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THE SURPRISING PATH TO GREATER CREATIVITY

KEITH SAWYER

Praise for ZIG ZAG

“Finally! A creativity advice book that is grounded in scientific research.”

—**Mihaly Csikszentmihalyi**, author, *Flow: The Psychology of Optimal Experience*

“*Zig Zag* is the most fun and most useful creativity book I have ever read. Keith Sawyer’s gem sweeps you up with a host of great stories, quizzes, exercises, and teaches you one way after the other to be more creative.”

—**Robert I. Sutton**, professor of Management Science, Stanford University; author, *Good Boss, Bad Boss and The No Asshole Rule*

“In geometry the shortest distance between two points is a straight line. But in creative pursuits, *Zig Zag* shows us, it’s anything but. Keith Sawyer is the most creative person writing about creativity I know.”

—**Robert Mankoff**, cartoon editor, *The New Yorker*; author, *The Naked Cartoonist: A New Way to Enhance Your Creativity*

“Creativity is essential in our journey to the future, and this gem of a book helps each of us on the way.”

—**Tim Brown**, CEO and president, IDEO; author, *Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation*

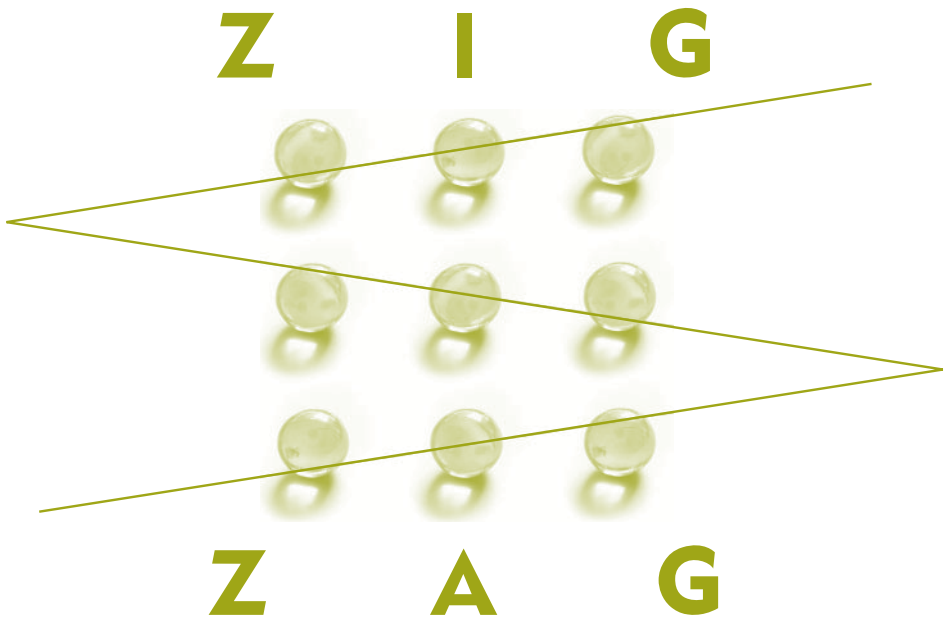
“Keith Sawyer is the best combination of a brilliant creativity researcher and storyteller around.”

—**Peter Sims**, author, *Little Bets: How Breakthrough Ideas Emerge from Small Discoveries*

“Zig Zag reveals the true nature of the creative process: improvisational, surprising, with unexpected twists and turns. The book is filled with hands-on activities that help you manage that process and keep it moving forward to a successful creative outcome.”

—**Josh Linkner**, author, *Disciplined Dreaming: A Proven System to Drive Breakthrough Creativity*

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THE SURPRISING PATH TO
GREATER CREATIVITY

Keith Sawyer

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To my son, Graham

Zig Zag

Introduction

Choosing Creativity

Ineffective people live day after day with unused potential. They experience synergy only in small, peripheral ways in their lives. But creative experiences can be produced regularly, consistently, almost daily in people's lives. It requires enormous personal security and openness and a spirit of adventure.

Stephen Covey

Creativity doesn't always come naturally to us. By definition, creativity is something new and different; and although novelty is exciting, it can also be a little scary. We're taught to choose what's familiar, to do what's been done a thousand times before. Soon we're so used to staying in that well-worn rut that venturing into new terrain seems an enormous and risky departure.

But rest assured—you already have what it takes to be creative. Neuroscience and psychology have proven that all human beings, unless their brain has been seriously damaged, possess the same mental building blocks that inventive minds stack high to produce works of genius. That creative power you find so breathtaking, when you see it tapped by others, lives just as surely within you. You only have to take out those blocks and start playing with them. How, though?

In fact, the journey's pretty simple. In this book, I share with you the eight steps that are involved in being creative. Once those steps become second nature to you, creativity won't seem rare and magical and daunting. You'll stop being scared of writer's block or stupid ideas or a blank canvas or a new challenge, and your creative power will be flexible, versatile, and available in unlimited supply. All you have to do is learn how to tap it. And that's the purpose of the exercises in *Zig Zag*.

I started thinking about creativity many years ago, when I graduated from MIT with a computer science degree and found myself designing video games for Atari. Since then I've played jazz piano and studied how jazz musicians collaborate; earned a doctorate in psychology at the University of Chicago and studied how Chicago's improv companies create on the spot; researched theories of creativity in education; and studied how artists and sculptors teach creativity.

No matter what kind of creativity I studied, the process was the same. Creativity did *not* descend like a bolt of lightning that lit up the world in a single, brilliant flash. It came in tiny steps, bits of insight, and incremental changes.

Zigs and zags.

When people followed those zigs and zags, paying attention to every step along the way, ideas and revelations started flowing. Sometimes those ideas did feel like gifts, arriving unsolicited at the perfect time. But in reality, a lot of daydreaming, eclectic research, wild imagination, and hard choices had paved the way.

The creative act is nonlinear.

Josh Linkner, jazz musician and entrepreneur

It's lucky we do all have creative potential, because we need it more than we realize. You might think of creativity only in a single context, as a

quality you pull out when it's time for a weekend craft project or a crazy practical joke. But you can use creativity to

- Excel at your job
- Build a successful career

- Balance professional success with a deeply fulfilling personal life
- Shape your personality, your sense of style, the way you connect with the world, and the way you are perceived
- Raise your children without dull routines, harsh words, or quick-fix bribes
- Learn effectively—not by rote memorization, but in a way that makes the knowledge part of you, so you can build on it
- Find fresh, clever, permanent solutions to nagging problems
- Make good and thoughtful decisions
- Forge interesting, sustaining friendships
- Bring about real change in your community

Think of a challenge, need, or issue that you face right now. Something that you care about and just don't know how to deal with; something that is frustrating you or feels like an impasse. Scribble this challenge on a Post-it note (now *there* was a creative product idea!) and stick it to this page. Scribble a few more, if you like; you can plaster the page with them.

Here are some examples that most of us have faced at some point in our lives:

- “My career is stuck, and I don't know how to move forward.”
- “My relationship seems to be falling apart, and I don't know what's wrong.”
- “I'm spending way more money than I'm making.”

At your job, your problem might be more immediate and concrete:

- “I need a good idea for my next advertising campaign.”
- “My company wants to market our successful product to a new type of customer, and we're not sure how we need to change the product to satisfy them.”

- “I need a way to explain the latest changes in tax policy to our employees.”
- “My group doesn’t work together very well because no one understands what anyone else is doing.”
- “At my medical practice, we’re starting to get a lot of patients with the same disorder, and I can’t figure out why.”

In many professions, the problems can get so specific and so technical that only you know how to phrase them. As a psychology professor, I face challenges like the following:

- “How can I rewrite my scientific journal article so it’s readable enough for a general audience?”
- “I need a research project compelling enough to win a National Science Foundation grant.”
- “My students didn’t understand a word of the reading I assigned. I need a clearer, livelier way to teach them this material.”

As you read the techniques in this book, keep thinking of your Post-it challenges, and play with these techniques to find a creative solution.

The Eight Steps

I’ve spent more than twenty years as a research psychologist studying how creativity works. I’ve explored the lives of exceptional creators and learned the backstories of world-changing innovations. I’ve reviewed laboratory experiments that delved deep into the everyday creativity that all of us share.

To write this book, I distilled all that research into eight powerful, surprisingly simple steps. Follow them, and you zig zag your way to creativity.

This book is your personal trainer, coaching you through the eight zig zagging steps of creativity.

Much of what's been written about creativity until now has romanticized it, invoking the divine Muses or the inner child or the deep subconscious. Creativity glows like an alchemist's gold, always mysterious and just out of reach, but promising utter transformation. That's a clever trick, and people have made millions on it. They've convinced us that creativity is a rare gift conferred on a handful of special individuals, and the rest of us can only stumble along in the dark, hoping some of that glittering dust will fall on our upturned faces.

These eight steps aren't the exclusive property of exceptional individuals. I repeat: we all have these abilities. And the latest research in psychology, education, and neuroscience shows that they can, without a doubt, be practiced and strengthened.

This book is your personal trainer, coaching you through the eight zig zagging steps of creativity. Before I started to write, I spent a long, patient year reading countless books that claimed to increase your creativity. Some of them were brand-new, some were decades






old, and some recycled the wisdom of the ancients. Most of them contained at least some good advice; but because they weren't grounded in research, that good advice was usually mixed with myths and mistakes. Still, in just about every book, I found at least one or two hands-on activities, exercises, and games that aligned perfectly with the latest research findings on human creativity. I organized the best of these classic creativity games and exercises into the eight steps. Then I added many of my own hands-on exercises, which I created just for this book and are based on new research about successful creative thinking.




Much of what's been written about creativity until now has romanticized it, invoking the

Creativity is close to 80 percent learned and acquired.

Hal Gregersen, professor at INSEAD Business School

Here are the eight steps, with short descriptions so you can see how they fit together:

-  1. *Ask.* Creativity starts with a penetrating research question, a startling vision for a new work of art, an urgent business challenge, a predicament in your personal life. Mastering the discipline of asking means you're always looking for good problems, always seeking new inspiration. You know where you're going, and yet you're receptive to questions that emerge unexpectedly.
-  2. *Learn.* In a creative life, you're constantly learning, practicing, mastering, becoming an expert. You seek out knowledge not only in formal classrooms but also from mentors, experts, books, magazines, film, Web sites, nature, music, art, philosophy, science . . .
-  3. *Look.* You are constantly, quietly aware. You don't just see what you expect to see. You see the new, the unusual, the surprising. You see what others take for granted, and what they incorrectly assume. You expose yourself to new experiences eagerly, without hesitation; you regularly seek out new stimuli, new situations, and new information.
-  4. *Play.* The creative life is filled with play—the kind of unstructured activity that children engage in for the sheer joy of it. You free your mind for imagination and fantasy, letting your unconscious lead you into uncharted territory. You envision how things might be; you create alternate worlds in your mind. “The debt we owe to the play of imagination,” Carl Jung wrote, “is incalculable.”
-  5. *Think.* The creative life is filled with new ideas. Your mind tirelessly generates possibilities. You don't clamp down, because you realize most of these ideas won't pan out—at least not for the current project. But successful creativity is a numbers game: when you have tons of ideas, some of them are sure to be great.

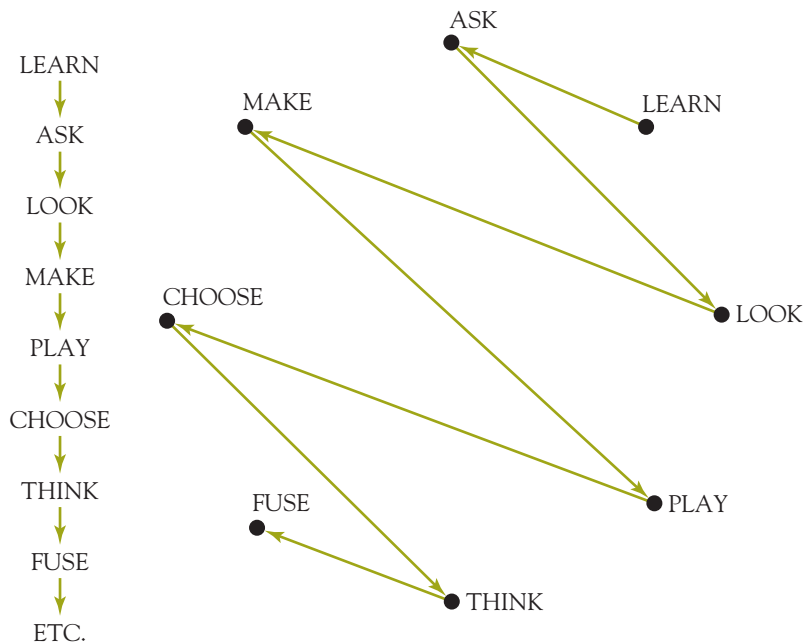
-  **6. Fuse.** Creative minds are always bouncing ideas together, looking for unexpected combinations. Successful creativity never comes from a single idea. It always comes from many ideas in combination, whether we recognize them or not. The creative life doesn't box its concepts into separate compartments; it fuses and re-fuses them.
-  **7. Choose.** A creative life is lived in balance, held steady by the constant tension between uncritical, wide-open idea generation (brainstorming, done right) and critical examination and editing. Choosing is essential, because not all ideas and combinations are ideal for your purposes. The key is to use the right criteria to critique them, so you can cull the best and discard any that would prove inferior, awkward, or a waste of your time.
-  **8. Make.** In the creative life, it's not enough to just "have" ideas. You need to make good ideas a reality. You continually externalize your thoughts—and not just the polished, finished ones. You get even your rough-draft, raw ideas out into the world in some physical form, as quickly as possible. Making—a draft, a drawing, a prototype, a plan—helps you fuse your ideas, choose among them, and build on what you like.

To solve a particular problem, the simplest approach is to work through the steps in order:

Creativity is not a mystery. There are proven techniques for enhancing creativity, and they are within anyone's reach.



Other books about creativity tend to stick to this linear process: spot the need or opportunity first, then identify the problem (ask), then gather information (look), then look for ideas (think), then select an idea (choose), and finally implement the idea (make). But as psychology and neuroscience are showing us, the creative process is far richer than that—and far less rigid. When you begin to master the eight steps, you'll start to zig and zag:



For example, although making seems to happen most naturally at the end of the eight steps, you can use its techniques to enhance the other seven steps, too. Making your ideas can help you fuse them, and choose the right ones. Making your daydreams can help you play more effectively. Making the things you see each day while looking can help you translate those sights into new ideas, or clarify your original question, or realize what you still need to discover.

Don't try to jump ahead to think and immediately have a bunch of ideas; creativity doesn't work that way. You have to follow the zigs and zags. You might not be focused on the right problem because you haven't asked the right question. You might not have the information you need because you haven't learned enough. You might not have explored the spaces and alternatives through the play that generates ideas.

Once you get comfortable with the rhythm of zigging and zagging, you'll be able to use the steps as you need them, without a rigid, linear order. In truth, any of the eight steps can play a role at any stage of creativity. After a great idea has emerged, no one can remember exactly where it started. But you can be sure that the looking continued through the final revisions, and the asking was repeated with each tiny decision about a detail in the finished work.

Exceptional creators often zig zag through all eight steps, in varying order, every day. That's part of the secret, because the steps work together to generate successful creativity. Each step feeds the other seven.

Many creativity books touch on some of these eight steps, but most of them emphasize thinking of new ideas and neglect the other seven steps. That's like waiting for a crop without sowing any seeds. If you want to do more than "be creative" for a minute or two, you need regular access to all eight steps. When you follow them, you experience a steady flow of small, good ideas. You come to expect those ideas to materialize, and they do. You can't know when they'll arrive, and you can't know what they'll look like. But you *can* trust the eight steps to bring them to you.

Zig Zag gives you, I hope, a more complete, original, and easily mastered way of seeing the world, making connections, solving problems, and overcoming obstacles. It's a handbook of proven techniques, based in solid scientific research about creativity and the brain. For my part, I've found it exhilarating to learn, with all the certainty today's neuroscience can bring, that creativity is not

a mystery. There are proven techniques for enhancing creativity, and they are within anyone's reach.

Mistakes We Should All Avoid

There are two common mistakes that people make when they decide they need to be more creative. Following the zig zag way can help you avoid these errors.

Mistake #1: Thinking That You Only Need to Be Creative Occasionally

Many people think of creativity as something you need only once in a while, when your normal habits and skills fail. So you wait until you face a serious challenge, something different from anything you've ever dealt with before, and only then do you decide that creativity is the answer. You're right, of course—creativity *is* the answer. But the mistake is waiting until the last minute and then hoping to suddenly become creative, for just long enough to solve the problem at hand. As therapist and author Martha Beck once wrote, "Don't wait for catastrophe to drive you to the depth of your being. Go there now; then you'll be ready."

This process *can* help you respond to a sudden challenge, but the real benefit comes when you practice the eight steps every day. Then, instead of reacting to unexpected problems, focused on the past, you'll be finding promising opportunities that drive you forward into the future.

Mistake #2: Hoping There's One Great Idea Out There

Often we think that a creative solution to a problem will be a single thought that dawns on us in a moment of clarity. To the contrary: studies of creativity show that it rarely arrives as a single brilliant idea. Rather, creative solutions to life's problems are lit

by many small creative sparks—what Virginia Woolf described as “little daily miracles, illuminations, matches struck unexpectedly in the dark.” Creativity works by collecting these sparks as you zig zag forward, until suddenly they give off enough light to reveal a solution.

Wouldn't it be better to have these small sparks happening all the time, and accumulating *before* you face a serious problem? Imagine having a backlog, a notebook of good ideas that you could draw on whenever you needed it. The eight steps teach you that kind of *proactive* creativity. It's already in your power to produce this type of creativity, and it's far more effective than *reactive* creativity.

As you read this book, you'll realize why the second mistake, the “insight” myth, is so dangerous. It makes creativity sound slick and easy: the flash of insight comes, and presto change-o, your problem is solved. The danger is that when you don't have that one big flash, you conclude, “I'm not creative.”

And you're wrong.

Practicing the eight steps does take some work; you have to invest a bit of effort every day to keep those small creative sparks coming. You concentrate, you commit a measure of your precious time and energy, and you persist. Luckily, the practices are more delightful than demanding, and the discipline soon comes naturally.

If creativity just meant sitting around waiting for a lightning bolt, then you wouldn't be able to learn much about it from any book. It would be inexplicable, a kind of magic outside your control. Luckily for all of us, that's *not* how creativity works. Creativity is not a trait or a property or a gift. It's a set of behaviors. “Inspiration is for amateurs,” said the prolific painter Chuck Close. “The rest of us just show up and get to work.”

How long will it take for the eight steps to lead you to creativity? For some people, a week or two; for others, maybe six months or a year. The time frame depends on how thoroughly

you practice the steps and how readily you let old anxieties and inhibitions slip away. Once you understand the process, you can sketch more loosely, come up with better ways to communicate with your boss, or write what novelist Anne Lamott calls “shitty first drafts” without being tempted to give up—because you’ll know how to choose and refine and test those early steps.

What is certain is that you will continue to get better at the steps. Before you know it, you will have mastered them and made them your own—custom-tailored for your own creative domain, whether it’s writing fiction, working in sales, or designing computer software. As circumstances change, the rhythm of your life speeds or slows, and you experiment with new kinds of projects, you can keep tweaking. You will zig and zag your way to constant creativity, every day. The basic steps won’t change, and they will never let you down.

How to Make Use of This Book

This is a practical book; it’s meant to be used. The more you practice creativity, the more creative you become. So in each chapter, I take one of the eight steps, explain it, tell you why it works, and then give you *practices* that will let you master it. For each practice, there’s an array of techniques, little exercises, or tricks or games that illustrate and enable you to hone that particular practice. Some you may need more than others; you’ll know where to linger and when to move on. In the Conclusion, I provide additional advice about how to weave the eight steps together for maximum creativity, to finish your training as a zig zag master.

The techniques described in this handbook are not there simply to be read, tried once, and discarded with a check in the to-do box. They are there for you to use daily, in whatever way you need them. Keep the book nearby. Every day, make it a point to engage in at least one of the techniques. You’ll soon find yourself doing this automatically, without even trying. But at the outset, open the

book at random and choose one, or select one of the techniques matched to the step you've chosen to focus on that day.

I'd suggest you start by skimming through the book once, from start to finish. Or, you could take a quick glance at Appendix A, a concise map of all of the information in the book. That way you'll see the big picture of how the eight steps form a creative journey.

Then take the creativity assessment that follows. It will tell you which of the eight steps you're already good at, and which you'll want to shore up. That's where the techniques come in: once you've identified the steps you want to practice and polish, you can improve your creativity by using the techniques designated for each of those steps.

Personal Creativity Assessment

Give yourself one point for each "yes" answer. A higher score means you have greater potential to excel at that step. A lower score means you need a bit more effort and exercise.

Ask

_____ I am never satisfied; everything can always be made better.

_____ When someone starts telling me about a problem he or she is having, I tend to say things like, "Wait a minute; it sounds like your real problem is . . ."

_____ I get annoyed by little things that don't work like they're supposed to.

_____ I've never agreed with that old saying, "If it ain't broke, don't fix it."

_____ Sometimes I go down the wrong path, but I trust that eventually I'll catch myself and correct my course.

_____ I never have enough time to explore everything I'm interested in.

Total for Ask: _____ (6 possible points)

Learn

_____ I would call myself an expert in my area.

_____ I've learned just about everything there is to know about my creative challenge.

_____ People come to me for advice about my field.

_____ I can tell you exactly where to get the answer to your question.

_____ I stay on top of new developments in my area.

_____ I subscribe to magazines and journals that keep me up-to-date.

_____ I keep handy the most important reference books in my field.

_____ When something new and different happens in my field, it's immediately obvious to me why it's different.

Total for Learn: _____ (8 possible points)

Look

_____ I like learning new things.

_____ When I meet someone with a job I've never heard of, I ask a lot of questions about what he or she does.

_____ I dabble in things; I've tried lots of different hobbies.

_____ I get bored listening to the same style of music over and over. I seek out unusual sounds and styles.

_____ I rarely have time to watch television, but when I do, I surf channels to see what sorts of shows are on these days.

_____ I get bored going to the same places; I'd almost always rather go to a new place.

Total for Look: _____ (6 possible points)

Play

_____ Sometimes I act a bit silly, but I rarely worry about it.

_____ I often imagine what it would be like if the world were very different.

_____ I'm always trying out new things. I almost never worry about looking stupid or making mistakes.

_____ I take breaks from work, but not necessarily at exactly the same time every day. I can tell when I've worked enough and I need to clear my head, and that's when I go for coffee or a snack.

_____ I sometimes have ideas when I'm not really doing anything—in the shower, or while driving. I write them down so I can work on them later.

_____ I sometimes wonder what life is like for someone born in another country who speaks a different language and was raised in a different religion.

Total for Play: _____ (6 possible points)

Think

- _____ When someone suggests a crazy idea, I'm almost always willing to go with it.
- _____ I rarely have trouble coming up with ideas.
- _____ Sometimes people laugh at my ideas because they seem kind of crazy.
- _____ My friends and colleagues think of me as an "idea person."
- _____ When someone else has an idea, my first reaction is to build on it and try to make it even better.
- _____ When I can't think of a good idea, I often step back and ask, "What's blocking me?"

Total for Think: _____ (6 possible points)

Fuse

- _____ I frequently notice strange connections between things—people, events, TV shows . . .
- _____ I'm usually working on more than one project, and I switch between my projects pretty often.
- _____ I like to talk to people very different from me.
- _____ I'm always dabbling in new hobbies.
- _____ In this past year, I attended a totally new group meeting or public event for the first time.
- _____ I'm usually juggling a lot of different projects and interests.

Total for Fuse: _____ (6 possible points)

Choose

- _____ I can tell pretty quickly if an idea is going to work.
- _____ Even if an idea sounds bad, I can usually find a couple of good things about it.
- _____ When an idea is a good one, I get a strong gut feeling, and I've learned to trust that.
- _____ I've had this experience: my idea turned out to be a bad idea, but I later used that idea for a completely different problem, and it worked out in an unexpected way.
- _____ Sometimes, to evaluate an idea, I'll list the pros and cons.
- _____ I can tell when an idea is interesting for some reason, even if I don't know yet if it will really work.

Total for Choose: _____ (6 possible points)

Make

- _____ I often doodle during phone calls or meetings.
- _____ I like to fix things myself—for example, if my child's toy car breaks, or if my toaster stops working, I'll take it apart before calling a professional.
- _____ I have kids' toys around that are for building things: Tinkertoys, Legos, wooden blocks . . .
- _____ I always have sketches and notes posted on the wall, where I can see them and think about them some more.