stuck. It is invaluable for students to work on their own as well as to observe each other in order to solve problems within each chapter.

Problems that students might come up against will be listed along with their solutions under the section heading *Tips & Hints*.

Chapter Completion

After the presentation, the students work on their own in the computer lab to finish the chapter exercises again with individualized assistance on an as needed basis. Everyone then hands in a hard copy of the completed chapter at the beginning of a class. I will typically review any problems I notice at each student's computer the next class so that we are looking at the file, not the hard copy.

What to look for in the hard copy for student comprehension will be listed under the section heading *Chapter Completion*.

Chapter Review Demonstration

The day the chapter lesson is handed in, I typically do a review demonstration of the whole chapter with either an overhead projector or around the largest monitor. The demonstration usually takes the whole class session and reinforces what the students have just taken the last one to two weeks to learn. Many times they can see their mistakes and correct it in their original file even before the hard copy of the file is reviewed with them individually.

In order to make the demonstration easier, the abbreviated steps for each lesson will be under the section heading *Review Demonstration*.

Assignments

At the end of the chapter review demonstration, hand out the assignments. Allow approximately one third to one half of the time that was initially allocated for the whole chapter. The exercises are similar to the lessons in *THE MINITUTORIAL* which the students can use for reference, but they are partially on their own. When the assignment is due, demonstrate it and review it in the same manner as the chapter review demonstration.