

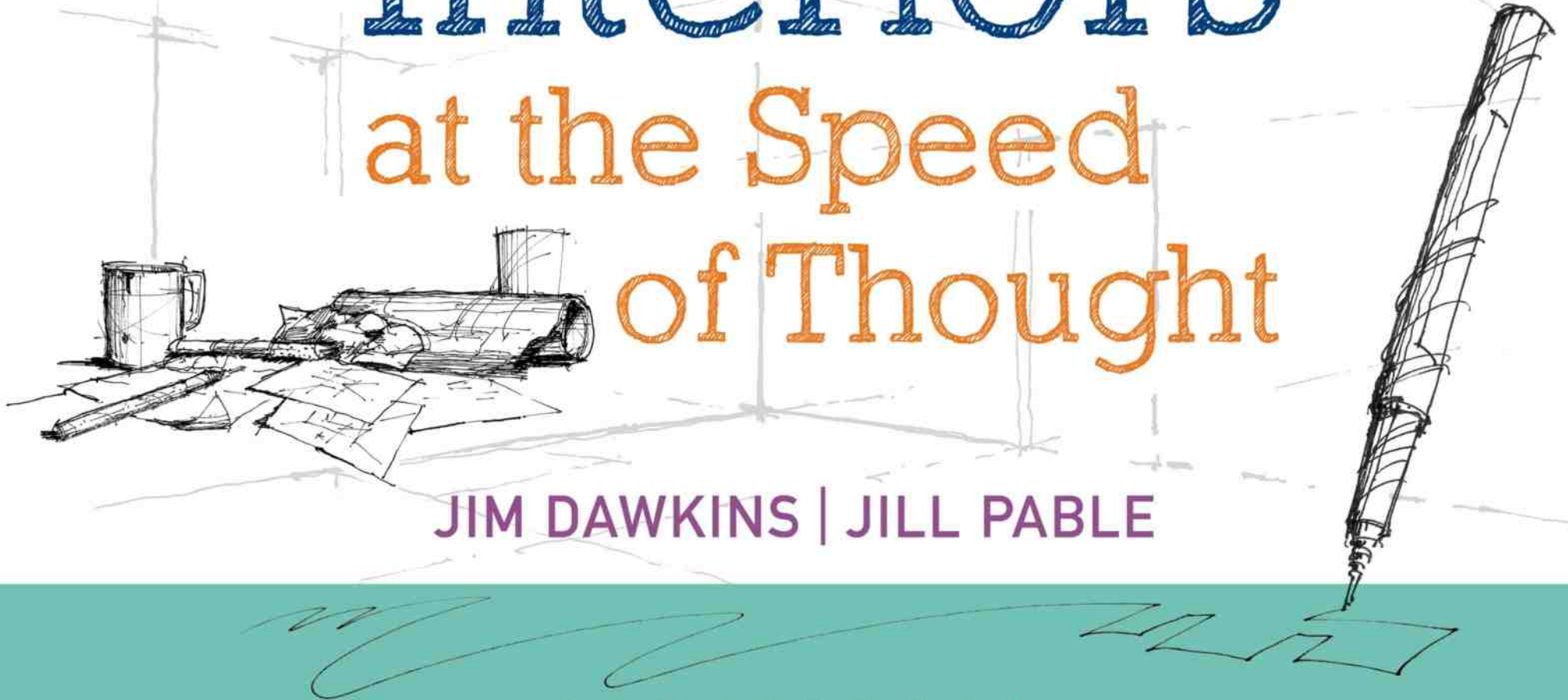
2ND EDITION

Sketching Interiors

at the Speed
of Thought

JIM DAWKINS | JILL PABLE

BLOOMSBURY



Sketching Interiors at the Speed of Thought

2ND EDITION

Jim Dawkins

Florida State University

Jill Pable

Florida State University

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Jim:

For those who struggle with the freedom that discipline affords. For those looking to find joy and meaning in things they can't express with words, gestures, emoji, or photos. For those who will discover that sketching can do both. Sketch, sketch, sketch . . . and then do it again.

Jill:

This second edition is dedicated to everyone who has felt that sketching was always an unreachable skill out of your grasp, and have longed for the ability to tell your design story that lives so passionately in your mind.

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PREFACE

The ability to create quick, information-rich hand sketches continues to be a critically important skill for design professionals, including interior designers and architects. Despite the strong presence of computer-aided drawing and drafting software in design practice, the hand one- and two-point perspective sketch still has a role to play in concept development, collaborative meetings, jobsite clarifications and corrections, design refinement, and client presentations, to name only a few of its applications. The goal of *Sketching Interiors at the Speed of Thought* is to provide meaningful, motivating practice so that you might develop sketches that enhance your design thinking and serve as an asset in your design career. If you feel intimidated about sketching, you have a lot of company! This book's patient step-by-step approach and friendly attitude are designed to provide a comfortable, well-paced learning place for developing these necessary skills.

HOW THIS BOOK IS ORGANIZED

In order to structure and organize ideas and strategies for creating perspective sketches, this book is presented in three parts of beginning, intermediate, and advanced sketching techniques. Within each part are five chapters, each presenting one or more scenarios that provide you hands-on step-by-step guidance for creating perspective sketches. This brings a bit of structure to your practice and helps you observe your progress. The chapters also have places reserved for you to tape the sketches that you create on index cards or other papers so that you can remember where you left off when you start your next practice session. The Passport to Quicker

Sketching site map shown here provides an overview of the topics of each of these chapters for easy reference.

There is no way other than repeated practice to improve your sketching, so it's important to stay motivated with little successes along the way. Since you may return to this book for practice over a long period of time, go ahead and place your thumbprint next to the number of each chapter once you have completed it at least once. Then you will know what you have and have not done when you return. To make a thumbprint, take a 50 percent or higher number gray-scale design marker and coat your thumb with its ink. Then apply your thumbprint.

Sketching Interiors at the Speed of Thought has three sections composed of five chapters each, plus three Sketching Extras chapters:

Part A

This introductory section walks you through creating important fundamental elements within architectural scenes. Basic things like stairs, doors, and ceilings are covered here.

Part B

This intermediate section builds on Part A's information and explores ideas that can enhance sketches, such as line quality and changing your point of view. More advanced concepts such as curving walls, floor height changes, and detailed kitchen spaces are located in this section.

Part C

This advanced set of scenarios explores techniques that take a few extra minutes. These ideas begin to move a sketch from idea exploration to something slightly more refined that you could share with a client. Shadows, texture, and sketch scene composition are explored here.

More Discoveries

The chapters in Parts A, B, and C are the heart of this book's step-by-step instruction. However, there is more to be discovered here that can enhance your sketching ability.

Sketching Extras

You deserve to be congratulated for the considerable work you will put into the five scenarios of each section. After you have completed all the scenarios within a section, we recommend you take a look at the Sketching Extras chapter associated with that section. Here you will learn about things that embellish sketched environments nicely, such as people and vegetation, and that also help you discover where you are on your journey of sketching expertise with a self-diagnosis opportunity.

Sketching Challenges

Once you have experienced the fifteen chapters of sketching scenarios, you might want some further guidance to challenge your skills further. A series of sketching challenge scenarios ask you to combine skills from Chapters 1–15, producing sketches that are more complex. These are great for honing your ability to produce sketches for clients.

This Passport shows the topics of each of the fifteen chapters' scenarios, and also the Sketching Extras and Sketching Challenges. Be sure to add your thumbprint to each scenario when you complete it. Staying motivated to practice is important!



Passport to Quicker Sketching

These two pages are your directory for the exercises contained in this book. It is intended to function as a map of sorts; a log of your journey through the sketching scenarios, extras, and challenges.

To create your record, each time you complete a task, ink up your thumb or other finger and 'stamp' the chapter in the area you see the thumbprint below. Think of it as a passport to quicker sketching!

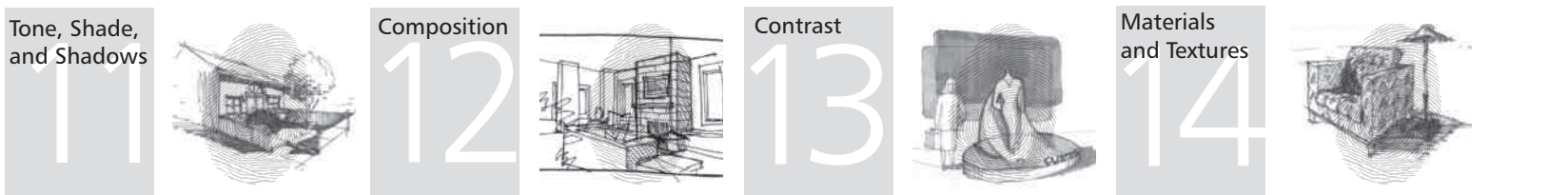
Chapters with Beginning Scenarios



Chapters with Intermediate Scenarios



Chapters with Advanced Scenarios



Extras and Challenges

Interesting
Ceilings

5



Extras

People

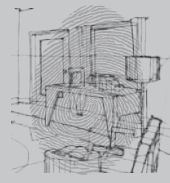
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Sketching Challenges

Residential
Entertainment
Room

C



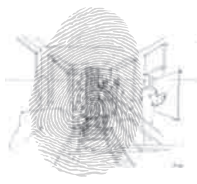
Tradeshow
Pavilion

C



Points of
View

10



Extras

Quick
Vegetation

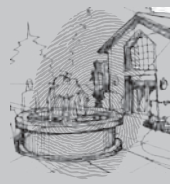
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Sketching Challenges

Use
Vegetation
with a
Building

C



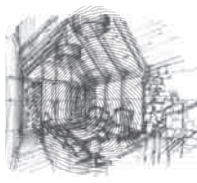
Viking Altar in
Valhalla

C



Putting It
Together

15



Extras

Thinking and
Sketching

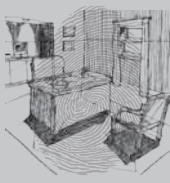
E



Sketching Challenges

Personalize an
Office

C



Your
Signature
goes over this
Thumbprint

C



Sketching Gallery

As your own sketching style evolves, let the work of others influence and help you grow. Everyone has his or her own personal style of sketching, and reviewing others' work can often provide inspiration for moving your own expressions to the next level. The Sketching Gallery provides examples of sketches of many kinds from interior design, architectural, and product design practitioners.

HOW TO USE THIS BOOK

There are various ways to use this book for your purposes. Here is the classic approach for generally improving your perspective sketching ability:

1. Go through the skills exercises in the Introductory Skills Check section.
2. Proceed through Part A Chapters 1–5
3. Complete the exercises in Part A Sketching Extras
4. Proceed through Part B Chapters 6–10
5. Complete the exercises in Part B Sketching Extras
6. Proceed through Part C Chapters 11–15
7. Complete the exercises in Part C Sketching Extras
8. Complete the Sketching Challenges scenarios
9. View the Sketching Gallery at any time

Another approach might be called “learning-on-demand,” meaning you access the chapters that you need for a given sketching need in your school studies or design practice.

With either approach, we recommend you document your practice by completing the sketches as directed on index cards, adding the date and completion time, and then affixing these to the book's pages. This will allow this book to serve as an archive of your practice over time and over multiple practice sessions.

NEW TO THIS EDITION

The first edition of *Sketching Interiors at the Speed of Thought* was helpful to instructors and learners because it offered self-paced, detailed sketching skill-building strategies provided in a series of hands-on sketching scenarios. Its friendly, step-by-step approach was designed to demystify sketching to reduce the intimidation factor. This, along with video demonstrations, reflection questions, and an emphasis on loose, quick studies, was the strength of the first edition. All this remains at the core of edition 2, which also provides expanded features that users have requested:

- The format of edition 2 combines the easy access of print coupled with vibrant online digital resources through Bloomsbury Studio Online. This helps ensure the long-lasting availability of information to learners as well as updates through time.
- Many of the chapter scenarios are entirely new, embracing updated perspective sketch skills that include not only basics like doors, windows, and ceilings, but also lighting fixtures, retail displays, exhibition kiosks, and detailed furnishings.
- The quantity of demonstration videos has grown by 300 percent in edition 2, with added title markers in the videos that help you fast-forward to the specific sketching step that you want to review.
- You complete sketches on index cards, an inexpensive, portable medium that stands the test of time. The book provides opportunities to document your index card work, taping these cards in place so you can remember your recent or not-so-recent progress on a scenario.
- Refreshed sketches in the Sketching Challenges bring more usefulness to sketching practice if you are more advanced in your abilities.

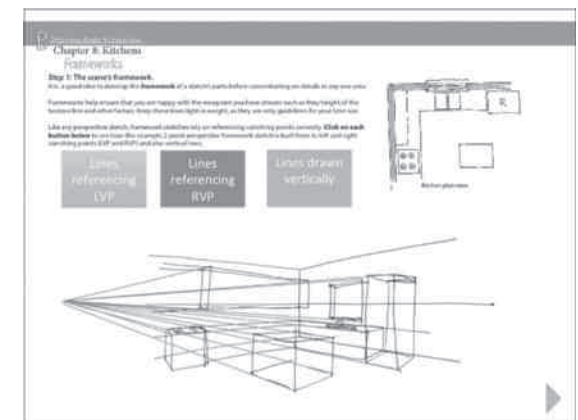
- A greatly expanded Sketching Gallery of scenes created by a diverse collection of practitioners and others allows you to gather ideas that can enhance your style.

Making Your Learning Extra Dynamic: *Sketching Interiors at the Speed of Thought* STUDIO



While this book's many chapters and scenarios will keep you plenty busy with sketching practice, it's by far the best to work through them with the added benefit of this book's online content. For example, watching each scenario's demonstration video can be an orienting and comforting prelude to beginning your own sketch of the same or similar idea. There are other things online that you won't want to miss:

- **Interactive learning activities**, where moving your mouse dynamically explains techniques for creating a sketch



This interactive screen in this book's online content shows how vanishing points affect a sketch's basic framework. You can roll over the buttons to see the effects of the vanishing points in the sketch.

- **Reflection questions** that reveal where your sketch succeeded and how you might improve it further
- **Personal stories and testimonials** about sketching from design students and practitioners that show the value of sketching ability
- **Guidance for instructors** that provides an overview of learning theory for sketching, how to know if learners are ready for this book, tips on overcoming learner intimidation, and ideas on how to integrate this book into a design course. This section also provides ideas on how to document learners' practice to help ensure motivation and enable grading.

STUDIO access cards are offered free with new book purchases and also sold separately through www.fairchildbooks.com.

DESIGNED FOR YOUR SUCCESS

Sketching Interiors at the Speed of Thought is dedicated to one primary purpose: to enable you to discover your own sketching style that you happily and confidently use to supercharge your design thinking and communication with others. As the chapters of this book will reveal, the path to success is built on repeated practice. With time, a style will emerge that is all your own—and your career will benefit.

ABOUT THE AUTHORS



Jim Dawkins is an associate professor of Interior Design at The Florida State University, where he serves as an instructor in both undergraduate and graduate project-based design studios as well as courses in graphic techniques, specifically hand drawing and sketching, used for design ideation and visual communication. He is a registered architect in several states, having earned his B.A. in Design and Master of Architecture degrees from Clemson University prior to practicing for twenty years as an architect, designer, and corporate officer with design firms in Atlanta, Georgia, and Vail, Colorado. Dawkins's primary research interest focuses on the notion of thinking through drawing: graphic facilitation, communication, and mediation of ideas through hand-drawing techniques and their realization in traditional hand and digital hybrid forms of computer-aided design. Secondary research currently involves the analysis of and instruction in hand sketching skills through the cognitive framework of expertise theory.



Jill Pable is a professor at The Florida State University in the Department of Interior Architecture + Design. Her research has examined architectural sketching as an expression of automaticity learning theory. She holds B.S. and M.F.A. degrees in Interior Design and a Ph.D. degree in Instructional Technology with specialization in architecture. She is the co-author of *Interior Design: Strategies for Teaching and Learning* and project lead for the research-informed knowledge resource *Design Resources for Homelessness* (designresourcesforhomelessness.org). In 2009 she served as national president of the Interior Design Educators Council and in 2015 was recognized as one of the 30 Most Admired Design Educators in the nation by DesignIntelligence. Her research focuses on design and cognition and also the creation of recuperative environments for the underprivileged.

ACKNOWLEDGMENTS

This book project has benefited from the indispensable advice of many people. First and foremost, I am indebted to my co-author Jim Dawkins, who has been a full partner in this adventure, and someone whose drawing and sketching skills are a veritable force of nature. The second edition is strengthened by the contrast in our styles, and his contributions lend a sense of purpose and elegance to the effort. Thank you also to the many design instructors and administrators who provided vital input and support. My department chairperson, Lisa Waxman, has been a supporter and cheerleader for over twenty-five years. I am also indebted to the instructors who reviewed this publication and helped us to determine the very best topics to include here so that learners could make the most of their sketching practice. Lastly, I am indebted to my husband Bill for his unceasing belief in me, for his support of this endeavor, and for forgiving the lost weekends that SIATSOT required.

Jill Pable

Many thanks to my co-author Jill Pable, who offered me the opportunity to partner with her on this revision. It is a privilege to be associated with Jill's work, her career, her friendship, and her wisdom (and mercy) in all things academic. I am thankful that I reside in a university department with a group of faculty members who allow me to pursue what feels like a guilty pleasure: teaching sketching. Their unselfishness allows me to demonstrate the same attitude when it comes to passing on my sketching world to our students. How do children understand the blessing bestowed upon them when their teacher encourages them to doodle in class as a third grader? Mrs. Midkiff's generous act created my entire life's work. How many times does a sketcher get to work with a master? In my life, once, with Joe Young, Clemson's master of perspective sketching and rendering. I hope I have time enough to live up to his legacy. Finally, I am God blessed to have Ashley, Connor, and Cole as my lifemates: beautiful souls that let me draw all the time.

Jim Dawkins

From both of us:

This project would not have seen the light of day without the partnership of Bloomsbury Publishers, who spurred this project onward through the original vision of Olga Kontzias and later Noah Schwartzberg. Individuals key in the production process include Development Editor Amy Butler and Art Development Editor Edie Weinberg. Their organization and assistance kept us on track.

ORIENTATION

WELCOME TO *SKETCHING INTERIORS AT THE SPEED OF THOUGHT!*

Hello, and welcome to this chapter. I am Jill Pable, co-author of this book, and I'm looking forward to sharing some thoughts with you about sketching in this chapter, and how this book can help you. But before we get to that, I'd like to share a story with you that describes why Jim and I think that having the ability to sketch is so important. Several years ago a gifted interior design student came to me to discuss a restaurant he was currently designing for a class project. We talked and explored ways to increase the functionality and interest of his solution. During our discussion he described that he had not included a dynamic suspended mobile sculpture within the lobby because he could not figure out how to draw it in his early perspective concept sketches. The idea of including the focal point sculpture then fell by the wayside in his later refined drafts. We agreed that his solution was weaker for the lack of this wonderful element.

It is an unfortunate fact that sometimes designers exclude something from their project solutions because they lack the confidence and skill to include it in their early and later graphic drawings. Sadly, this problem tends to stunt design solutions. As instructors, we didn't want to see this happen to other students—so we wrote this book! The good news is this: this scenario is quite avoidable if you commit to sketching practice. That's what this book is all about—comfortable practice at your own pace so that your sketching skills will enhance your design practice.

DEVELOPING YOUR SKETCHING STYLE: UNDERSTANDING AND OVERCOMING FRUSTRATION

If you feel uneasy when you think about sketching, you are not alone! Many people feel this way, and in fact, many designers do not sketch very well. When we started sketching, we were very uneasy too.

It's easy to think that sketches have to be beautiful to be helpful. That's just simply not true. For example, if you are visiting a project job site, and the tile installer has a question about how the tile joins the wood flooring, a 20-second sketch that shows how the two materials come together is worth its weight in gold.



Sketch by Jill when she was four years old. Not sure what the large alien-like tree forms are, but they seem to be menacing the houses.



Sketch by Jim around the time of fourth or fifth grade. This was one of several doodlings on the back of an "explanation letter" my mom had me write about jumping on the beds.

One problem with learning how to sketch well is that it takes time to get comfortable with the skill and develop your own sketching style. In high school or college classes that teach stiff, "by the rules" architectural drafting or, in contrast, the sometimes rule-free techniques of artistic drawing, sometimes there is insufficient class time to devote to practical sketching to solve problems, and therefore students come away frustrated that their sketching is not good enough. The problem gets worse when those students reject sketching as a tool in their design process, and therefore never practice enough to resolve this dilemma.

Another hurdle with learning how to sketch well is that if you learn in a group setting, sometimes you are asked to share your sketches with others. This can be uncomfortable, as usually people are at different places in their expertise. Sharing sketches can make you feel vulnerable or intimidated.

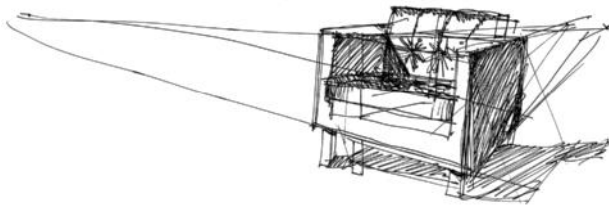
Instructors struggle with teaching sketching too (just ask us!). Assisting students that are at different levels of expertise makes it challenging to help everyone at the same time, and sketching as homework can be difficult and time-consuming to document and critique. Here again, this book can help by offering example solutions that the instructor him/herself doesn't have to generate.

This book's focus on self-paced sketching practice is designed to address some of these various barriers in these ways:

- We see sketches as something in between the refined, structured nature of drafting and the very loose approach of artistic drawing. Therefore, this book teaches sketching by adhering to a few important rules, but not so many as to stifle the happiness of creating sketches. This permits free but focused sketches that successfully communicate ideas but do not take a long time to create.
- It allows you to practice without other people instantly critiquing your work (unless, of course, your sketches produced here are part of a group class).
- Its diverse and discrete sketching scenarios can also help you diagnose and target your weak spots for improvement by reviewing sample solutions, and reflection questions help you recognize and correct errors.
- Its many video demonstrations and examples from a variety of designers show diverse approaches and successful styles of sketches that can inspire your own choices.
- The scenarios explore real-world scenarios a designer might encounter in practice.

Bottom line, it can help you to overcome frustration if you realize that there really is no “magic bullet” for achieving success with your sketches; it just takes patience, plus the ability and persistence to practice over

a period of time. You CAN make your sketching a valuable and credible skill!

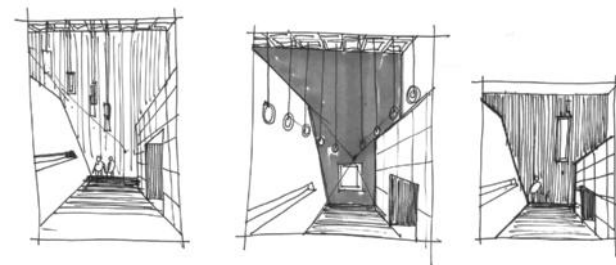


This sketch took about 3 minutes to create, and did not use a straight edge. While it's rough in appearance, it also has vitality.

THE VALUE OF SKETCHING

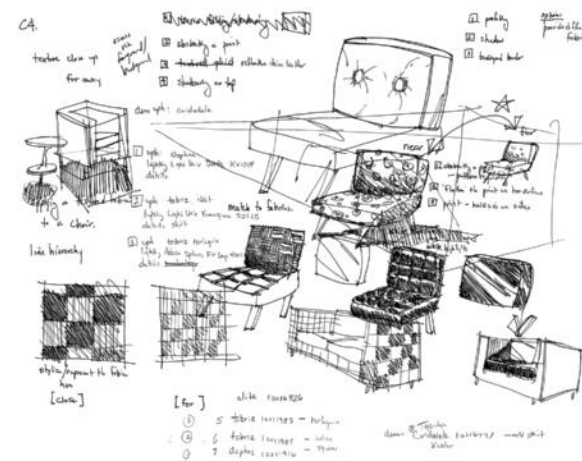
So why learn to sketch, anyway? What good is this skill, especially in these times of technology that so effectively help you create your project solutions? It turns out that sketching fulfills some basic things that designers need as they do their work, and having sketching ability can help you with your career in wonderful ways. For example:

1. **Hand sketching is still very useful, even with today's technology.** Jill conducted a nationwide research survey of 457 professional designer members of the International Interior Design Association, asking them questions about how they perceived hand sketching and how they used it in their practice. Ninety percent of respondents stated that quick 3D sketches were important or very important in general, and 80 percent of respondents found quick 3D sketches somewhat or very important in their design process.¹ As educators that teach students how to assemble a portfolio to secure a design job, hiring practitioners regularly tell us they want to see more design process represented, often communicated through hand sketches.



A series of small “thumbnail” perspective sketches let a designer try out various ideas with minimal time investment.

2. **Sketching helps you think.** Sketching is a convenient and quick way to get ideas down on paper rapidly. In fact, a sketch can serve as a “memory placeholder,” allowing you to store ideas there on paper, releasing them from your brain's memory. You are then free to develop your design solution without having to remember everything all at once, adding and polishing your design with further features. As complex as design solutions are, it's nearly impossible to develop the level of detail



A sketch brainstorming page that helped us create one of the scenarios in this book.

necessary without working at it a bit at a time with small sketches. For example, the image here shows a series of “brainstorm” sketch images that we created to develop the book’s chapter on materials and texture. It’s a messy collection of images, notes, and lines, but it helped us think through the concepts and approach how to construct the learning journey in this chapter.

3. **Sketches suit today’s need-it-now, collaborative way of working.** Imagine this scenario: You are a designer in a firm, and your client drops by unexpectedly to talk about that troublesome conference room and kitchen in his office project. Right then and there, you need to generate several space-planning options so that you can have a productive discussion and make a decision. Suddenly, there no time to pull up a computer software program, and huddling around a small computer screen for this impromptu meeting is not a great option either. The best thing to do is to grab a roll of tracing paper, place it over the existing floor plan, and get to work drawing and describing ideas to your client sitting beside you. In today’s world of clients participating in the decision making of their spaces with their designer, this scenario is not so far-fetched.
4. **Sketches impress clients.** If you have the ability to generate sketches quickly and accurately, you can explain your designs to others as you create them. This will greatly impress your clients with your abilities and knowledge and will win their respect. In a poll of over 400 design practitioners in the United States, the overwhelming majority (86 percent) believe that quick 3D sketches can lend credibility to a designer when sketches are created in the presence of clients.² For this reason, developing the ability to “sketch at the speed of thought” is what this book is all about.

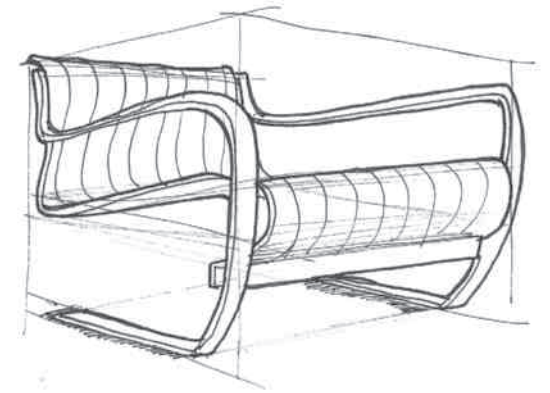


Wellington Arch by Tim White.



Visit the *Sketching Interiors at the Speed of Thought* STUDIO for a video that shows sketching in action during a client meeting.

5. **Sketches can give rise to time-efficient presentation drawings.** Given enough time and the right opportunity, initial sketches sometimes blossom into quick but efficient client presentation images. In your professional life, *time is money*, and a 30-minute embellished sketch may be the best means to explain your design to your client.
6. **Sketching ability supports promotion into leadership positions.** People usually associate creativity and problem solving with the ability to lead a project or a firm. In a group brainstorming session, have you ever noticed that he or she who holds the pen often seems to guide the direction of the design discussion? Said one design firm owner interviewed in the study introduced above, “those that can sketch or can get the message across—those are the leaders because that’s who you’re going to send out—someone who can carry the message.” This practitioner recalled his own history and his ability to sketch an



A perspective sketch can show off a design’s assets to help sell a client on a solution. In this case, the curvilinear lines of this custom chair are complemented by a low horizon line. Line weight variation helps the chair seem “solid.”

idea before his senior colleagues could finish their thoughts. This made him the “it boy” for attending big meetings with his firm’s lead architect. As a result, he became a very important person in the firm at 21 years old, primarily because of his sketching ability.³

Sketching with paper and pen is an important part of an architect’s or interior designer’s job responsibility, helping make his or her design decision making efficient and productive. A nice by-product is securing the respect of clients and colleagues.

SO, WHAT EXACTLY IS A “SKETCH”?

If you consult different books on drawing and sketching or talk to designers that generate sketches for their practice, you will quickly see that there is no single consensus on what constitutes a sketch. Artists and designers

may differ on this term, for example. Some people think sketches are strictly pen on paper, and others permit shading or color. Sometimes design firms have specific preferences for when they like to use sketches and for what purposes. It's helpful, then, to describe what is meant by the term "sketch" for this book so you know what to expect in the chapters ahead:

- Sketches are loose but confident and usually drawn without the aid of a straightedge.
- Sketches can be created for any sort of drawing view, such as plan views, elevations, and sections. However, this book will concentrate on creating perspective sketches because these (in one- and two-point styles) are the kind that clients and other people most easily understand AND are usually the most difficult type to create.
- Sketches are not construction drawings, which are painstakingly exact and produced with straightedges in a documented scale.
- Sketches are produced in a time span from several seconds to 30 minutes or more. Quick, rough sketches can work out design problems, while sketches of longer duration can create casual client presentation graphics.
- Sketches are a unique reflection of the artist who creates them, and no two are the same. They are an exciting blend of designer personal artistic style and a practical depiction of built space.

In summation, this book maintains that the true test of a sketch's success is this:

- How well does the sketch communicate the intended idea to its audience?
- How well does it engage its audience in a discussion of a space that might be constructed?
- Is the sketch created in a span of time that supports the circumstance for its need for its users?



A quick sketch of a bookcase explores how a client might arrange objects that are meaningful to him or her.

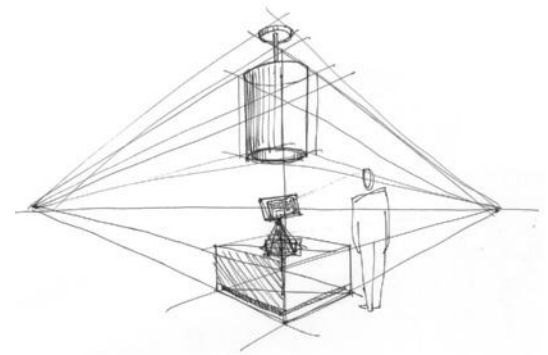


Jill's sketch of her relative's house, customized to show her car and dog.

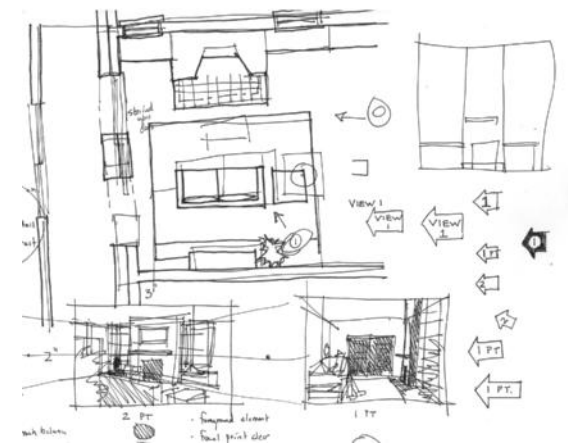
TYPES OF QUICK SKETCHES

Sketches are created to fulfill different functions for their creators and viewers. Here are some examples.

1. You can use sketches to show a vision of something not yet constructed, creating appreciation or understanding, such as an interior scene or object.
2. Sketching studies can depict options to help you make decisions about objects, environments, or other things like page layouts



Sketch study of a museum display showcasing a rare book.



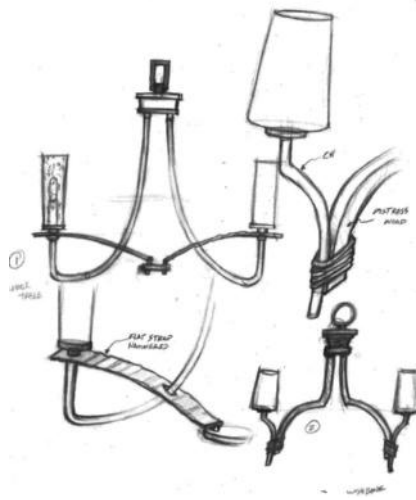
A "dumpsheet" of sketches that helped Jill work through a chapter in this book.

3. You can sketch objects or a place from real life to see or experience it in a new way, such as travel sketches (see the Sketching Gallery chapter).
4. You can use sketches to explore how things come together or come apart, such as joinery sketches and exploded sketches that show an assembly of things such as a lighting fixture's various parts.
5. Sketches can explain an abstract process or procedure.
6. Sketches can sometimes have several of these objectives.

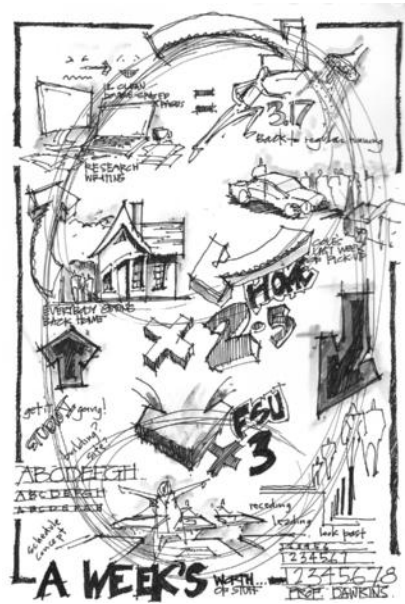
To keep things simple as you practice and to maximize the usefulness of your new skill, this book will stick with option 1 above, creating scenes of an object or place that is not yet constructed. Specifically, you will develop sketches that help you:



Jill's sketch of an arbor and garden shed in Fresno, California.

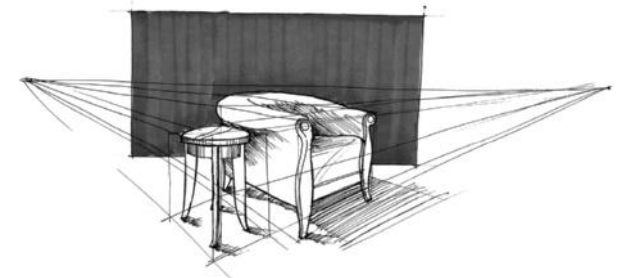


A sketch by designer Teddy Feracho of Golden Lighting exploring joinery for a lighting fixture.



Diagramming a week's worth of activities at the start of one of Jim's semesters.

- Craft interior scenes where objects relate to each other through alignments
- Create unique interior spaces that use out-of-the-box ideas such as curving walls, skylights, and angled planes
- Add entourage elements like people and vegetation to add polish to sketches
- Select the best view for a scene by understanding composition principles
- Polish sketch strategies such as line weight variation and shade and shadow that can convert quick early sketch ideas into graphics for client presentation
- Show finish materials on surfaces quickly and accurately



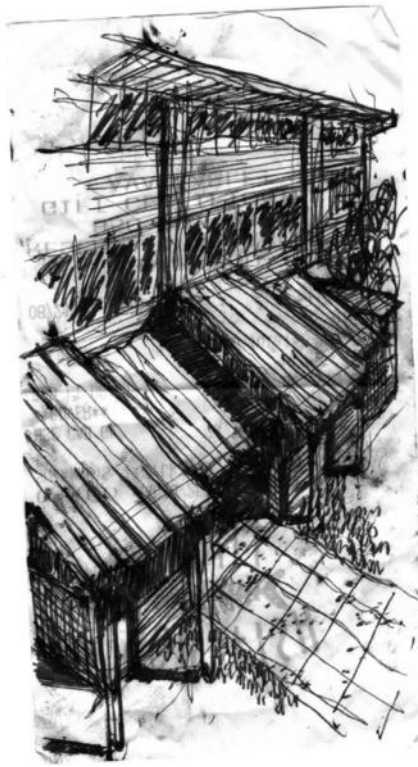
A quick sketch of a chair and table that gives a client a sense of the small-scope style in a project. Such a sketch might also be useful for a manufacturer's catalog of furniture.

A WAY TO THINK ABOUT ACQUIRING SKETCHING PROFICIENCY

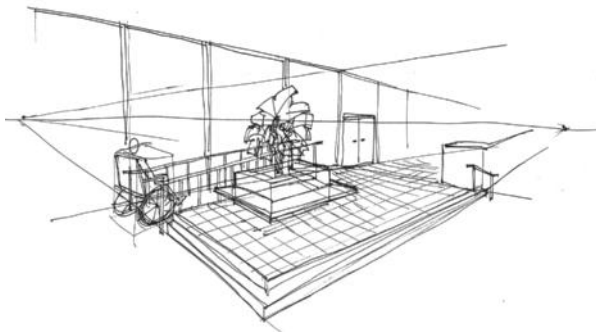
Creating perspective sketches that help people understand what you have in your mind can be intimidating. The irony of the situation is that nervousness produces inhibited, frightened-looking sketches. To create sketches that have something to say, it's best to adopt and maintain a loose approach that confidently expresses your ideas beautifully and naturally. Relax and have fun with your practice—it is possible, and in fact preferable to do so! You will sketch more (and improve more!) as a result. If you get frustrated with this book's chapters and scenarios, it's best to stop and take a break.

How do you know you are on your way to making sketching a useful tool for yourself? The goal is to seamlessly fit perspective sketching into your life and career, and use it as an intuitive, exploratory tool to inform your thinking and decision making. Specifically, you will know you are on your way to this goal when:

- You no longer automatically begin creating a design solution in plan view.
- You explain a design idea to a friend by sketching a quick perspective without giving the act a second thought.
- You can explain your concept to someone else while you sketch it.
- You have the confidence to show an early idea to a colleague or client.
- You consider including quick concept sketches in your graphic presentations.
- You consider ideas you rejected before because now you can communicate them through sketches.
- You know what to do when a client is due to arrive in 45 minutes expecting to see some options.



You never know when inspiration will strike. Sometimes grabbing the nearest piece of paper (in this case, Jim sketching on the back of a restaurant receipt) helps you get an idea down on paper right there and then.



A sketch study for an accessible airport public space.

- Your telephone doodles are often quick perspectives of real or imaginary places or other things.

HOW THIS BOOK CAN HELP YOU

This book is designed to provide you with guided sketching practice. LOTS OF practice is the key to developing quick, accurate sketching abilities. It is something you acquire over time. Honestly, though, here is the secret to your own personal sketching skills: the trick is to adopt the mindset of *choosing* to sketch your ideas, whether it's for a design project you're working on, or just to have fun doodling on some scratch paper while you are on the phone with a parent. That is, it's important to decide



Napkin doodling by Jim during a conference meeting.

that sketching is actually fun as well as rewarding, and then you will practice without thinking about it as work. Another way to put it is that sketching is *a way of life*, and a particular way of thinking about and reacting to the environments and ideas around you. Once you sketch something, you never see it quite the same way.

This book is designed to kick-start you on the journey of getting to know your sketching skill (at whatever level it currently is) and starting to make progress so that you eventually enjoy doing it. The scenarios presented in the chapters here ascend in difficulty so that you start out comfortably, and then they challenge you to push your abilities to the next level.



This is Jill's sketch of Riley, a golden retriever mix owned by one of Jill's family members. Just creating this sketch (traced from a photograph) had the effect of letting her get to know the dog in a unique way and deeply encounter elements such as the dog's fur, the twinkle in her eye, and how her ears show she's happy.

Everyone is somewhere along a continuum of sketching beginner to sketching expert. In fact, "sketching expertise theory" is a guiding framework for us as the authors of this book.⁴ If you would like to know more about this, and also diagnose where you are on this continuum, check out Part C of the Sketching Extras chapter.

THE IDEA BEHIND THIS BOOK'S UNIQUE APPROACH (OR HOW TO NOT THINK ABOUT SKETCHING!)

As your authors, we want you to succeed with your sketching practice, making the greatest gains you can in as little practice time as possible. Without going into endless detail on this, we believe that a great way to be efficient with your practice is for you to work toward being able to sketch *without thinking about it*—sort of surprising, isn't it? In other words, as you practice the movements of your hands as you create, a sketch will eventually get so easy and second nature that you no longer have to *think about the act of sketching*, but instead can concentrate on *doing something else as you sketch*. This could be something important and necessary, like designing the scene in your mind as you produce the sketch, or explaining the sketch to a client or colleague. If you watch really proficient designers create sketches, they can often "sketch on the fly," where their sketches really just become a graphic extension of a verbal explanation of an idea to someone. Designers with this level of ability have accomplished something important: they have *automatized* their ability to sketch, meaning they have made sketching movements something they don't have to think about, sort of like breathing. This does several wonderful things for them:

- It allows them to sketch quickly with little wasted effort.
- It allows them to sketch accurately so that someone else can understand their sketch's ideas.

You already have made some things in your life automatic. For example, you may be able to walk and talk to someone at the same time without thinking about walking. This is because you have been walking for a long time and are so good at it that you no longer have to think about putting one foot in front of another—you just do it. And because you do it so well, you can hold a conversation with someone, putting the majority of your attention on the act of talking and listening. The same thing applies for chewing and swallowing, and driving a car. (Have you ever gotten to work or school but can't recall making the trip to get there? You were thinking about other things while you drove!).

Eventually, your sketching will get this way too. You will be able to design a scene in your head as you sketch it, concentrating almost entirely on getting your vision on paper, rather than worrying about hand movements, vanishing points, and other necessary things. The nice thing about this is that it makes sketching all that more enjoyable! It becomes a valuable skill that you bring to your design practice, allowing you to express your design ideas in real time (hence the name of this book, *Sketching Interiors at the Speed of Thought*) with ease and confidence.

Because the goal here is to get you to be *automatic* with your sketching movements, this book will ask you to do a few things that may seem unusual.



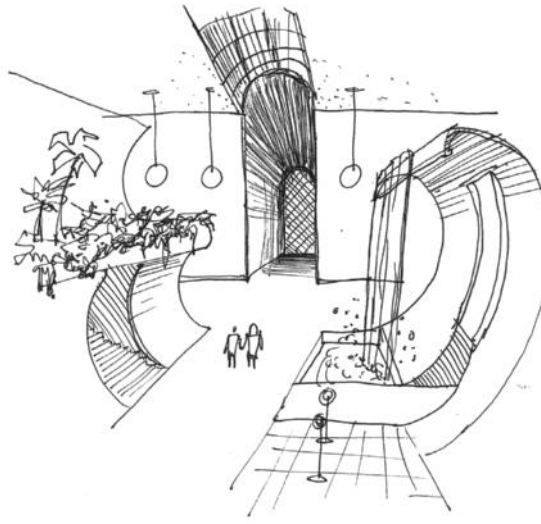
1. You will typically be asked to time yourself as you sketch. This helps you really see your progress as you practice a scene

multiple times—almost always you should see the time it took you to produce the sketch go down—and so helps you stay motivated. If having a timer going while you sketch is slightly uncomfortable, it's sort of designed to be! That's because automaticity theory says that people are best pushed to think about other things while they sketch—and this is the key to getting faster while the accuracy of your sketching is maintained or improves.

2. In some scenarios you will be asked to explain the sketch to a friend sitting next to you. In terms of *automaticity*, this is known as a “distractor task,” designed to get you thinking about something other than your sketching movements. Just like the timer, challenging yourself to be distracted while sketching will have the effect of moving your sketching skill toward greater proficiency.
3. You will be asked to answer some questions about your sketch in each chapter. This is so that you will be able to notice things you did well or that need improvement for the next time you sketch. It's so much better to understand something about your actions each time you do them with these reflection questions, rather than repeating the same mistakes time and again! Do take the time to answer these questions and also time yourself. If you do so, you will see your sketching improve at a rate that is probably quicker than if you ignore these ideas.

MATERIALS YOU WILL NEED

To get off on the right foot with your sketching practice, it's important that you have the right tools. Doing so will allow you to produce sketches that quickly begin to look like those of a confident design practitioner.



One of Jill's fantasy sketches, drawn just because it felt good.

Pens

We recommend that you create your sketches in black pen, rather than pencil. This takes the temptation to erase out of the picture, which takes too much time! The choice of your sketching pens does not have to be expensive, but it is really important that the flow of ink supports the speed at which you will sketch. You will need three different pen widths. Here are some of our favorites.

- Narrow width: around a 0.25 or 0.35 width, such as Uniball Signo Ultra Micro 207 or Sigma Micron 005
- Medium width: around a 0.5 width, such as Uniball Signo 207 or Pentel Pen
- Wide width: around a 0.7 width, such as Sanford Sharpie Ultra Fine Point or Pilot Precise V7 Rolling Ball

You will also need a “markup” pen when you answer reflection questions about your sketches. This should be a 0.25/0.35 or 0.5 width in a different color than your sketching pen so you can see your notes to yourself about the sketch. Blue, green, or red color works fine.

Markers



Design markers can add quick zip to a sketch.

In some scenarios you will apply a gray-scale marker to your sketches to dress them up a bit. To keep sketches quick to produce, you will use only two shades of gray:

- 30 percent-40 percent gray
- 70 percent or 80 percent gray

Both should be in the same gray family, such as cool, warm, neutral, or french, depending on the marker brand chosen. These families vary in how much brown (warm) or blue (cool) is flavoring the gray shade. Ideally, the marker should have a variety of tips, such as chisel and fine. One brand we like is Prismacolor.

Papers

You will practice on a variety of papers to show you options for developing your own preferences. The chapter scenarios will ask you to use all of these types:

1. White, unlined index cards in sizes 4x6 and 5x7. A pack of 50 or 100 of each should suffice. Most of your sketches will be this size, as these are faster to produce and easier to sketch on.
2. Trash/tracing paper. This can be a pad style with 8 1/2x11 sheets or a 12" wide roll. White, buff, or yellow colors work fine.
3. Drafting tape or drafting dots to secure multiple layers of papers on a table surface.

MATERIALS YOU WILL NOT NEED

Notice that a straightedge or ruler is not required for practicing your sketching with this book. This is because these are loose, hand-drawn sketches, and using a ruler would lend a bit of out-of-place precision to your sketches, plus take too much time to use. If this makes you uncomfortable, a little practice will help you see how much faster your sketching can go without having to haul a straightedge out every two minutes to complete a line.

While color can be a terrific addition to a sketch for added zip, this book's emphasis on quick sketches will keep marker additions to gray scale. See this book's references below for other sources that can provide you guidance with color in sketches.

Now it is time to get started. The next chapter helps you determine your current level of skill and whether your place in the journey makes this book's scenarios the right next steps for you. May your practice be fruitful and confidence-building and lead to the ability to express the full range of your creativity!



Go forth and happily sketch.

ENDNOTES

¹J. B. Pable, "3D Hand Sketching Skills and Affinity for Design Firm Leadership," in *Design Communication Association Bi-Annual Conference, Muncie, IN*, 291–296 (Muncie, IN: Design Communication Association, 2007).

²Ibid.

³Ibid.

⁴J. Dawkins and J. Pable, "Sketching at the Speed of Thought: Weaving Expertise Theory with Drawing Automaticity," in Simon Downs (Ed.), *Interweavings: The 3rd International Conference on Drawing, Cognition and Education*, 7–16 (London: Loughborough University, 2013).

ADDITIONAL REFERENCES

Ching, Frank. *Architectural Graphics*, 6th ed. Hoboken: Van Nostrand Reinhold.

Hanks, Kurt, and Larry Belliston. *Rapid Viz: A New Method for the Rapid Visualization of Ideas*, 3rd ed. Boston: Crisp/WKI, 2006.

Lockard, Kirby. *Design Drawing*. New York: Norton, 2001.

INTRODUCTORY SKILLS CHECK

OVERVIEW

Practicing sketching is what this book is all about. To get the most out of practicing, it's necessary to make sure that your current understanding and ability are in line with where this book's content is prepared to take you next. Therefore, this introduction is dedicated to helping you determine if you are at a point in your abilities where these scenarios will help you.

Performance Goals

- This introduction will explain those skills that you need to have before beginning to work with the chapters and scenarios.
- The introduction will also enable you to diagnose the level of your current skills and if you are prepared to work with the content in this book.
- Finally, the introduction will give you the opportunity to create two-point perspective scenes so you can brush up on rusty skills before proceeding to this book's chapters and scenarios.

What You Should Already Understand or Be Able to Sketch Before Beginning This Book

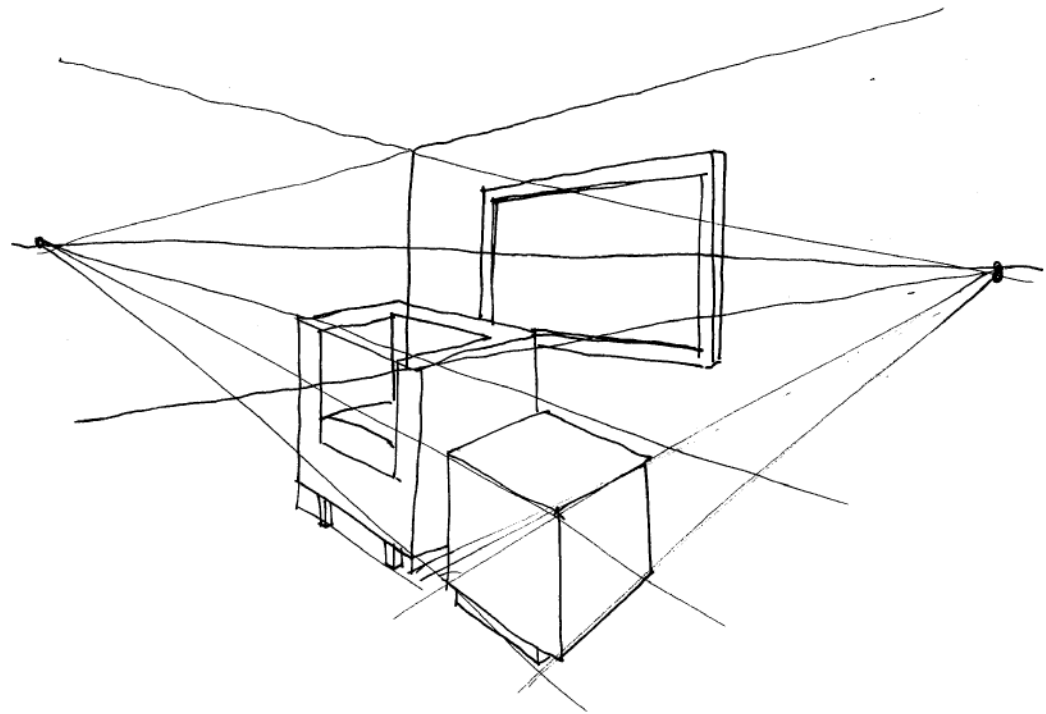
This book's scenarios are designed for a person who has basic familiarity with sketching in perspective. For example, if you took a drawing course that introduced you to perspective drawing, or you've picked it up yourself by viewing others' work or reading about it, you are likely ready for this book.

You should have a basic understanding of these basic drawing concepts:

- Line quality: drawing confident one-stroke lines.
- One-point and two-point perspective basic mechanics:
 - **Vanishing points**
 - **Horizon lines**
- Basic knowledge of drawing the following:
 - Objects such as boxes and cylinders
 - Positioning objects within a scene

- Simple wall, floor, and ceiling planes
- Furnishings such as sofas, chairs, tables, and desks

If you have not been introduced to these sorts of basic skills in the past, it's important that you obtain these abilities *before* you embark on this book's content. Go to the next page for guidance on determining where you are and if you're ready to proceed with these chapters.



Two-point perspective of a room with furniture and art piece.

SKILLS CHECK: ARE YOU READY TO BEGIN THIS BOOK?

It is important that your existing abilities are at a point where this book's scenarios will be helpful for you. Here is a way to determine if you are ready to proceed: Can you sketch each of the scenes shown here with confidence and basic perspective accuracy in 10 minutes or less? Both show the same room and objects, with one in one-point perspective and the other in two-point perspective.

Give it a try now:

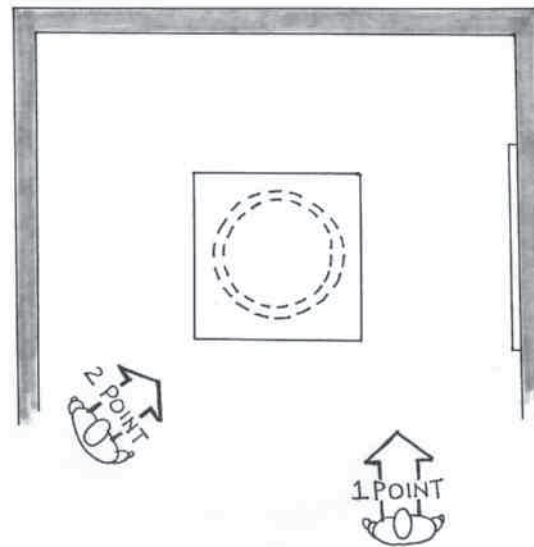


1. First, set up a way to record how long it takes you to complete each sketch. Most smartphones have a stopwatch or timer function. **Set your timer to 10 minutes as you prepare to sketch.**
2. Next, **gather your materials.** You will need a blank 5x8 index card (without lines), or alternately one-half of an 8 1/2x11 sheet of white paper folded in half. (Constraining the drawing area keeps the sketch quicker and easier to draw.) Also, you will need an ink pen for sketching. This should give a free flow of black ink in a line width of about .5 millimeter or less. For example, a Pilot V5 Precise rolling ball pen works well and is inexpensive. Your pen should NOT be a ballpoint style, as these don't deliver ink smoothly and readily. Also, pen is better than pencil because you are not tempted to erase lines, which takes too much time.
3. When you have your timer set and your materials gathered, you are nearly ready to sketch. **Make sure that your chair lets you sit up close to a comfortable-height table surface and that your elbows are**

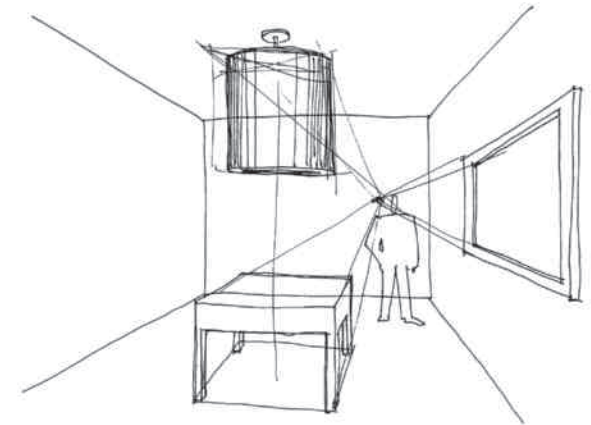
not constrained. You should have sufficient light placed on the side opposite your sketching arm to avoid cast shadows.

Complete the one-point perspective sketch, timing yourself. Use the viewpoint shown in the plan view on this page. Stop when you get to 10 minutes. Don't look at the examples on this page so you're not copying them. Instead, keep your eyes on your page or the provided plan view. Write the amount of time that elapsed at the bottom left of your sketch when you are done.

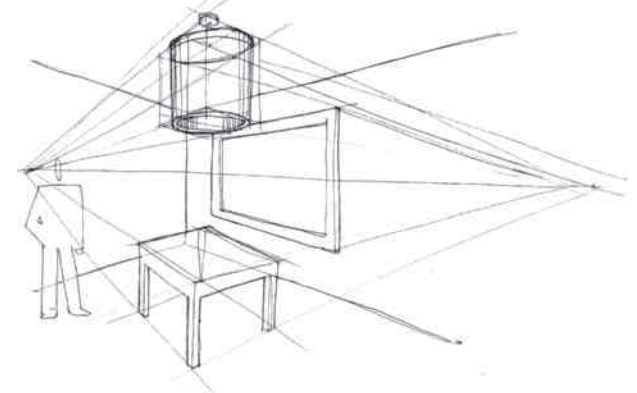
Next, **complete the two-point perspective sketch** in the same fashion on a separate piece of paper. Stop when you get to 10 minutes. Write the amount of time that elapsed at the bottom left of your sketch. Then go to the next page.



Plan view of the room showing the viewpoints for the one- and two-point perspective sketches.



One-point perspective of a room with furniture and art piece.



Two-point perspective of the same room.

YOUR FIRST SKETCHES

In the area provided here, tape your two perspective sketches to document your practice. While this may seem cumbersome, leaving a breadcrumb trail of what you've already done provides several benefits for you:

1. It helps you celebrate successes along the way, which can maintain your enthusiasm to keep practicing. With multiple attempts, you will likely see your sketching improve while your completion times decrease!
2. If you work for a while in this book and then take a break and come back later to your practice, it shows you where you left off.

Tape your two cards or sheets of paper in the space provided here. Make sure your completion times are noted. Then go to the next page to diagnose where you are and what to do next.

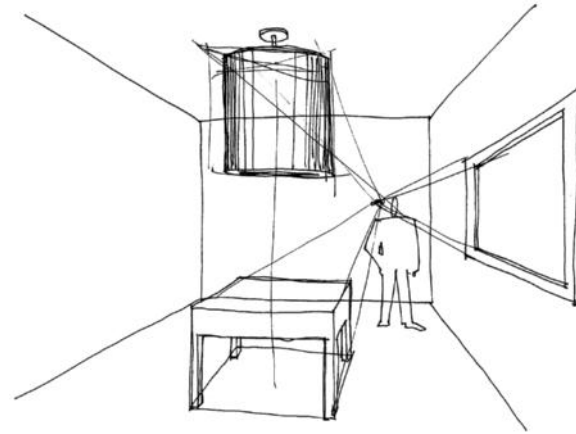
Tape your sketches here.

DIAGNOSING WHERE YOU ARE RIGHT NOW

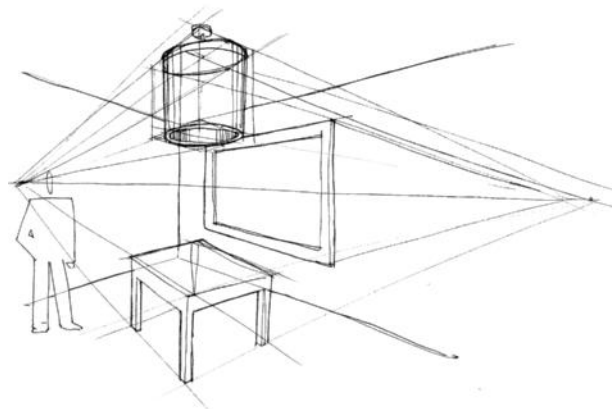
So you've just finished two sample perspective sketches on the previous pages. How you felt as you were creating these says a lot about what you should do next. **Take a look at your sketches and compare them to the sample solutions shown here.** Yours may not look exactly like these because horizon line heights and other things can vary—but the perspective construction “mechanics” should be accurate enough to be a convincing scene.

Chances are that you fall into one of the following categories with your current skills:

- **You're feeling good!** You completed both scenes in 10 minutes or less, and the objects in the scenes are correctly shown in perspective, are sized proportionally to each other and the room, and are aligned as necessary. Line quality is moderate to good with confident strokes. You're ready to move on! **Go to Chapter 1 and get started.**
- **You feel like you could do this, but this trial run was a bit rusty.** Maybe you needed a bit more time, or an object or two was a little rocky in its perspective, size, or placement. Bottom line, though, you feel like you could create these scenes with just a bit more practice or instruction that reviews perspective principles. If this is you, then **proceed to page xxxiii to complete a refresher exercise of these scenes.**
- **You're feeling pretty uncomfortable or lost with creating these scenes.** If so, that's OK! Everyone is in a different place with these skills, and with time and effort, you'll be ready for this book. If this is you, then **turn to page 1 to review some other resources that will provide you with the fundamentals.** Then you can return to this book for further practice.



One-point perspective of a room with furniture and art piece.



Two-point perspective of the same room.

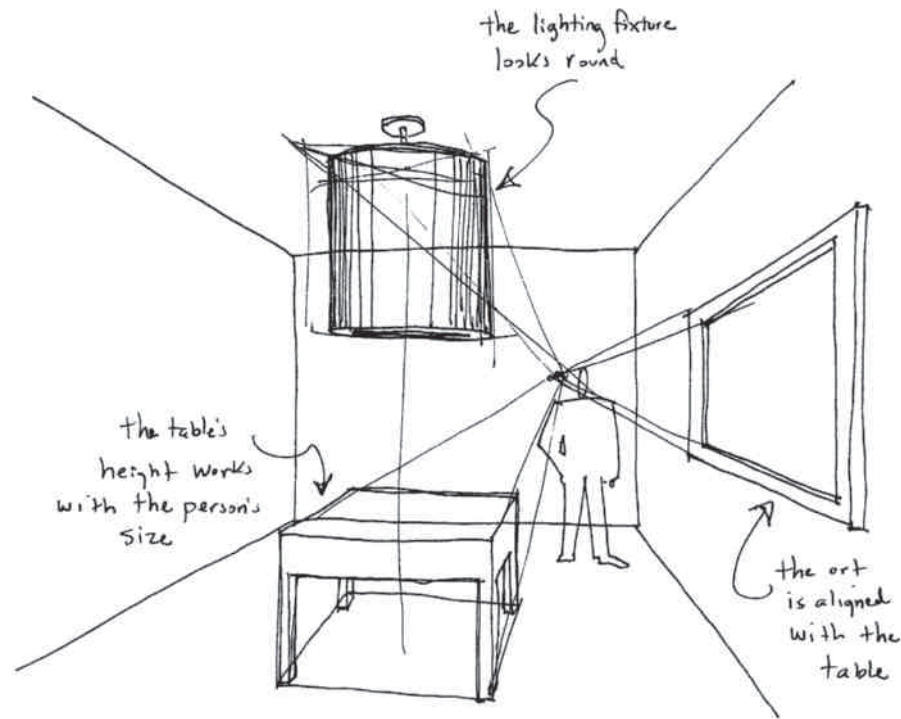
PERSPECTIVE BASICS REFRESHER EXERCISES

If you've arrived at this page, then you feel that your first trial run with the perspective scenes shown here did not go entirely as you wished but that you could create these scenes better with more practice or a little more guidance. The next few pages will run you through these exercises so that things like the scene's construction, placement of objects, "guesstimation" of size and height, and alignments between them are a bit clearer for you. These steps are illustrated for you both in print and in demonstration videos. You will re-create these perspective scenes, using these steps to build your confidence and to iron out any details that were less than great in your first tries. Some main ideas are noted on the following perspective sketches.

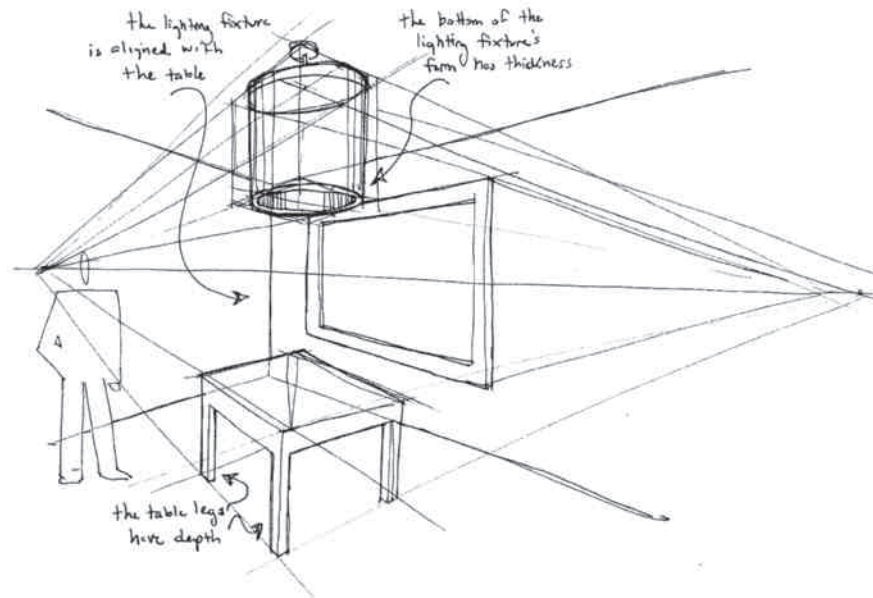


Explore online

The demonstration videos for these scenes are available in this book's online materials in the Introduction chapter.



One-point perspective with notes that point out some things to pick up in the construction of the scene.



Two-point perspective of the same room, with further notes.

PERSPECTIVE BASICS REFRESHER

EXERCISES: ONE-POINT PERSPECTIVE

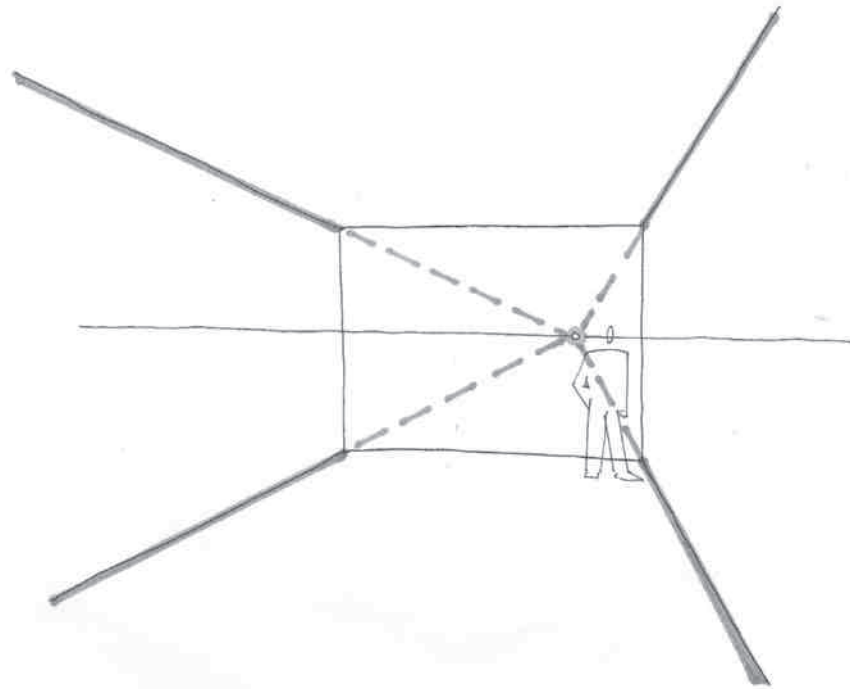
One-point perspective scenes are a little easier to create than two-point perspective scenes because you only have to worry about a single vanishing point most of the time. One-point perspective sketches are helpful for looking toward the end of a room or showing an interior that emphasizes symmetry. Such perspectives can look very regal and stately. On the other hand, one-point perspective sketches can look a little predictable or boring unless the space is interesting, or unless the designer takes care with the placement of the vanishing point and horizon line. So that the scene stays interesting, generally *avoid* placing the horizon line *right in the middle of the back wall* or the vanishing point *right in the middle*.

Characteristics of One-Point Perspective Scenes

- They have one vanishing point that is located on a seen or unseen horizon line. (If objects are not aligned with the left-right or front-back directions, they can use other vanishing points along the horizon line, but that is a discussion for another day!)
- A straight-on flat back wall can be present (or not).
- Most lines are drawn in one of these three directions:



Directions: up-down, side to side, or originating from a single vanishing point.



The wall lines are aligned with the corners of the back wall and the vanishing point. Note that the scene is more dynamic because the vanishing point is not placed in the middle of the back wall. The horizon line is at eye height, and a sketch person brings a sense of scale to the scene. (You will learn more about sketch people in a later chapter, so do the best you can here for now!)

Here is a step-by-step explanation of how to create this scene. Set up your sketch:

1. Don't worry about timing yourself for this sketch, as you'll be creating it using the step-by-step instructions.
2. **Gather your materials.** You will need a blank 5x8 index card (without lines), or alternately one-half of an 8 1/2x11 sheet of white paper folded in half. (Constraining the drawing area keeps the sketch quicker and easier to draw.) Also, you will need your ink pen for sketching.

Create the walls, ceiling, and floor of the space as shown. Then go to the next page.



Explore online

The demonstration videos for the one-point perspective scene are available in this book's online materials in the Introduction chapter.

Feel free to review these videos as many times as you like before you attempt the sketch yourself.

PERSPECTIVE BASICS REFRESHER

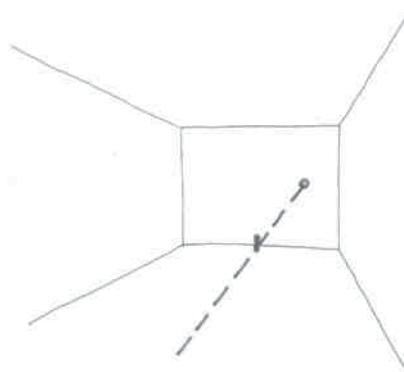
EXERCISES: ONE-POINT PERSPECTIVE TABLE

Follow these steps to complete the table for your **one-point perspective refresher sketch**. The approach shown here creates simple boxes that the objects would fit into and then carves away unnecessary parts of the box to finish the objects' details.

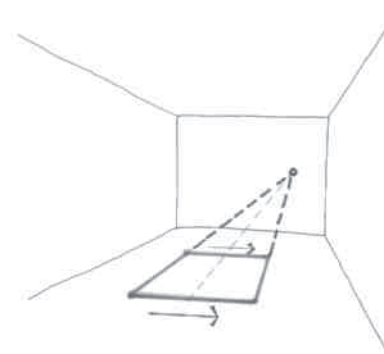


Explore online

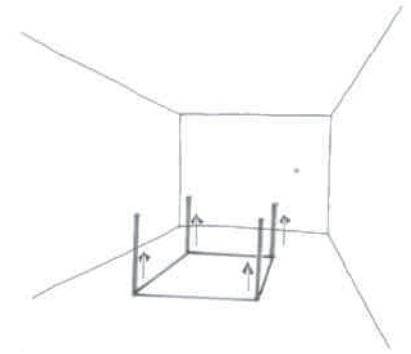
The demonstration videos for the one-point perspective scene are available in this book's online materials in the Introduction chapter.



Find the middle of the room. First, get oriented to the space and find the halfway point on the floor so that the table can be placed in the middle. Place a tick mark halfway along the back wall's floor line. Then, using the vanishing point, create a light dotted line that passes through both points into the middle of the room.



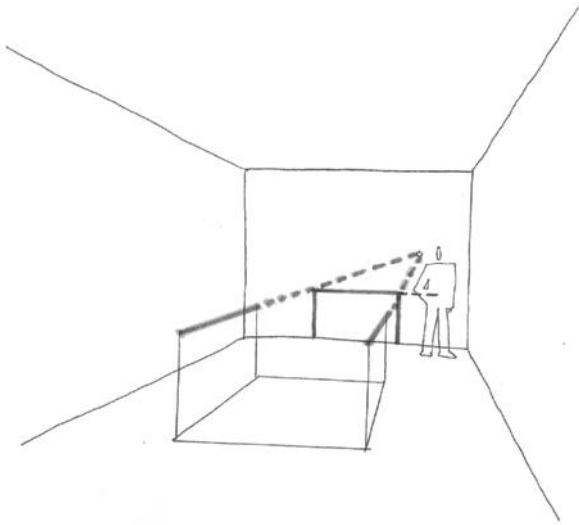
Create the object's footprint. Using light lines, create the table's "footprint" on the floor, guesstimating its size and depth, and using the previous front-back line to center it in the room. The sides of the footprint pass through the vanishing point. The other lines are true horizontal lines.



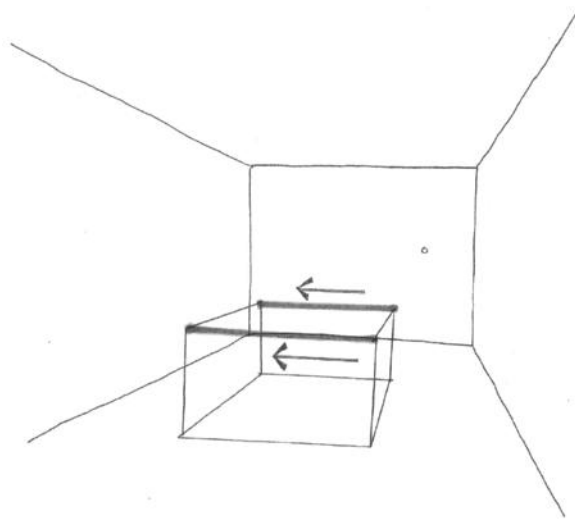
Using light lines, guesstimate the heights of the box's corners by drawing true vertical lines from each one. These lines should end below the vanishing point line.

PERSPECTIVE BASICS REFRESHER

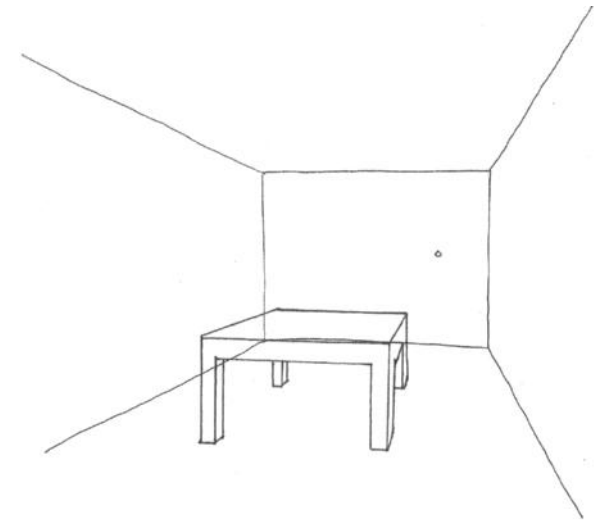
EXERCISES: ONE-POINT PERSPECTIVE TABLE (CONT.)



Use the reference wall to find the height. Here, you'll use a nearby reliable measuring plane (the back wall) to guesstimate the table's height. First, go back to the back wall in the room, and sketch light lines that show the height of the table. It's easier to do it here as it is near the human figure. Make the table top about waist high to the figure. Then, using the vanishing point, sketch light lines aligned through the corners of this wall-based table out in space toward the upright lines in the table's box. This will tell you where to stop the upright table box lines.



Complete the object's box. Sketch light true horizontal lines connecting the top corners.



Create the table legs. Carve away unneeded parts of the box, showing table legs. Note that you will see the fronts and sides of all the legs. Make the lines that represent the table a bit darker/wider than the previous guidelines so that it seems "solid." (Here the earlier guidelines are not shown so you can see the table more easily.)

PERSPECTIVE BASICS REFRESHER

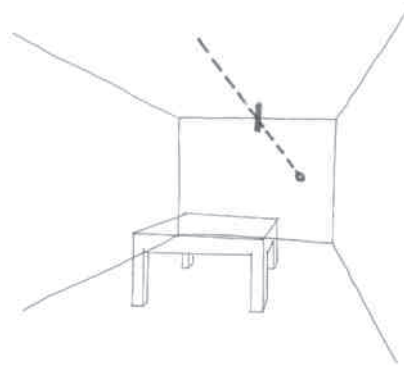
EXERCISES: ONE-POINT PERSPECTIVE LIGHTING FIXTURE

Next, add the lighting fixture to your one-point perspective scene. This lighting fixture needs to be aligned over the table so that the lighting illuminates tasks there. The lighting fixture is a “worm’s-eye” object, named as such because it is entirely above the horizon line. This means you will see the underside of its bottom surface. You will learn more about worm’s-eye objects in Chapter 1.

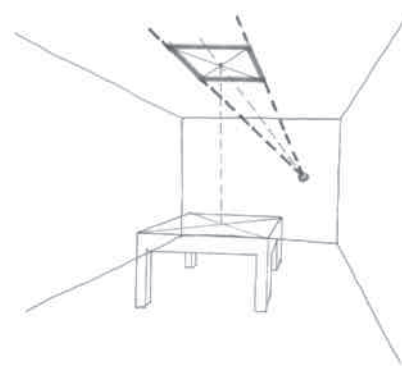


Explore online

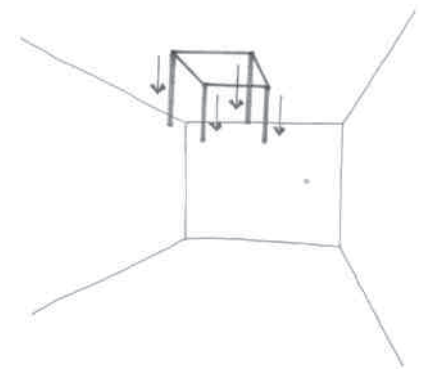
The demonstration videos for the one-point perspective scene are available in this book’s online materials in the Introduction chapter.



Find the middle of the room along the back wall. This is so that the lighting fixture can be placed in the center. Place a tick mark halfway along the back wall’s ceiling line. Then, using the vanishing point, create a light dotted line that passes through both points into the middle of the room.



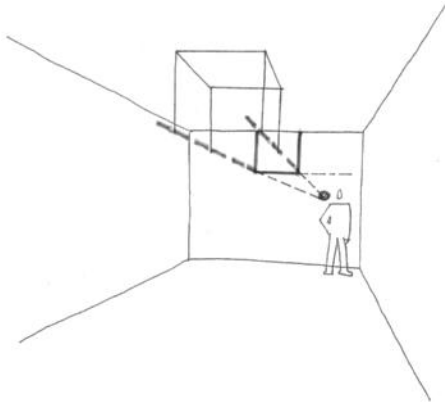
Create the object’s ceiling footprint. This footprint defines the size and placement of the lighting fixture in relation to the ceiling. The sides of the footprint pass through the vanishing point. The other lines are true horizontal lines. Reasonably guesstimate the depth from front to back. You can check centering over the table with corner diagonal lines.



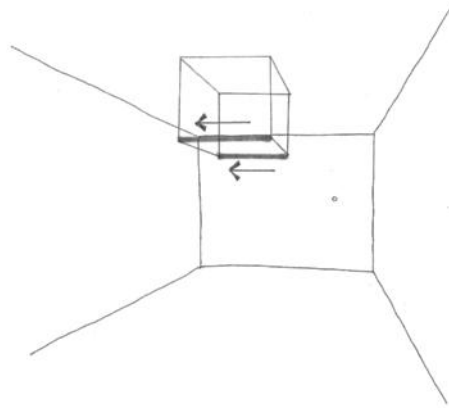
Guesstimate the heights of the box’s corners. Using light lines, extend vertical lines down from all four corners of the box to start to form its sides. In the next step you will determine where these lines terminate.

PERSPECTIVE BASICS REFRESHER

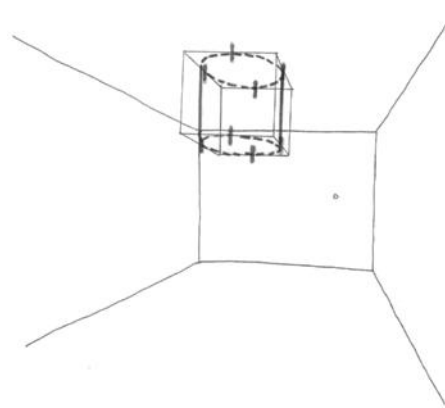
EXERCISES: ONE-POINT PERSPECTIVE LIGHTING FIXTURE (CONT.)



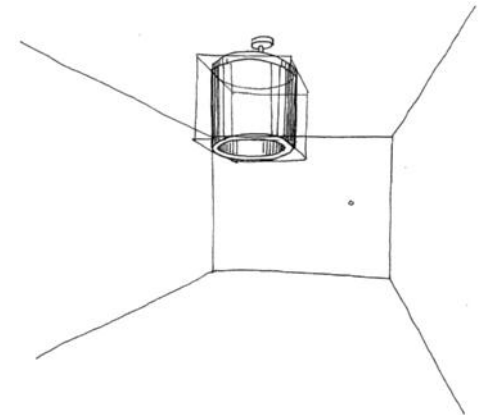
Use a reference wall to find the height. Do an “eyeball” measurement using the back wall to estimate the right height for the box’s side walls. Keep the bottom of the fixture above eye level, which is the horizon line. Project those lines forward to the box in the middle of the room, noting where each of the height lines will stop.



Complete the box. Add true horizontal lines that are light.



Create the round shape within the box. Turn the box into a cylinder by finding the halfway points on all four sides of both the top and bottom. Then sketch an ellipse that passes through the four halfway points. Connect the ellipses with new vertical lines on the sides that describe the width of the cylinder.



Add finishing touches. Create the pendent stem and the ceiling canopy (the cylinder that attaches to the ceiling), and add some lines to show roundness. Give the bottom surface another ellipse to show the cylinder’s thickness.

PERSPECTIVE BASICS REFRESHER

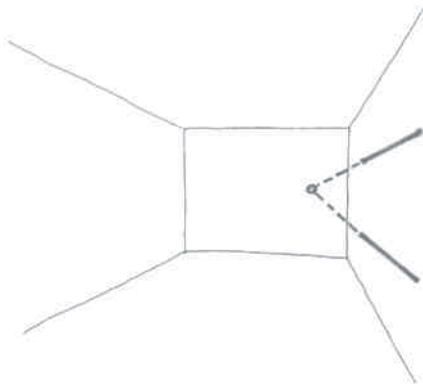
EXERCISES: ONE-POINT PERSPECTIVE ART

Finally, add a framed art piece on the wall to your one-point perspective scene. This frame needs to be aligned to the table for a sense of order in the space. The lighting fixture is an “eye-level” object, so called because it straddles the horizon line. This means you will see neither the underside of its bottom surface nor the top of its top surface. You will learn more about eye-level objects in Chapter 1.

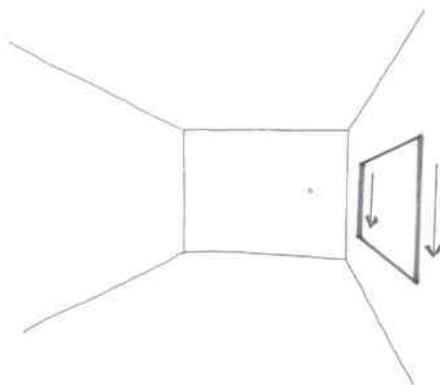


Explore online

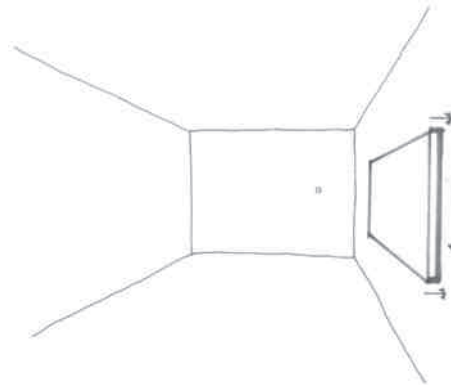
The demonstration videos for the one-point perspective scene are available in this book's online materials in the Introduction chapter.



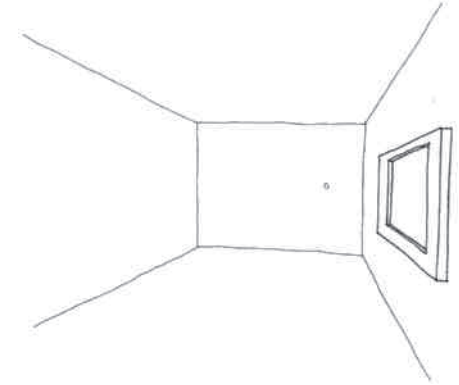
Define the art frame's height. Draw lines out from the vanishing point along the right wall.



Define the art's width. Draw vertical lines at the far side and near side of the object. This will complete the object's footprint located on the wall.



Show the object's thickness. Add lines as shown to indicate that the frame has a depth to it when seen from the side.



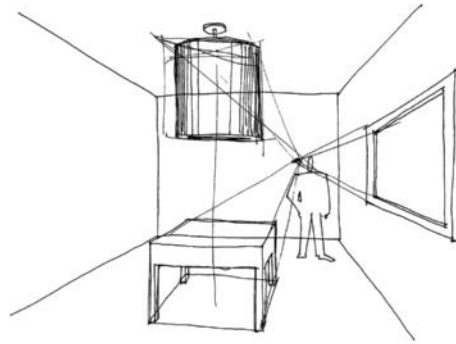
Add lines that provide detail. Note the lines that describe the indentation of the art area within the frame. You see the depth of this indentation on three sides.

PERSPECTIVE BASICS REFRESHER EXERCISE: ONE-POINT PERSPECTIVE SOLUTION

Here is an example of what your one-point perspective refresher exercise might look like. Note that not all the guidelines are shown so that you can see the finished objects more clearly. Compare your sketch with these objects to check for accuracy of their construction in perspective, relative size, and alignment.

Repeated attempts of sketches on more cards or paper always make a scene go better, so feel free to repeat this if you wish. You might also try this again to see if you can create the scene in under 10 minutes as recommended. **Tape your various attempts here as a record of your practice**—even the bad ones! They will show how far you have come as you keep practicing.

Now go on to the two-point perspective refresher exercise on the next page.



An example solution of the refresher exercise.

Tape your sketches here.

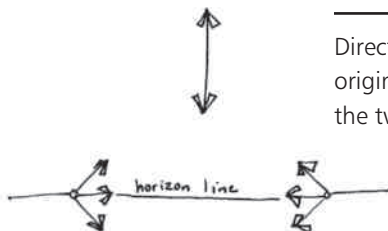
PERSPECTIVE BASICS REFRESHER

EXERCISES: TWO-POINT PERSPECTIVE

Two-point perspective scenes, as the name suggests, need two vanishing points to make them work. This makes them slightly trickier to create than one-points, but the payoff is often a dynamic scene. What makes a two-point different is that in its simplest form, a two-point scene peers into the corner of a room, so you have to decide where that corner is. Often designers avoid placing this corner *right in the middle*, as this can look a little boring. For example, in the room shown here, the corner is a little to the left. This has the effect of showing more of what's going on in the area of the right wall. The opposite would be true if you placed the back corner to the right. In a later chapter you will learn how to compose a scene and how placing the back corner can play a role in a pleasant view.

Characteristics of Two-Point Perspective Scenes

- They have two vanishing points that are located on a seen or unseen horizon line. (If objects are not parallel to the left or right walls, they can use other vanishing points along the horizon line so that objects can be rotated in any orientation a designer desires. We'll worry about that later, though!)
- Often the scene looks into a corner, or two planes that might create a corner if they connect.
- Most lines are drawn in one of these three directions:



Directions: up-down or originating from either of the two vanishing points.

Here is a **step-by-step** explanation of how to create this scene. Set up your sketch:

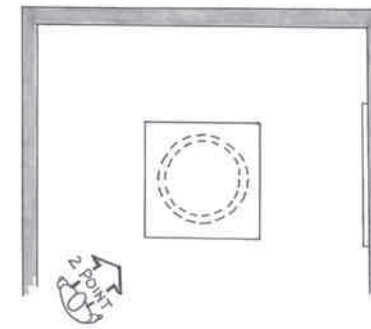
1. Don't worry about timing yourself for this sketch, as you'll be creating it using the step-by-step instructions.
2. **Gather your materials.** You will need a blank 5x8 index card (without lines), or alternately one-half of an 8 1/2x11 sheet of white paper folded in half. (Constraining the drawing area keeps the sketch quicker and easier to draw.) Also, you will need your ink pen for sketching.

Create the walls, ceiling, and floor of the space as shown. Then go to the next page.

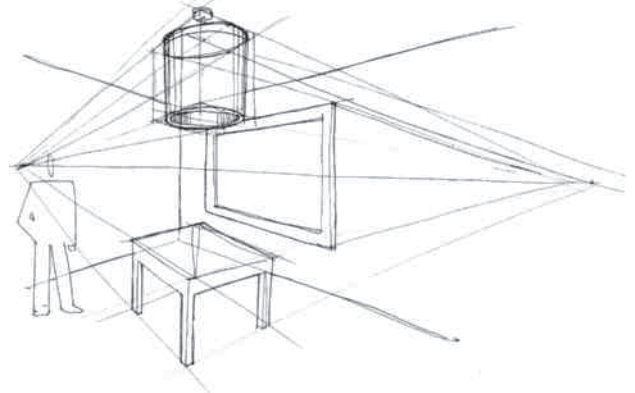


Explore online

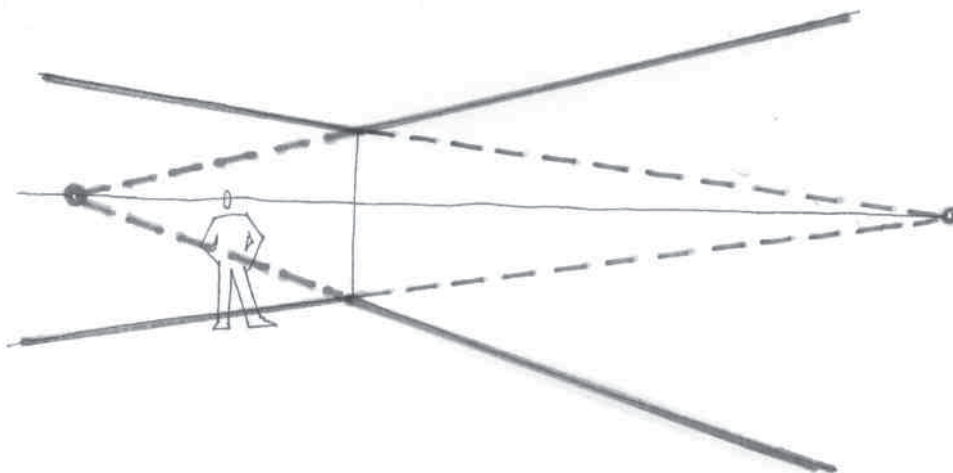
The demonstration videos for the two-point perspective scene are available in this book's online materials in the Introduction chapter. Feel free to review these videos as many times as you like before you attempt the sketch yourself.



Plan view showing the two-point perspective viewpoint.



One possible solution to the scene.



Create the walls, ceiling, and the floor of the scene as shown. Draw a sketch person for scale (as best you can!) so that his or her eyes go across the horizon line. Draw the back corner of the room a bit to the left.

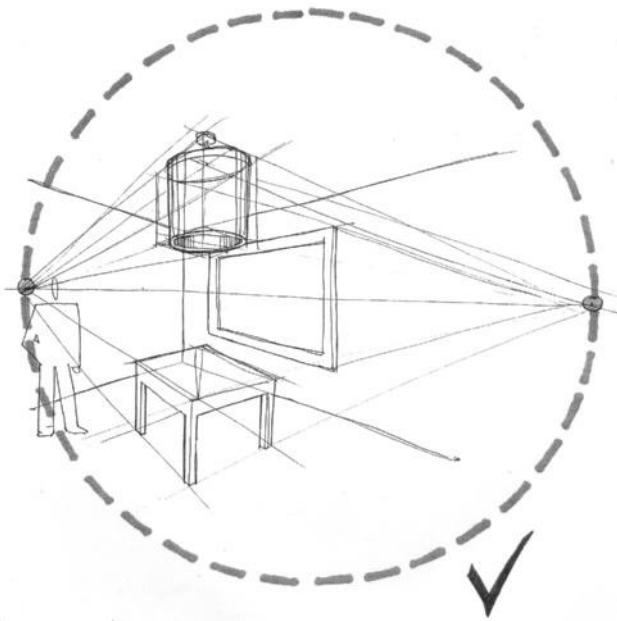
TWO-POINT PERSPECTIVES: AVOIDING DISTORTION

When creating two-point perspective sketches, it is important to keep things within an imaginary circle called the *cone of vision* so that objects are not distorted. This distortion results when the vanishing points are placed too close together when compared to the height of the back corner.

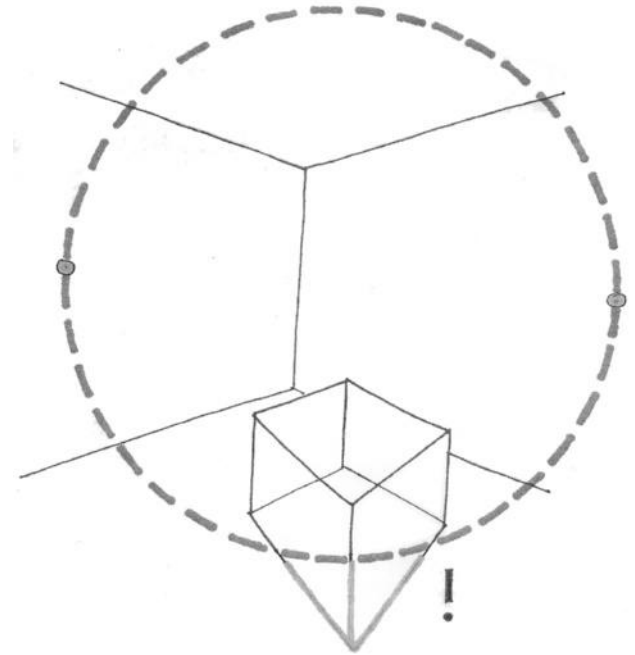
Keep these things in mind to minimize your problems with distortion:

1. Keep the vanishing points wide apart. This means that the distance from the back corner to either vanishing point should be *more* than the line length describing the height of the back corner.
2. Be mindful of the height of the back corner wall line. The longer/taller this is, the further out the vanishing points should be placed.
3. If you're wondering where it's "legal" to draw in a two-point perspective scene without running into distortion, imagine drawing a circle through the two vanishing points. This is the *cone of vision*. Anything inside this circle will not be distorted, but anything outside of it may appear distorted.

With this concept in hand, go back and check your two-point perspective walls you just sketched. Is your cone of vision big enough to contain the objects you are about to draw without distortion? If so, go on to the next exercise. If not, redraw the scene now.



The scene keeps items well within the cone of vision. Things don't look distorted, which is good. Part of this has to do with the drawn height of the back corner in relation to where the vanishing points are placed.



In this scene, the box is partially outside of the cone of vision, which makes it look distorted. This is confusing and distracting to viewers of your sketches. The problem lies with the placement of the vanishing points—too close in, which pinches the available drawing space within the room.

PERSPECTIVE BASICS REFRESHER

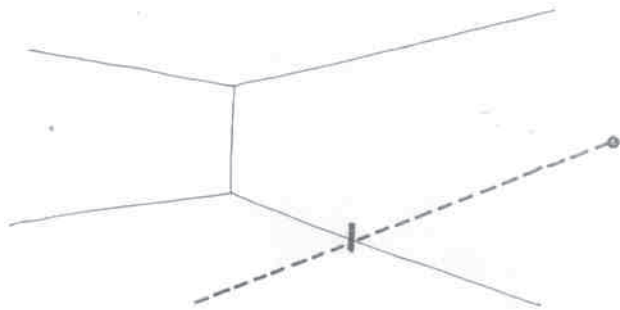
EXERCISES: TWO-POINT PERSPECTIVE TABLE

Follow these steps to complete the table for your two-point perspective refresher sketch. The approach shown here creates simple boxes that the objects would be in, then carves away unnecessary parts of the boxes to finish the objects' details.

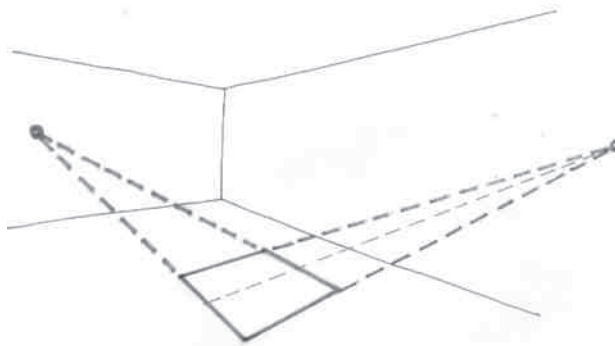


Explore online

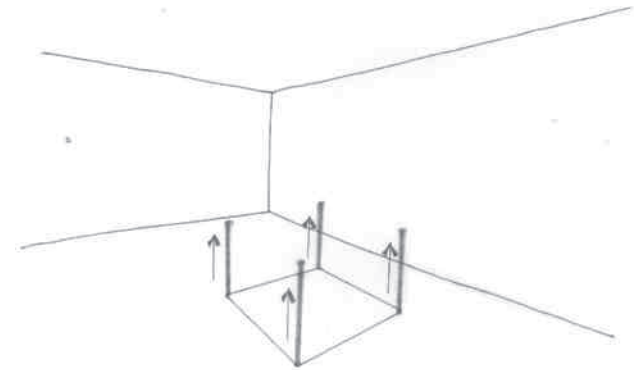
The demonstration videos for the two-point perspective scene are available in this book's online materials in the Introduction chapter.



Guesstimate the halfway point along the right wall to center the table. First, get oriented to the space and find the halfway point on the floor so that the table can be placed in the middle. Place a tick mark halfway along the right wall's floor line. Then, using the vanishing point, create a light dotted line that passes through both points into the middle of the room.



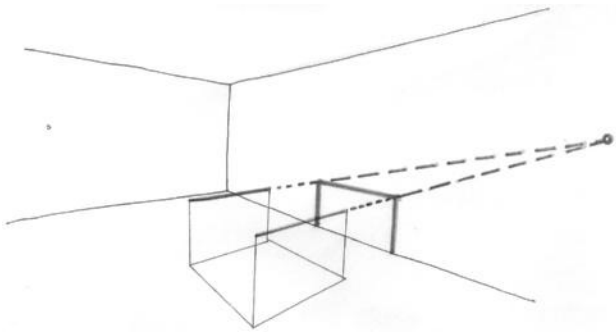
Create the object's footprint. Using light lines, create the table's "footprint" on the floor, guesstimating its size and depth, and using the previous front-back line to center it in the room. The sides of the footprint pass through the left and the right vanishing points.



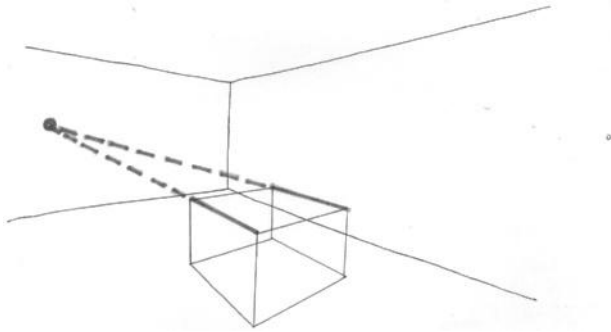
Guesstimate the heights of the box's corners. Using light lines, draw true vertical lines from each one. These lines should end below the horizon line for now. The next step will determine their stopping point.

PERSPECTIVE BASICS REFRESHER

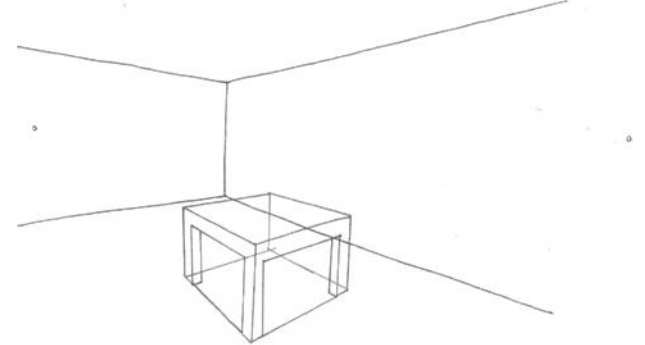
EXERCISES: TWO-POINT PERSPECTIVE TABLE (CONT.)



Use the reference wall to find the height. Here, you'll use a nearby reliable measuring plane (the right wall) to guesstimate the table's height. First, on the right wall in the room, sketch light lines that show the height of the table. Then, using the right vanishing point, sketch light lines aligned through the corners of this wall-based table out in space toward the upright lines in the table's box. This will tell you where to stop the upright table box lines.



Complete the table's box. Sketch light true horizontal lines connecting the top corners using the left vanishing point.

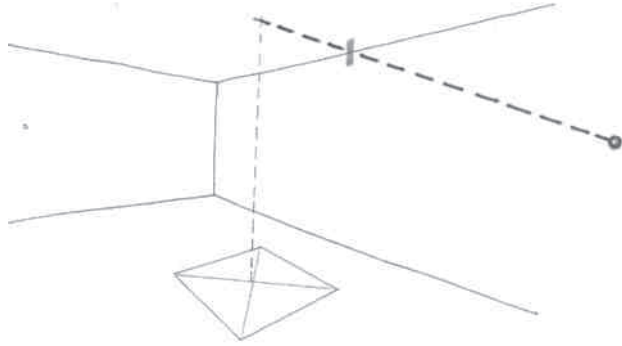


Create the table legs. Carve away unneeded parts of the box, showing table legs. Note that you will see the fronts and sides of all the legs. Make the lines that represent the table a bit darker/wider than the previous guidelines so that it seems "solid." (Here the earlier guidelines are not shown so you can see the table more easily.)

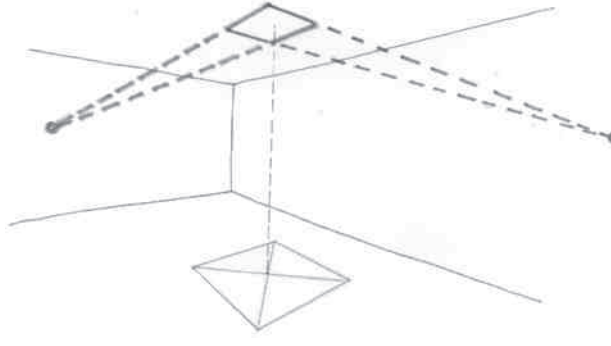
PERSPECTIVE BASICS REFRESHER

EXERCISES: TWO-POINT PERSPECTIVE LIGHTING FIXTURE

Next, add the lighting fixture to your two-point perspective scene. This lighting fixture needs to be aligned over the table so that the lighting illuminates tasks there.



Find the middle of the room along the right wall. This is so that the lighting fixture can be placed in the middle. Place a tick mark halfway along the back wall's ceiling line (which will be directly above the tick mark you previously placed on the floor line there). Then, using the vanishing point, create a light dotted line that passes through both points into the middle of the room. Here the table is shown on the floor for reference. You can place an X on your table top to provide a target for your line if you wish.

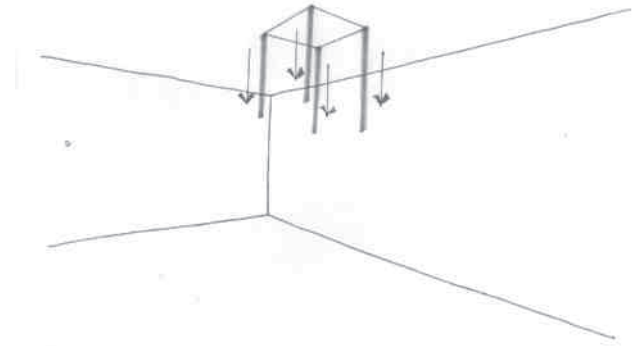


Create the object's ceiling footprint. This footprint defines the size and placement of the lighting fixture in relation to the ceiling. The sides of the footprint pass through the left and right vanishing points. Reasonably guesstimate the depth from front to back so it looks square, but in perspective.



Explore online

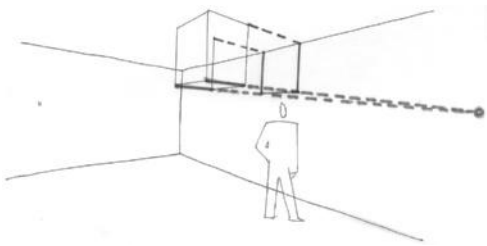
The demonstration videos for the two-point perspective scene are available in this book's online materials in the Introduction chapter.



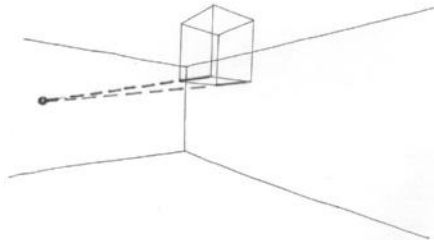
Guesstimate the heights of the box's corners. Using light lines, extend vertical lines down from all four corners of the box to start to form its sides. In the next step you will determine where these lines terminate.

PERSPECTIVE BASICS REFRESHER

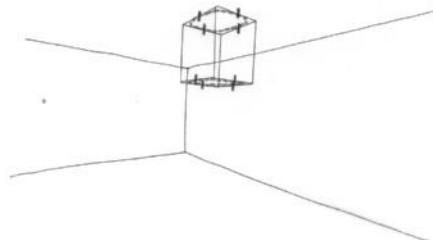
EXERCISES: TWO-POINT PERSPECTIVE LIGHTING FIXTURE (CONT.)



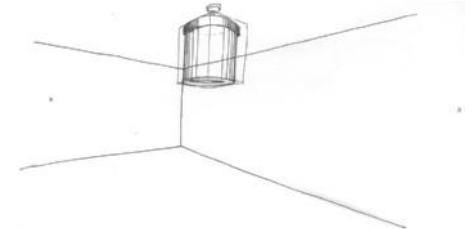
Use a reference wall to find the height. Do an “eyeball” measurement using the back wall to estimate the right height for the box’s side walls. Keep the bottom of the fixture above eye level, which is the horizon line. Project those lines forward to the box in the middle of the room, noting where each of the height lines will stop.



Complete the box by referencing the left vanishing point.



Create the round shape within the box. Turn the box into a cylinder by finding the halfway points on all four sides of both the top and bottom. Then sketch an ellipse that passes through the four halfway points. Connect the ellipses with new vertical lines on the sides that describe the width of the cylinder.



Add finishing touches. Add the pendent stem, the ceiling canopy (the cylinder that attaches to the ceiling), and some lines to show roundness. Give the bottom surface another ellipse to show the cylinder’s thickness.

PERSPECTIVE BASICS REFRESHER

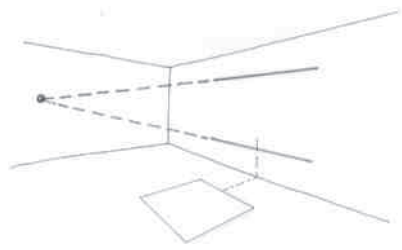
EXERCISES: TWO-POINT PERSPECTIVE ART



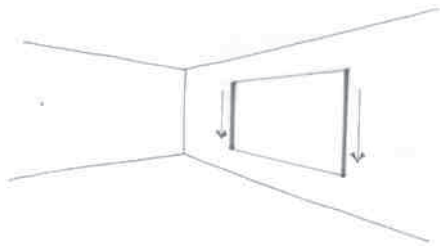
Explore online

The demonstration videos for the two-point perspective scene are available in this book's online materials in the Introduction chapter.

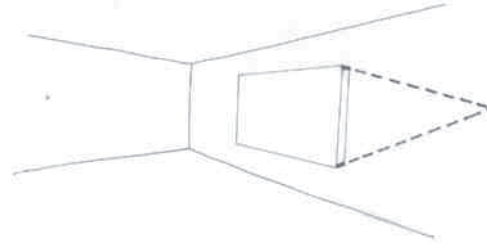
Finally, add a framed art piece on the wall to your two-point perspective scene. This frame needs to be aligned to the table for a sense of order in the space.



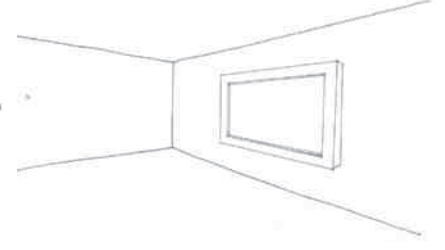
Define the art frame's height. Draw lines out from the left vanishing point along the right wall. The table and its center point are shown here for reference.



Define the art's width. Draw vertical lines at the far side and near side of the object. This will complete the object's footprint located on the wall. Let the table be centered on the centerline of the art frame.



Show the object's thickness. Add lines as shown to indicate that the frame has a depth to it when seen from the side.



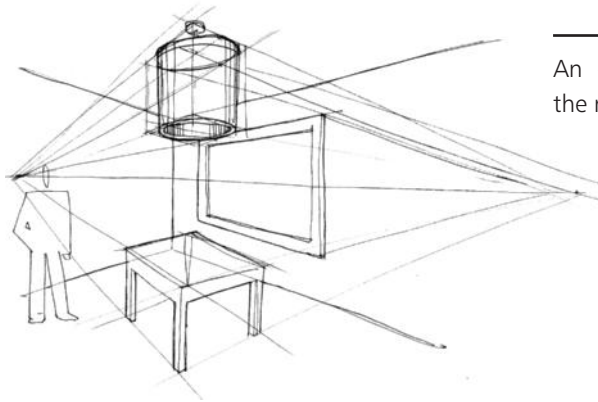
Add lines that provide detail. Note the lines that describe the indentation of the art area within the frame. You see the depth of this indentation on three sides.

PERSPECTIVE BASICS REFRESHER EXERCISE: TWO-POINT PERSPECTIVE SOLUTION

Here is an example of what your two-point perspective refresher exercise might look like. Note that not all the guidelines are shown so that you can see the finished objects more clearly. Compare your sketch with these objects to check for accuracy of their construction in perspective, relative size, and alignment.

Now is the perfect time to repeat this two-point perspective scene, this time timing yourself to see if you can create the scene in under 10 minutes as recommended. **Tape your various attempts here as a record of your practice**—and document how long each attempt took as well.

If you feel confident with the one- and two-point perspective scenes here, then you're ready to go on to Chapter 1.



An example solution of the refresher exercise.

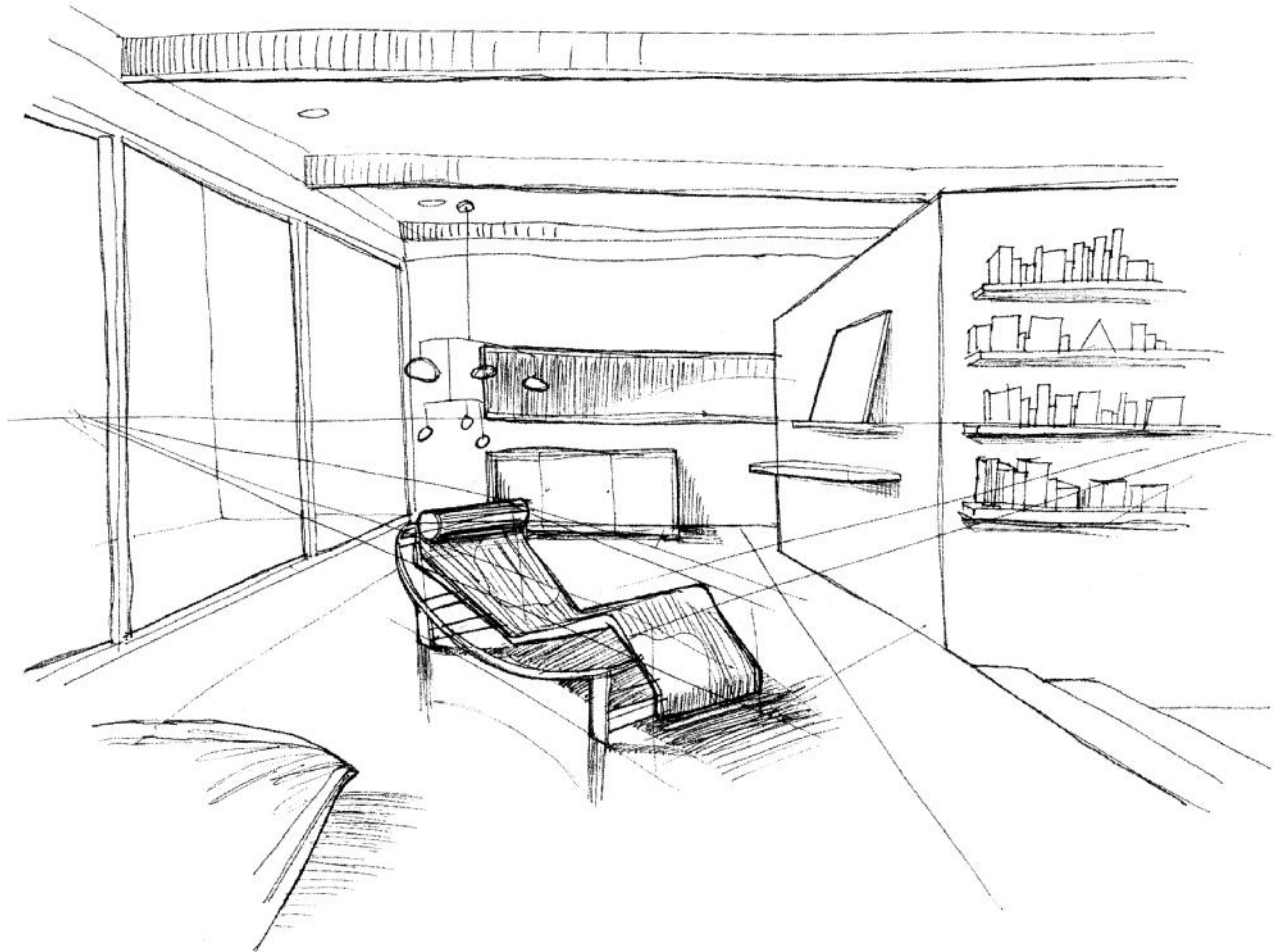
Tape your sketches here.

RESOURCES FOR BUILDING BASIC PERSPECTIVE SKILLS

There are many books that teach the basics of perspective drawing. Here are several that have a friendly, get-to-the-point approach:

- Ching, Frank. *Architectural Graphics*, 6th ed.. Hoboken: Van Nostrand Reinhold, 2015.
- Hanks, Kurt, and Larry Belliston. *Rapid Viz: A New Method for the Rapid Visualization of Ideas*, 3rd ed. Boston: Crisp/WKI, 2006.
- Koenig, Peter. *Design Graphics*, 3rd ed. New York: Pearson, 2012.

If you are the type of person that learns better with others, you might also take a beginning art, interior design, or architecture class that teaches perspective techniques. Whatever learning method you prefer, it is *very important* that you are comfortable with sketching basic perspective scenes and objects before you proceed in this book so that you are comfortable and make the progress you hope for.



A one-point perspective sketch. Note that the right wall does not connect to the back wall to allow for a corridor. Extensive glass and a floor-level change bring interest to this scene, created in about 15 minutes. The lounge chair used other sets of vanishing points along the horizon line that are visible here because it is not oriented at a right angle in the scene. Sketch by Jill Pable.

INTRODUCTION TO CHAPTERS 1–5: GETTING STARTED

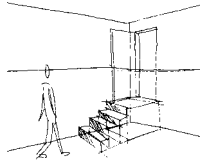
INTRODUCTION

Welcome to the start of the scenario chapters of this book! Chapters 1–5 are designed to get you off on the right foot by looking at foundation elements in perspective sketches, such as stairs, doors, and windows. You will also address more complex objects composed of various basic shapes, like lighting fixtures, fountains, or visual displays. These beginning chapters also get you comfortable with manipulating the basic planes within interior environments—floors, walls, and ceilings—so that your sketches can start to reflect the full breadth of your imagination. There is nothing as frustrating as having a great idea for a new interior and rejecting it because you believe you cannot sketch it convincingly. With enough practice, this will not be a problem, and these scenarios can help!

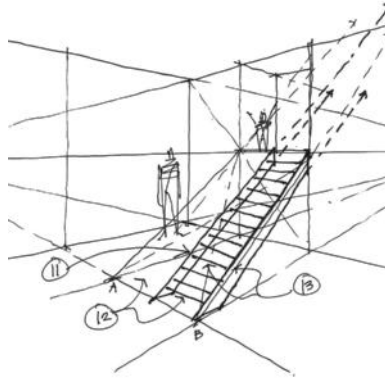
PERFORMANCE GOALS FOR THESE CHAPTERS

After completing the exercises multiple times using these chapters' step-by-step exercises, example sketches, and demonstration videos with diligence and persistence, you will be able to create quick perspective sketches that accomplish the goals listed on this page.

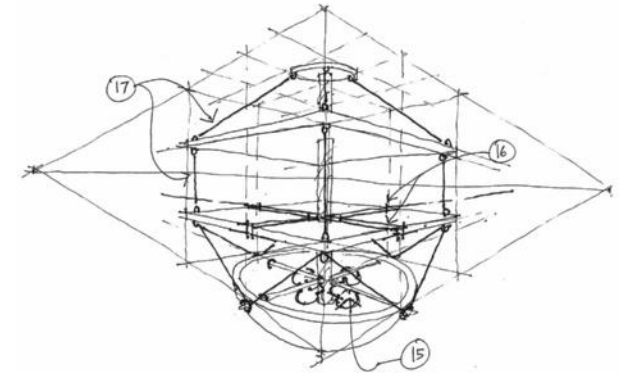
You will be invited to engage in repeated, timed practice of these exercises. If you document these attempts, you will likely observe and improve your sketching speed and accuracy over time. There is no “silver bullet” for learning how to sketch instantaneously. It takes time and effort, but if you commit to it, your improvement and mastery *will* happen!



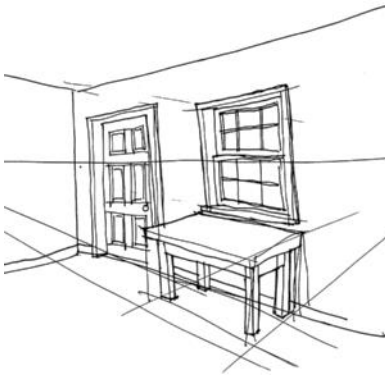
Chapter 1: Sketch level changes like stairs, correctly referencing the horizon line and vanishing points.



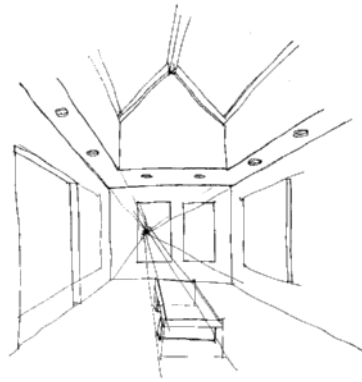
Chapter 2: Estimate the depth of spaces quickly and effectively and depict slopes correctly using vanishing point references.



Chapter 3: Depict complex objects correctly that are composed of subparts, such as lighting fixtures and museum displays.



Chapter 4: Sketch the correct and convincing geometry of doors and windows embedded in walls.



Chapter 5: Add interest to interior spaces by showing altering ceilings and custom skylights.

CHAPTER 1

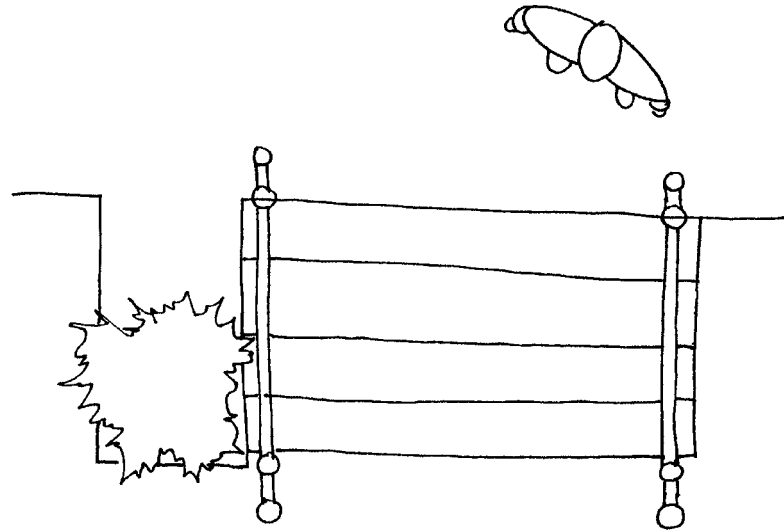
LEVEL CHANGES

OVERVIEW

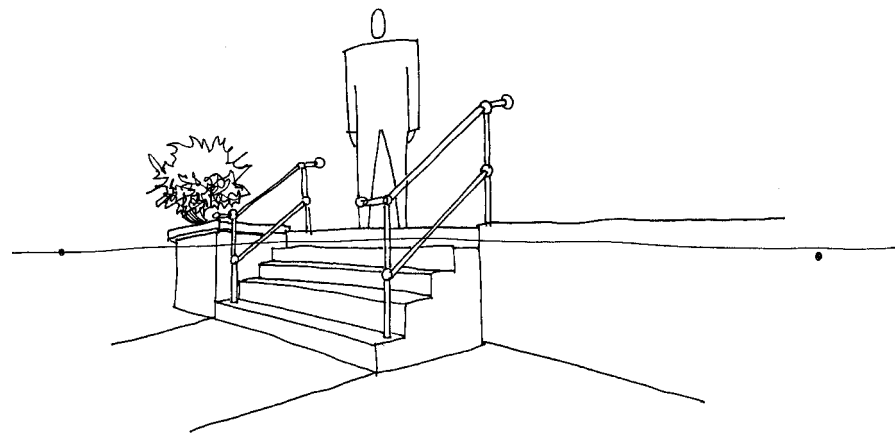
This first chapter will explore level changes in architecture, an important part of many spaces. Clients often notice if the view is “wrong” when it comes to level changes, so it’s really critical that perspective is correct when dealing with stairs, balconies, and similar things that are often included in quick sketches.

Don’t despair, though; if you keep a few simple rules in mind, you’ll get it right quickly.

This scenario will show you how you can manipulate the point of view.



Plan view of a space with stairs.



The design in a two-point perspective view.

WORM'S-EYE, EYE-LEVEL, AND BIRD'S-EYE BOXES

One way to sketch stairs is to think of them as a series of boxes arranged next to each other. If you are unsure about ideas like the horizon line and drawing boxes, go back to the Skills Check exercises for a review.

The boxes of these stairs are one of three types:

- Worm's-eye boxes
- Eye-level boxes
- Bird's-eye boxes

Worm's-Eye Boxes

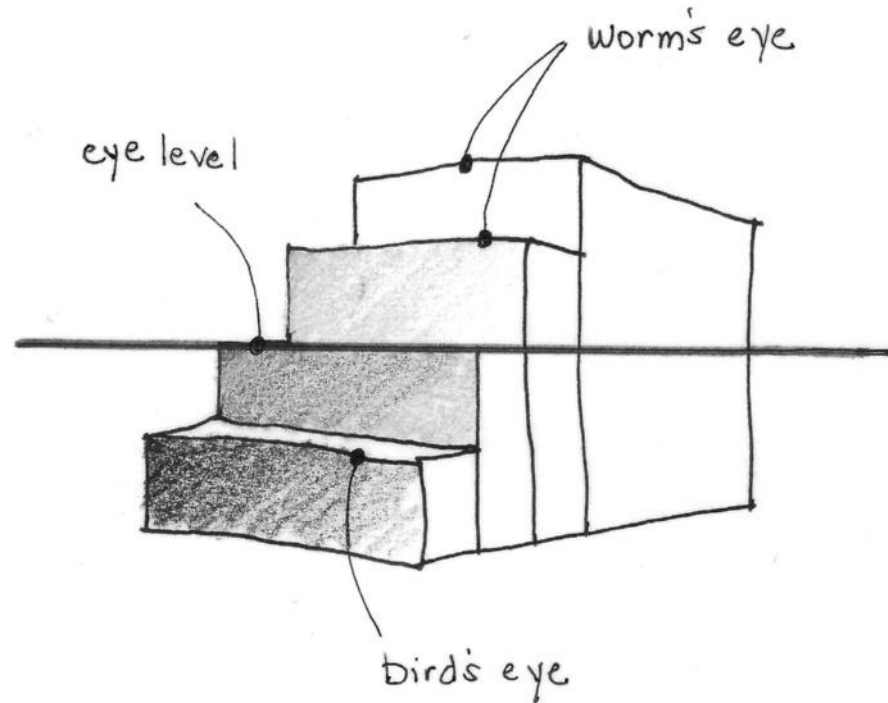
These boxes appear entirely above the horizon line. You cannot see the top of the stair treads.

Eye-Level Boxes

These boxes cross the horizon line. If perfectly on the horizon line, the tread is drawn as a single line.

Bird's-Eye Boxes

You can see the tops of these boxes, which are located entirely below the horizon line.



Worm's-eye, eye-level, and bird's-eye boxes.

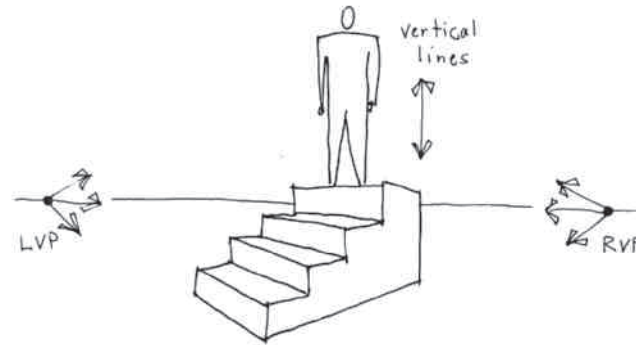
VANISHING POINTS

You can draw stairs in either one- or two-point perspective. In this sketch, lines in stairs are drawn in one of three directions:

- Vertically
- Receding to the left vanishing point (LVP)
- Receding to the right vanishing point (RVP)

Re-create this sketch on this page using a 4x6 index card, taping it on this page. Include the vanishing points (VPs) on the card, using them to construct the stairs with lines. It's OK to show the guidelines from the VPs that construct the stairs.

Repeat this exercise as many times as you wish using more 4x6 index cards. Tape your best attempt on top of the blank area on this page.



The stairs are drawn with lines that are influenced by the left vanishing point, the right vanishing point, or the vertical direction.



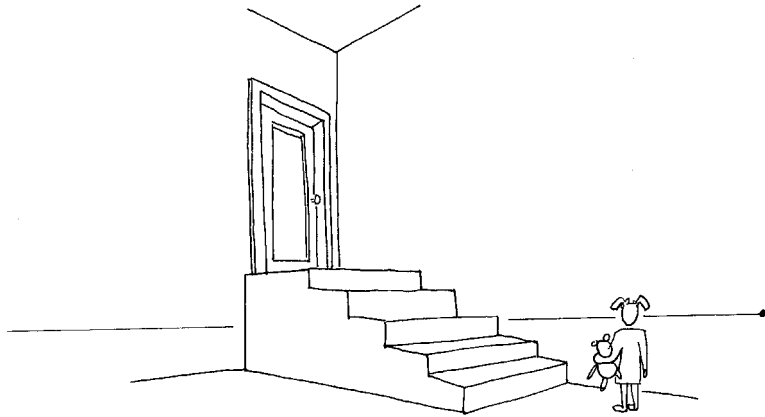
Explore online

See a dynamic drawing of how the step's lines relate to vanishing points in this chapter's STUDIO online resources.

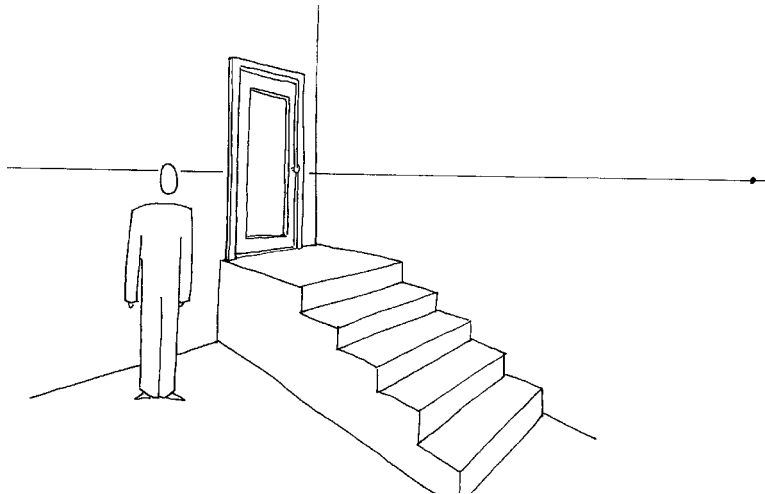
Tape your sketch here.

CHILDREN'S AND ADULTS' POINT OF VIEW

Stairs look different depending on how low or high the horizon line is placed. Horizon line height relates to your choice of the viewer's eye level. Here is the same set of stairs seen from two different viewing heights.



The stairs as seen by a young child. The horizon line is low, and the view looks up at most of the stairs. Most adults are not used to looking at interior space from this dramatic point of view.



The stairs as seen by an adult. The horizon line is higher, and the view looks down at many of the stairs. This five-foot adult eye-level horizon line height works well for most quick perspectives.