

LIFETIME CREATIVITY

A MASTER'S ADVICE FOR YOUNG MAKERS.

BY I-WEI HUANG



THE BUILDING BLOCKS

Every kid draws; I just never stopped. I spent countless hours dreaming up and drawing robots and creatures. People often call the ability to do art a natural talent, something you're born with. But what many don't see are the obsessive hours spent trying to improve on a skill that can never be perfected. Art is both a need and a skill, and this duality fuels itself in an endless cycle.

As a kid, I also took a lot of things apart. I suspect most of you did and do too. Curiosity combined with the love of tinkering fuels both the destructive and creative side in us. I'm always eager and excited when something breaks around the house and I get a legitimate excuse to open it and see what's inside. I can't always fix the problem, but I always learn from the experience. Today, with the internet, it's even easier to find information about how to fix, make, hack, and destroy things.

Building on early visual interests, natural curiosity, and a love of making will fulfill you for the rest of your life. Today, I design video game characters and toys for a living, and it's the best job in the world.

NATURE AND THE ILLUSION

People often ask me where I get the ideas for designing *Skylanders* char-



acters, as well as my steam-powered and little characterful robots. The answer is simple: nature! I have artist influences like everyone else, but the natural world, present and prehistoric, gigantic to microscopic, contains the best designs.

We are hardwired to know and feel when something resembles nature. So even when I make mechanical things, my aim is usually to create a bit of the illusion of life, based loosely on some natural design. I don't mean that you should copy nature directly, only that you should learn as much about animal anatomy and locomotion as possible. Each observation will become a tool in your toolbox, and with a mixed bag of tools, you can fool people into thinking that

you've created something that's out of this world — when in fact, it's the opposite.

ROUGH IT OUT

The best single piece of advice I can give, for both drawing and physical hacking, is to test before you commit. If you draw a perfect eye, it's difficult to proceed because you then have to draw a perfect face around it. It's easier and more effective to rough out the big forms first, then make the final lines for your perfect eye once the foundation is good enough to continue.

The same is true for making mechanical things. I often mount components together temporarily before making the final mounting,

Always stay curious; creation is a wonderful thing. All you need to do is pick your passion, develop it, and never stop building on your craft.



which can be a time-consuming process that involves irreversible drilling and cutting. I love zip ties and servo tape because they let you easily strap things together to test out part of a mechanism before committing fully to the design. I'm not an engineer, so I rely on trial-and-error — and it's better to do lots of little temporary trials in order to minimize the big, permanent errors.

THE GOAL

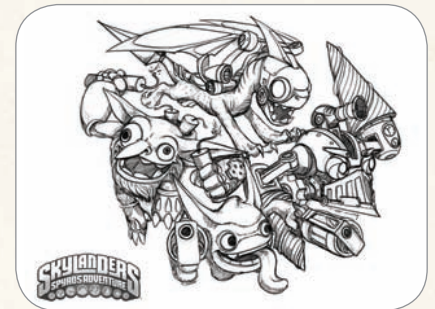
Always keep the big picture in mind. Don't lose your focus on the goal while you're working on the small details. It's always OK to change your goal during your process — that's the organic nature of art, and sometimes little mistakes turn out to be

great breakthroughs that change your goal. But always keep checking back to see if you're still progressing toward your last goal and confirm that it's still what you want.

PICTURE IT

Visualize. Force yourself to not pick up your pencil or screwdriver for 20 minutes while you think about every aspect of what you're going to do. Visualize yourself doing it, in the correct sequence, like you're actually doing it. This is a difficult thing to do, but gets easier with practice.

By visualizing in your head, you're actually problem solving, working out the big, obvious problems. By the time you get to the actual doing, you're only facing smaller detail



problems. Your brain makes mysterious connections when you force it to only practice and not yet act. Once you've mastered how to do this in your head, you'll never be bored.

BE DONE

Lastly, know when to consider a successful project finished or an unsuccessful project bad enough to stop. The obsessive nature of creation can often lead to much time and energy wasted on a project. Knowing when to stop is difficult, but it's easier if you just put the project aside and let your brain rest. I often come back to old projects weeks, months, or years later, with a fresh perspective.

I-Wei Huang is an artist and animator for the video game industry. He's best known for his tinkering in working steam-powered machines and other characterful robots, under the name CrabFu (crabfu.com).