HOW TO LEARN
DIGITAL PAINTING

BY MITCH LEEUWE

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HI THERE!

Let me introduce myself. I'm Mitch Leeuwe and am an illustrator from the Netherlands. I always drew a lot as a kid. I even had the childhood dream to become an animator at Disney. During my teenage years, I lost that dream. Luckily, I slowly started drawing more and more. When I was 19, I began to do some freelance work as a graphic designer, which made me consider picking up drawing again. I attended several drawing programs at schools but I learned most from online resources. Now, I'm a freelance artist working on visual development. This means I design characters, props and backgrounds for games, animation and toys. However, you probably know me from my Instagram where I release tutorials and more. My goal is to create a place where people can learn the things I wanted to learn when I started out.

ABOUT THIS BOOK

In this book I show and explain everything I know about digital painting. Being able to paint your own drawings is a great way to get a job as an artist at a studio or find jobs as a freelancer. Maybe you just want to make your own products or just for fun! When I worked at a game studio painting was a big part of my job. Games with cartoony designs and realistic painting were really popular at the time and they still are!

Everyone can learn how to paint. However, it's important to allow yourself time to learn and to make small steps. With this book I want to help you with that. So, I start with the basics and we'll work our way to more complex rules.

Happy drawing and I hope you will enjoy the book.

Best,
Mitch Leeuwe

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DIGITAL PAINTING

DRAWING SOFTWARE

I get a lot of questions about which software and brushes I use. There is a lot of different great drawing software. I started using Adobe® Photoshop® software back in 2004, because I just started drawing digitally.

Adobe® Photoshop® is still the main drawing software for artists. There are more and more alternatives coming. However, software is not the most important part of painting, knowing the principles behind color and light are.

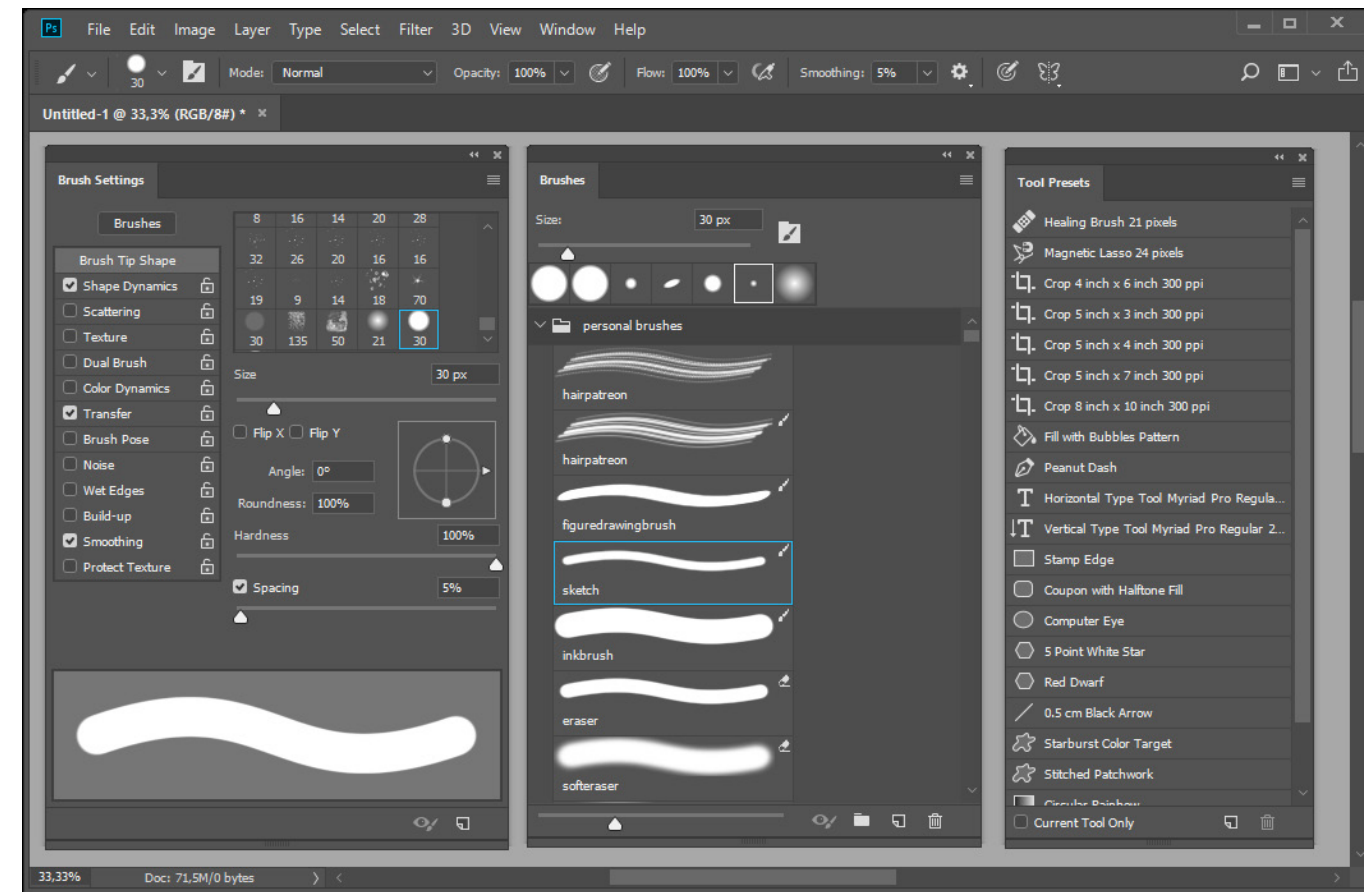## Panels to manage your brushes

The brush settings
Here you can create your own brushes with their own settings

Brushes
This is your library of brushes

Tool presets
Here are your tool presets and you can create new presets.

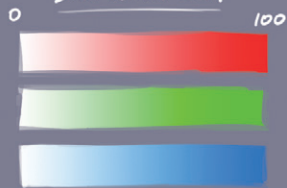Adobe® product screenshot(s) reprinted with permission from Adobe®

PROPORTIES OF COLOR

VALUE
Value describes the lightness or darkness of a color

0 — 100

Saturation
0 — 100

Saturation defines the intensity of a color

Hue
A Hue is the pure color without VAlue & saturation

360°

colorwheel

Colors have three different properties:

Hue	Saturation	Value
These are pure colors. Like green, yellow, red, purple, blue.	How intense/vivid is the color? Does it have a low intensity, e.g. is it almost grey, or is it really bright with a high intensity.	This determines whether the color is light or dark. For example: a light pink or a dark deep blue.

Complementary colors are color pairs, which are also called opposite colors. If you take a look at the color wheel you see why they are called opposite colors. They are located on opposite sides of the color wheel. When you mix those colors, they lose hue and start to turn grey or eventually white or black. But when you put them next to each other you can create a strong contrast.

COMPLEMENTARY COLORS

Complementary colors are pairs of color that are opposite of each other in the colorwheel

Whe mixed they cancel each other out

● + ● = ○

When put next to each other they create the strongest contrast

WARM VS. COLD COLORS

Warm colors

evoke a warm feeling

like the sun

Cold colors

evoke a cold feeling like water

different wave lengths

Warm colors tend to make you think of warm things, like the sun or fire. Warm colors appear to come closer to the viewer. You could use these warm colors to make a room feel smaller and cozier.

Cool colors are associated with ice, water and cooler things. As warm colors can make a room feel cozier, you could use cold colors to make a room feel bigger.

Color harmonies are color combinations that have an aesthetically pleasing effect on people. These combinations can help create a harmonious pleasing color scheme for your background. When you are working on a painting it's great to ask yourself what you want to tell and which color palette suits your story best.

COLOR HARMONIES

colors that are seen together that have a pleasing effect And are in harmony

1. Complementary
2. Analogues
3. Triad
4. Split Complementary
5. Rectangle
6. Square

A Family of Colors

← primary colors
parents of all the colors

secondary colors

Tertiary colors

the children of the primary colors

the grandchildren of the primary colors

PRIMARY COLORS

The primary colors are yellow, red and blue. Printers actually use cyan, magenta and yellow as primary colors. But I like to use the yellow, red and blue one because those are the classic ones and they just make more sense to me. Yellow, red and blue are used a lot. You could think of primary colors as the parents of all colors.
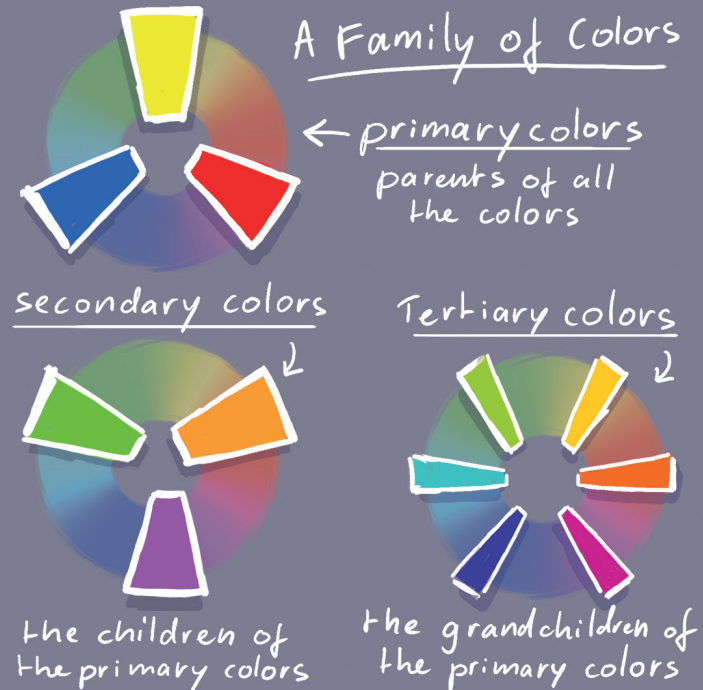
SECONDARY COLORS

Secondary colors are orange, purple and green. The secondary colors are the children of the primary colors. If you mix primary colors you get secondary colors. For example, if you mix yellow and red you get orange,

etcetera. Keep in mind that this is a theory and the results may vary if you try this with paint. The most important thing is to remember are the relationships between colors on the color wheel.

TERTIARY COLORS

Tertiary colors are obtained by mixing a primary and secondary color. As you can see on the color wheel, tertiary colors are located between the primary and secondary colors.

mixing colors

primary colors   secondary colors

By mixing primary colors you get secondary colors

yellow + red = orange
red + blue = purple
blue + yellow = green

mixing primary & secondary colors you get tertiary colors

primary colors   secondary colors   tertiary colors

yellow + orange = orange
red + orange = orange
red + purple = magenta

blue + purple = purple
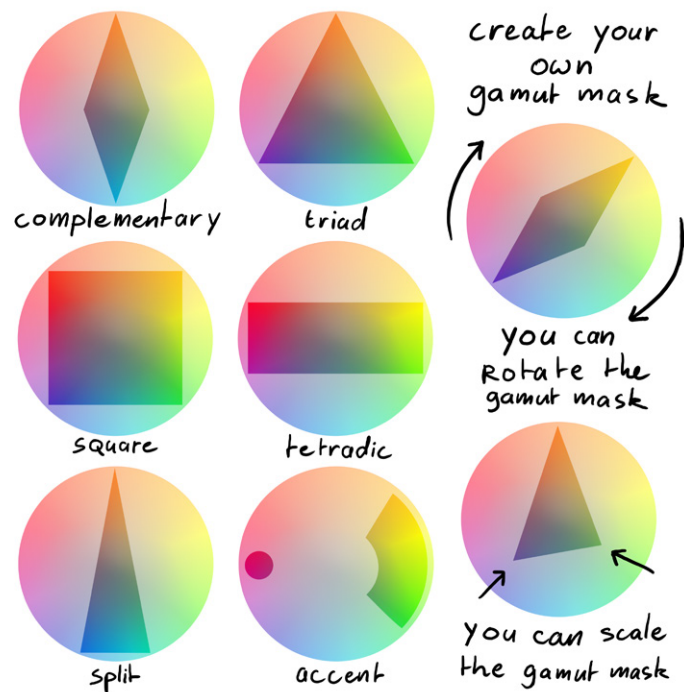blue + green = teal
yellow + green = green

GAMUT MASKS

Gamut masking is a method to create a balanced color scheme. Before you add colors to a painting, first think of the emotion and mood you want to add to the scene. With gamut masking you put a mask on top of the color wheel which creates a harmonized color scheme.

The big advantage of a gamut mask is the limitation of color choices. It immediately shows you which colors work nicely together in harmony, by leaving all other colors out.

complementary

triad

create your own gamut mask

square

tetradic

you can Rotate the gamut mask

split

accent

you can scale the gamut mask

① use a color wheel

② pick a color scheme like complementary

③ put a mask on top of the color wheel

← picking colors from the gamut mask

you can also use it on characters

In this example I'm showing how I create a gamut mask. The best way to learn to use this is to simply play around with these following guides.

1. I start with an image of a color wheel. You can copy of the one I use here or get one from the internet. Simply search for 'color wheel'. Try to get one with a greyish spot in the middle, so you have a desaturated color in the middle and fully saturated color on the outher edges.

2. In the example, I have chosen a complementary color harmony. Feel free to use any of the other types of color harmonies, like triad or square. Please refer to the chapter on color harmony to learn more.

3. Create a diamond-shaped mask on top of the color wheel. Use the colors inside the shape to pick your color scheme for your painting. As you can see, the shape contains a grey pink as well as an intense orange and blue, which are the main colors.

COLOR MEANING

You could say that our reaction to color is based on instinct and emotion. How you feel about a color is really personal and people can have a different feeling about a specific color. But at the same time, our feelings towards colors are built by our culture, experiences, subconscious, our individual backgrounds and personal preference.

However, some meanings behind color seem to be universal. Take the color red, for example. Red is a strong color. It really stands out and is often used to convey a note of caution or a warning.

A carefully thought-out use of color in your work can help set the right mood and emotion.

LOVE – COMPASSION – IMMATURE – PLAYFUL – BEAUTY

ENERGY – PASSION – DANGER – COURAGE – FIRE

FUN – OPTIMISTIC – CREATIVITY – INDEPENDENT – STIMULATE

ENERGY – ENTHUSIASM – HAPPINESS – OPPORTUNITY – POSITIVITY

HARMONY – BALANCE – SAFETY – ENCOURAGE – NATURE

TRUST – HONESTY – RELAY – ORDER – LOYALTY

RELIGION – SPIRITUALITY – COMPASSION – SENSITIVITY – MYSTERY

NATURAL – COMFORT – HONESTY – WARMTH – STABILITY

POWER – CONTROL – ELEGANCE – FORMALITY – FEAR

LIGHT – INNOCENCE – GOODNESS – PURITY – SAFETY

CONTRAST

When you're painting it's important to keep contrasts in mind. There are a lot of different ways to create contrast in your work. The most important and noticeable is value, which is why it's important to continuously check your painting's value, to be sure everything is clear and readable.

Value

Value is the most important when making a painting. It's the first type of contrast we notice and therefore the strongest. Essentially, value is the level of light and darkness in a piece.

Hue

With 'hues' we mean the actual colors. By choosing opposite colors on the color wheel you can create very strong contrasts. The farther apart colors are on the color wheel or a color chart , the stronger the contrast.
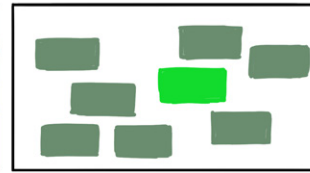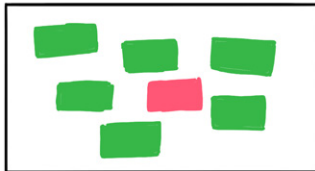
Saturation

Color saturation is the intensity of color in an image. Our eyes are drawn to the most intense color. Colors that are low in saturation look greyish and fully saturated colors look bright and strong.

Edge

Choosing a hard or soft edge also contributes to the level of contrast. You can draw the viewer's attention to the main subject by giving it sharp edges and by adding blurry edges to the surrounding area.
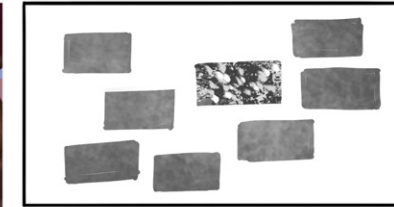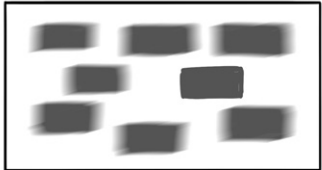
Textures

With textures you can also create contrast by showing different materials. You can also add a higher level of textures to get the viewers attention. For example when you add more texture to a point of interest compared to an object in the distance. The object in the distance can have a really subtle or none texture at all.
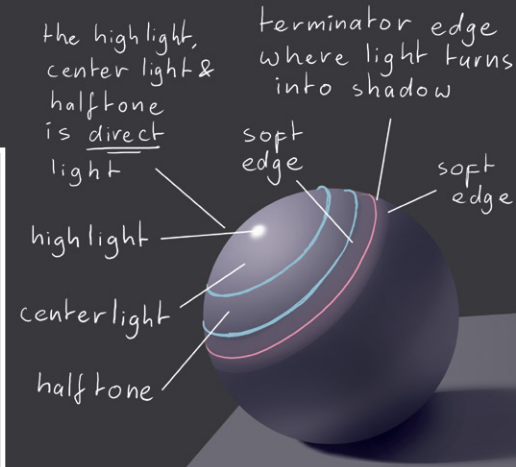
LIGHT & SHADOW

One of the best ways to start learning to paint is to learn how to paint a sphere. When light hits an object like this sphere, it creates a logical and predictable set of tones. If you understand these different properties, you can apply them to more complex structures. This is also called 'the form principle'.
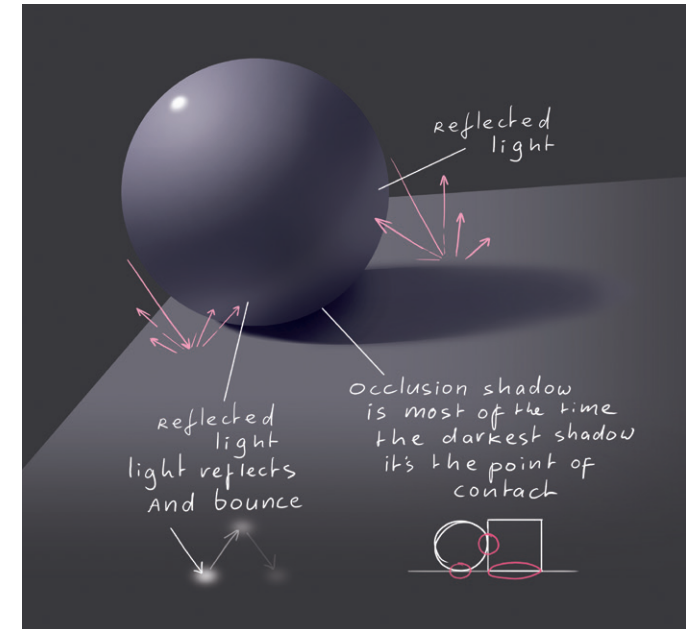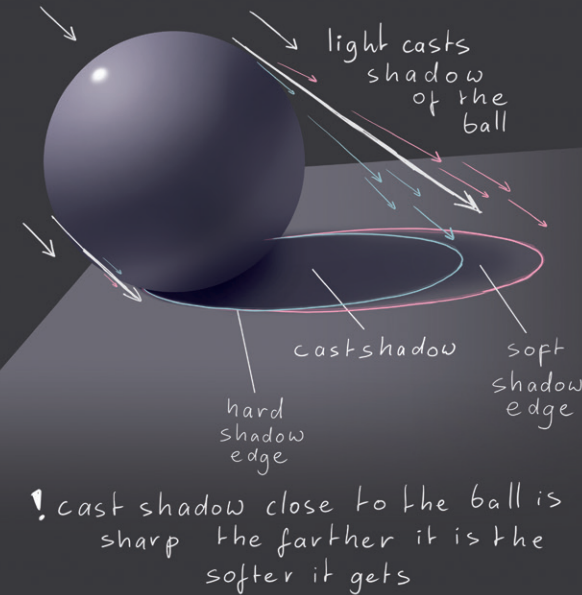Although the example shows a classic light setup, setups can be different. For example, the material could be different or there could be a second light source. However, the basic principles are always the same. Try painting a ball like this in values.

Light & shadow
lightsource
highlight
centerlight
halftone
terminator
reflected light
core shadow
Occlusion shadow
castshadow

The terminator is the line around an object where light starts to become shadow. With a round surface like this ball the terminator is a soft gradient.
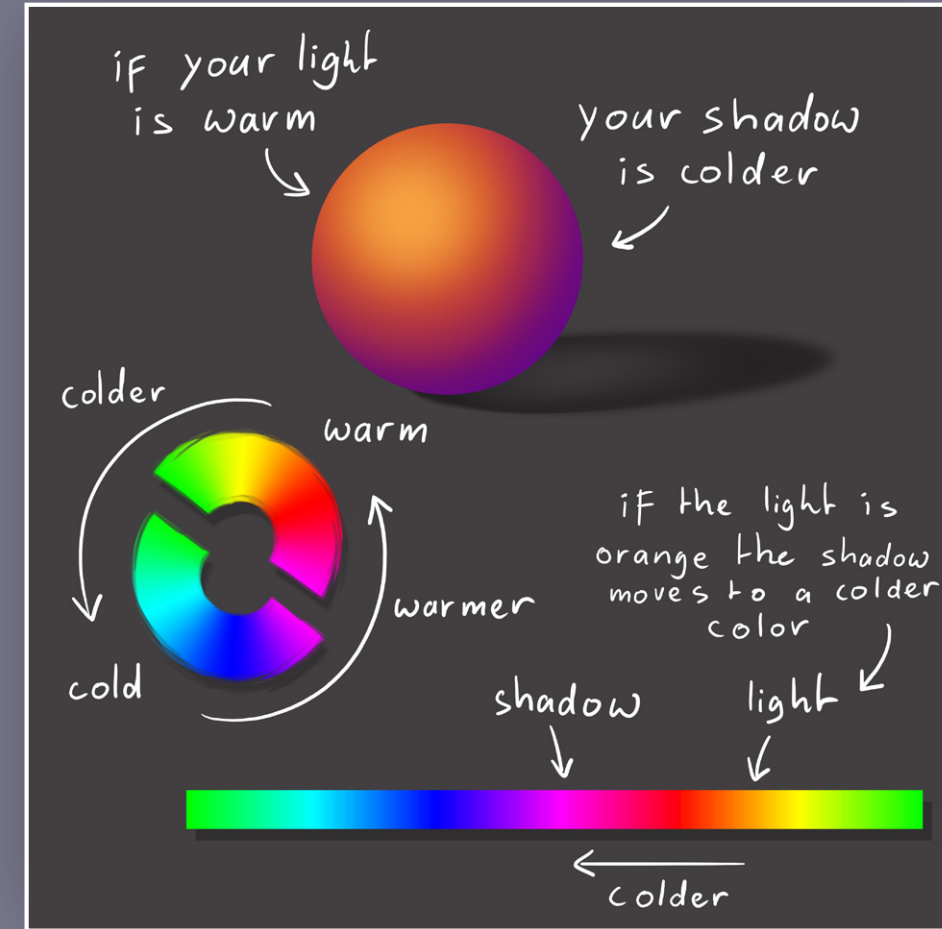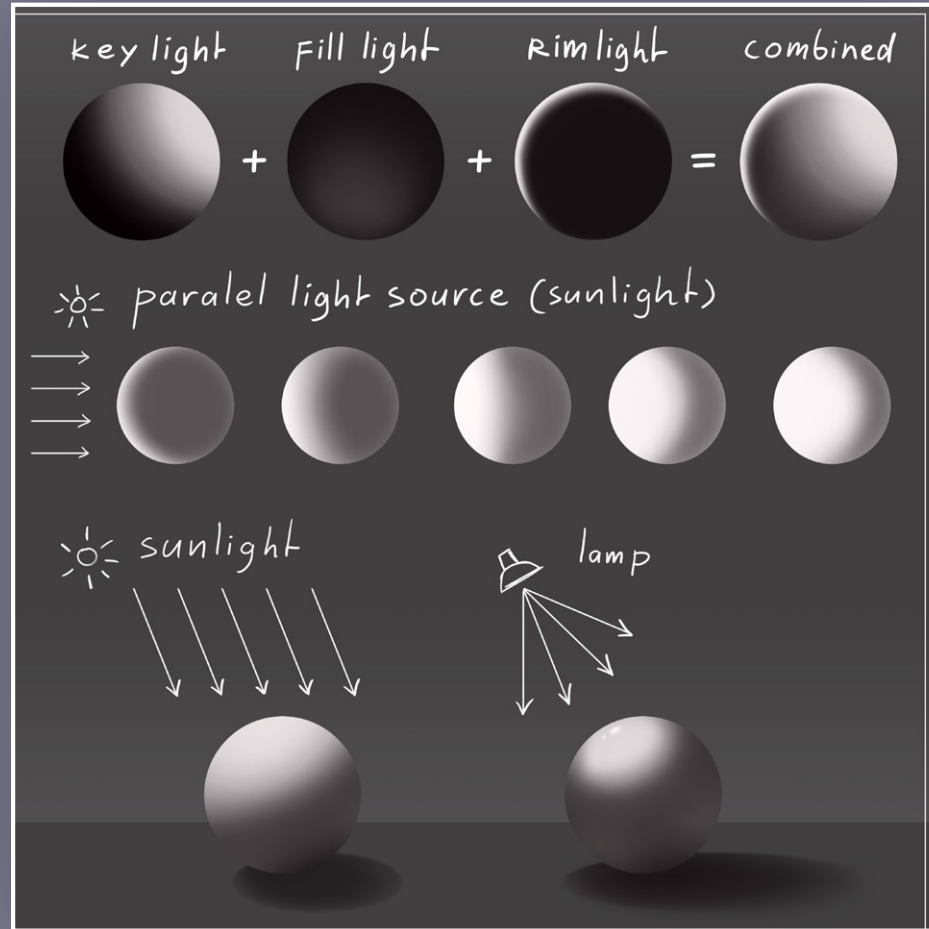

the highlight, center light & halftone is direct light
terminator edge where light turns into shadow
soft edge
soft edge
highlight
centerlight
halftone

Light bounces of objects, depending on how reflective objects tend to be. In this example you can see how light goes past the edge of the ball and get's scattewred. That's the reason why you get these soft shadows farther away.

light casts shadow of the ball
castshadow
soft shadow edge
hard shadow edge
! cast shadow close to the ball is sharp the farther it is the softer it gets

reflected light
occlusion shadow is most of the time the darkest shadow it's the point of contact
Reflected light light reflects And bounce

Because light bounces of objects it can also bounce back on the object. That is why you get reflective light. Reflective light is always softer than the main light. Oclussion shadow is the shadow you see when objects are really close or touching each other. It's the dark line if you press your fingers together. Oclussion shadow is the darkest part of a shadow.

Here are some more examples of how light works on spheres.
- Key light is the main light.
- Fill light is the light from the main light that reflects on the sphere.
- Rim light is light from a source from the back of the sphere. It is often used to separate the object from the background.
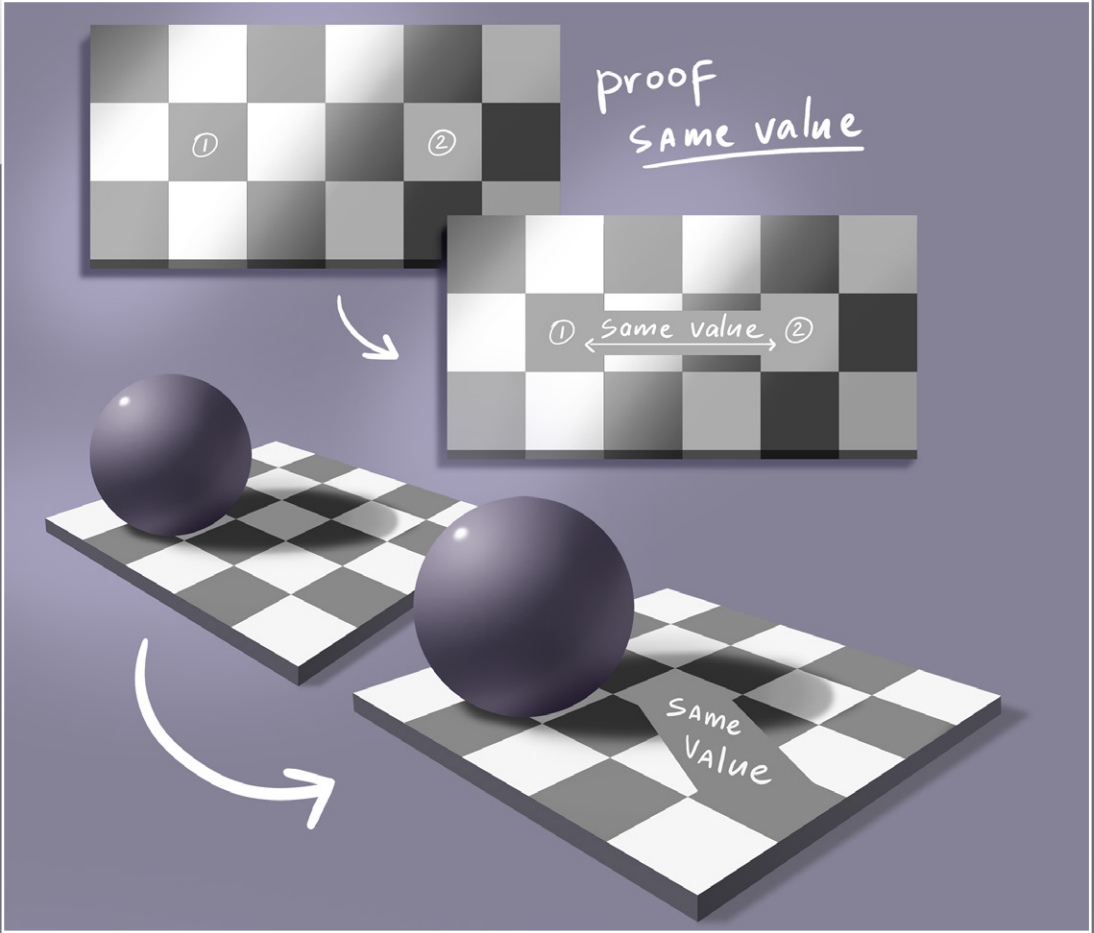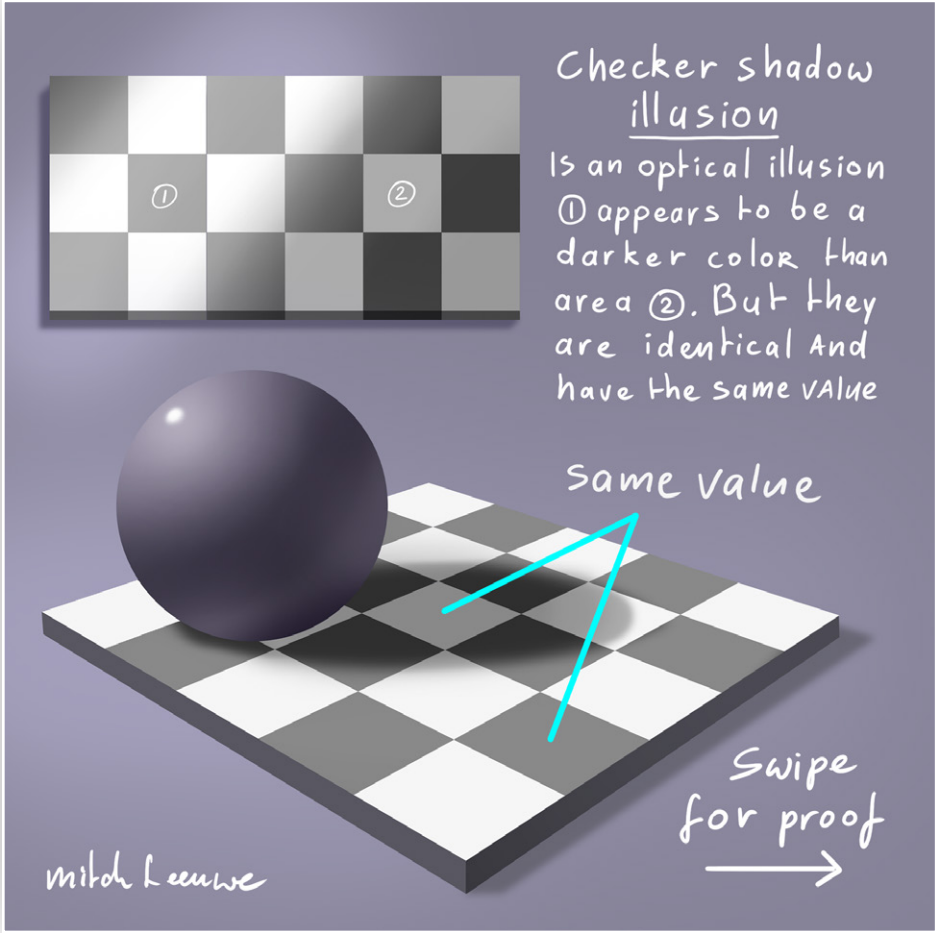
key light   Fill light   Rim light   combined

+   +   =

paralel light source (sunlight)

sunlight   lamp

if your light is warm

your shadow is colder

colder

warm

cold

warmer

if the light is orange the shadow moves to a colder color

shadow   light

colder

When I use a warm color as a light source, I tend to use a cooler color as a shadow. But when I use a cool color as light source, I like to use a warm tint as shadow. Normally, I add a shade of purple to the shadow. I play with its opacity until it hits the right amount.

Using these contrasting colors for light and shadows helps you create richer art with more depth.
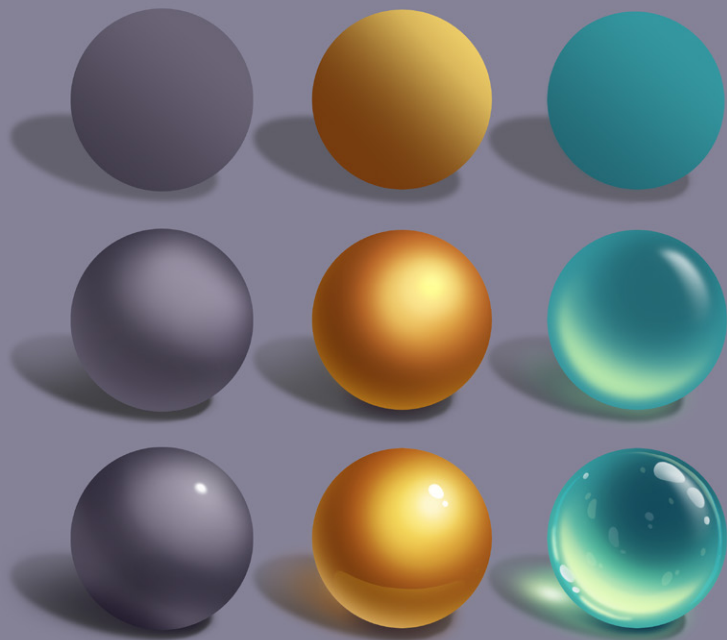
VALUES

The checker shadow illusion is an optical illusion. It's perceived different from reality. This also works for colors. When you put opposing colors next to each other, they make each other stronger, like red and green. With red next to green, the red appears to be way stronger. It can be useful to be aware of these illusions when creating art.

Take caution when using 100% black in your drawings. The checker shadow illusion shows that it isn't always necessary to use 100% black, as the color is affected by the surrounding colors.

Checker shadow illusion
Is an optical illusion ① appears to be a darker color than area ②. But they are identical And have the same VALUE

same value

Swipe for proof

Mitch Leeuwe

proof
same value

① same value ②

same value

Try painting these balls yourself, also try to paint them in different colors and materials.

MATERIALS

Light has a different effect on different materials. The ball on the left has a highlight. But when you remove the highlight the surface feels way more matt.

There is a lot of reflection on the golden ball, and you can also see the gold reflected in the shadow. The stronger the surface's reflection, the stronger the bounce light in the shadow will be.

The glass ball filled with a kind of fluid passes light trough it. That's why you see so much of the light reflected in that one's shadow.

Glass
Here is an example with glass. Light passes trough glass but it also bends light, which I'll explain further at a later stage. In this example, I show you how to draw a glass ball in 9 steps.
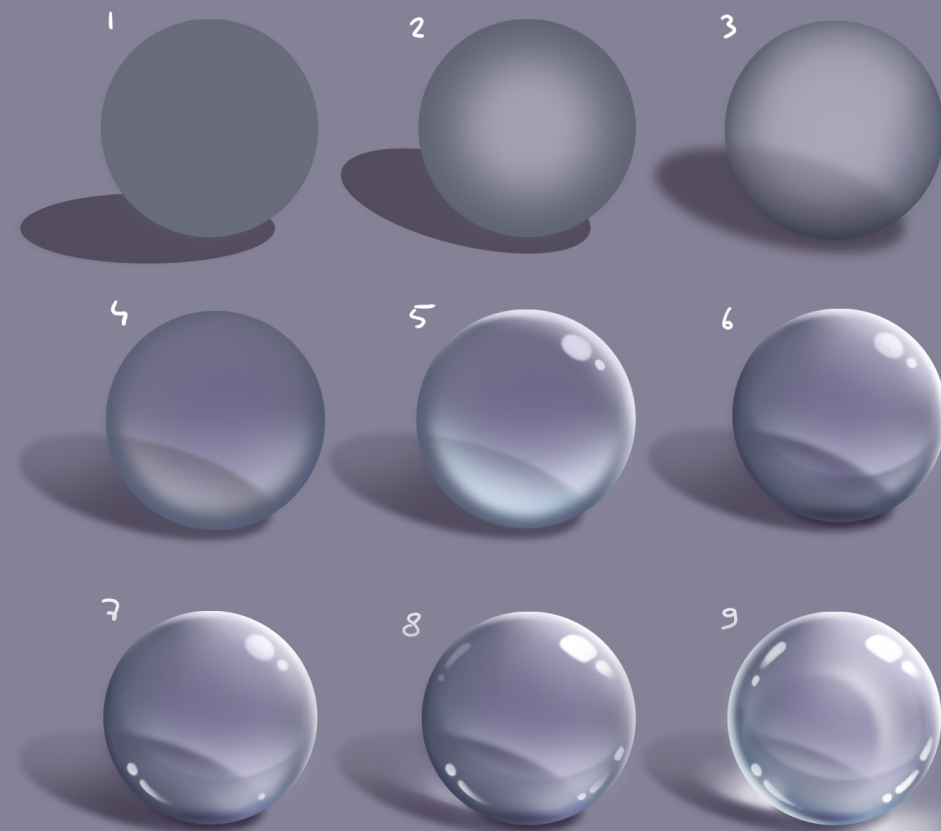
Jelly
Light that passes through a transparent ball seems to glow. This is called refraction, later on I'll explain more about this term but here you can already see how to paint it step by step.
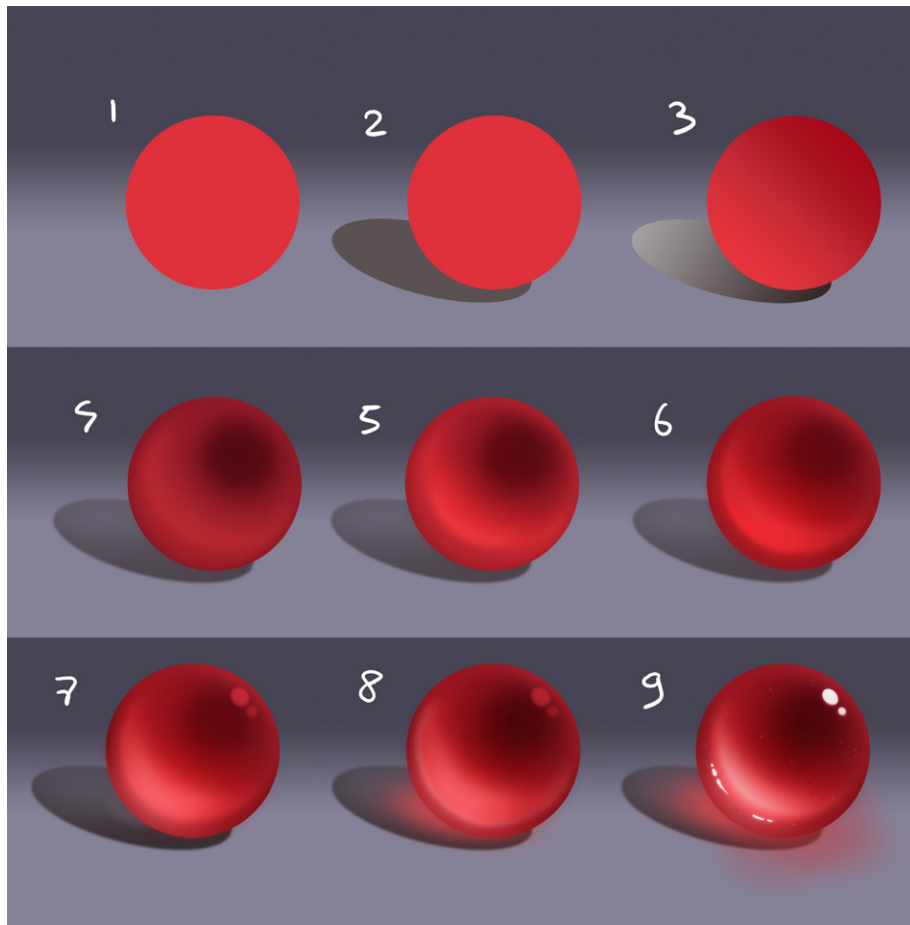
Lava
Here, I'm showing how to paint this lava ball step by step. In the third image you can see that I start by painting the different parts of the rock. When all shapes are in place, I add the gradients to it. Later, I add the lava's glowing effect to it.

Chrome
In this example I show you how
I draw reflection step by step.
I find it pleasant to start really
simple and add details later.
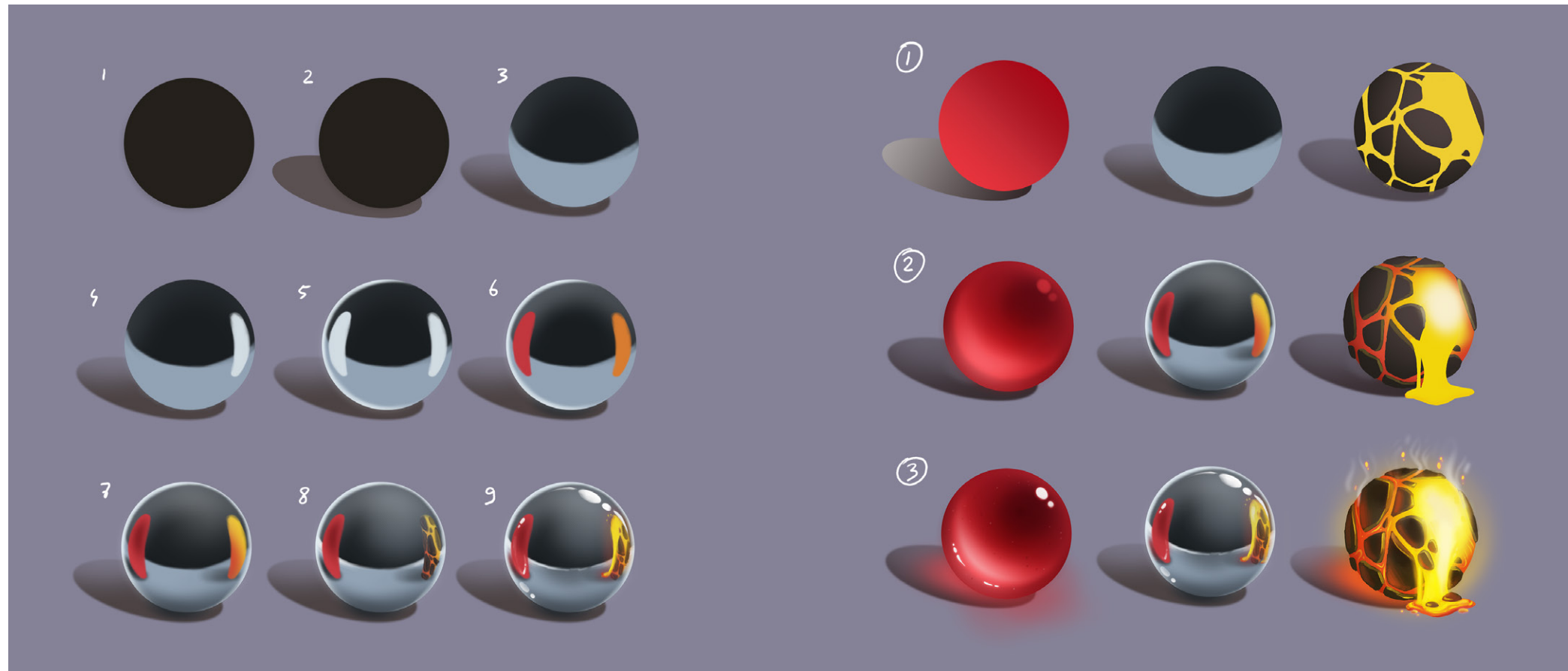
Here you can see how I add
the reflection of the balls on
each sides of the chrome ball.
I first start by drawing the basic
shapes. Always check if you got
the reflection right. That's why I
often make a little sketch first,
to see I have applied the
mirroring correctly. Keep in
mind that on the ball, you'll
see mirrored images.

Fur or hair
There are a lot of different ways of drawing fur or hair. I always start thinking in big shapes first, so I start adding arrows, as you see on ball number 2. These arrows are the force and direction of the hais. Hair also clusters together so that's what I'm trying to do in picture number 3.
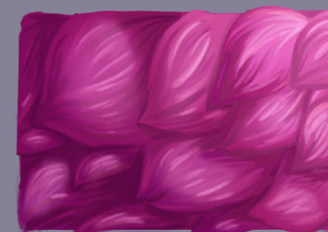
think in groups of hair
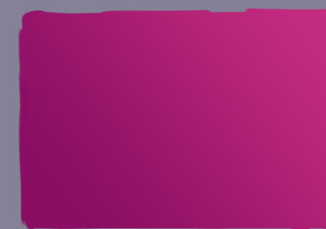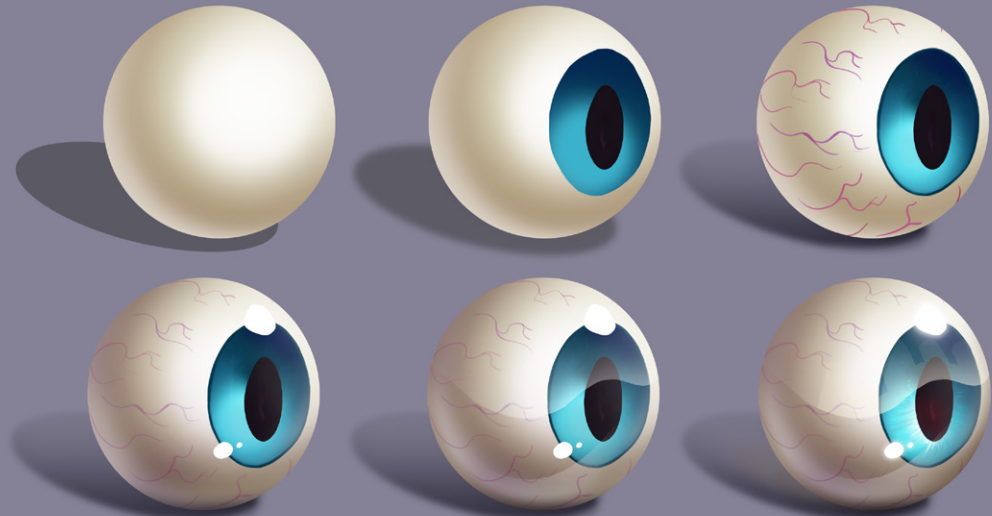

① start with base color

② create plucks of hair

③ add shadding

④ add details
mitch Leeuwe

Here you can see how I add flocks of hair to a flat surface.

Eye ball

Painting eye balls is fun. The glassy look it has, the little veins in it and the colorful iris. Understanding the anatomy of the eye definitely makes it easier to paint eyes.

Lenses are filled with a fluid, which means light passes through. That is why the bottom part of the iris – when the light comes from above – is lighter than the top. In animated movies they often amplify this effect. See if you can spot this effect in an animated movie from one of the bigger studios.
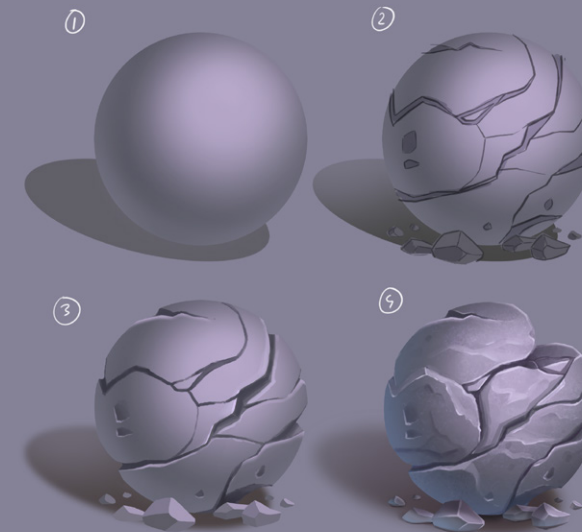
Stone

Drawing a stone ball is a great way of learning to draw textures. I start by adding deep cracks and patterns. As a last step, I paint in all the details. Sometimes I use a picture of a rock and put it on top with a layer effect. But personally, I like to paint in the details by hand. The downside of this is that it takes more time, but you'll have more control over it. You can also use a textured brush.
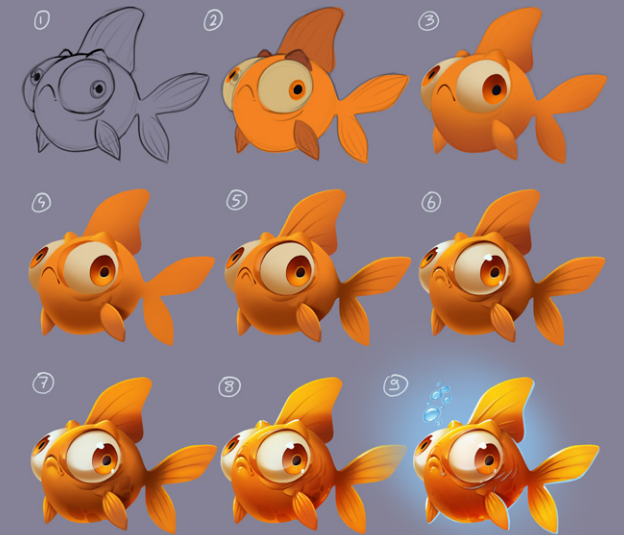
Goldfish

This goldfish is basically a ball shape, which makes it great to practice character painting with. It's a great exercise to start off with a sketch and paint it step by step, like I'm showing here.

Wood

Painting wood step by step. When I have the basic shapes, I add all the wood grains and highlights. I draw those wood grains in with a hard brush.

In step 8 and 9, I added some overlay effects in Adobe® Photoshop® to make the colors a bit warmer. When I use brown colors, I like to use warm shades.

Starting with a plank when painting wood is really good because it's not complicated. And when you made something you like, you can apply it to a more complex shape. Like a tree or barrel.
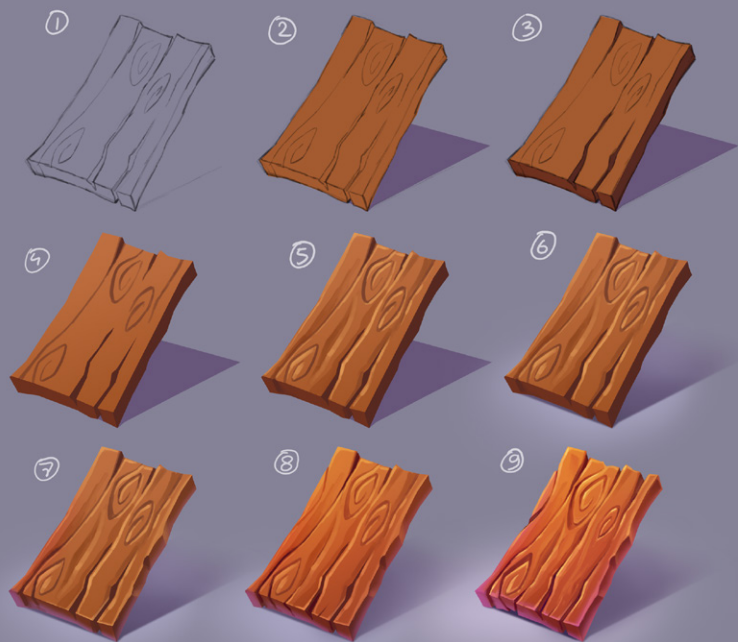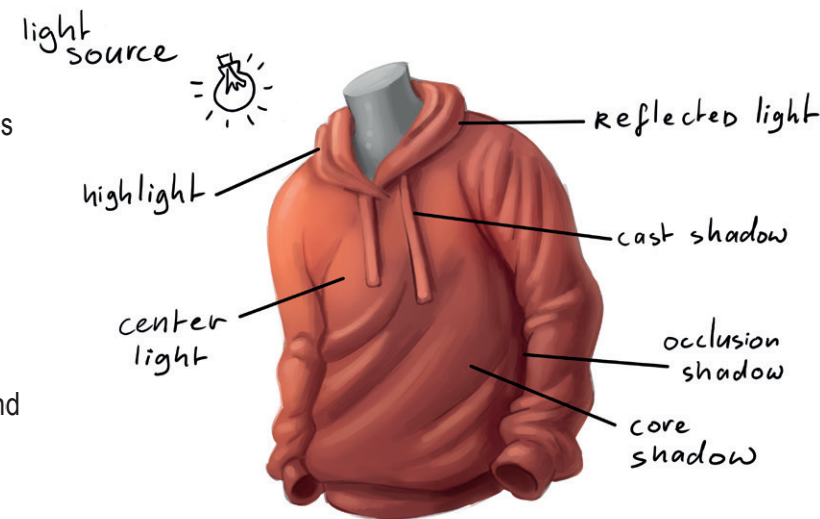
Clothes

Painting clothes can be really difficult because of all the folds and weird shapes. However, the same rules still apply. Refer to the first example of the ball, light and shadow and you can totally figure out how to paint everything.

Try it yourself:

Take a chair and put a big blanket over it and start painting it. Determine where the light comes from and how it reflects. See if you can figure out where the terminator and highlight are.

light source

reflected light

highlight

cast shadow

center light

occlusion shadow

core shadow

sketch & value

block in colors

basic shading

details texture & light

Crystal
Painting crystals is always fun, because you can go as crazy as you like with the gradients. The light blue is also slightly different than the darker blue. Using layer effects like 'overlay' to finish your crystal also helps to make it look way more magical.

Try it yourself:
You can use this sketch or create something new. Try using different colors. You can also use completely different colors instead of the light and dark blue.

Paint a tree
To paint a tree you have to draw the trunk and the leaves. These elements are different, as the leaves allow light to pass through and the trunk is opaque. But I'll go into that later in another section of this book. Again, here you can see the steps I take. I start with a sketch and I put the transparency of that layer very low and start adding the basic color layers behind it. When I have the layers sorted, I add the basic shadings, sometimes I turn the sketch layer off. Once I think I don't need the sketch layer anymore, I delete or hide it.

Try it yourself:
You can use this sketch or try drawing a try yourself and start painting it.

Painting a bottle

Here is an example of putting different materials together. This object consists of Like the cork, the glass and the fluid. The light behavioursbehaves differently for with each of the materials. This creates a nice contrast and makes your painting rich. I'm also showing here how I start with by making creating different separate layers for all each the different materials.

Try to find an object in your home that where you live you could use to paintconsists of different materials. and Uuse that as a reference for your painting and start practicing, using the steps below. to paint an object with differen materials in it like this potion.


① start with sketch
② block in colors
③ ADD mask
use gradients & soft brush
④ final touch

EFFECTS

Fire

When I paint fire, I start with a very basic shape. The hot air rises and the cold air goes down, this is how fire gets its shape. So, I start with that very basic shape in 1 and I add shape details in 2. In step 3 3 I start by making two layers. I can add glow effects and add gradients to these layers. In step 5 and 6, I add blur effects and glowing overlay layers.

Try it yourself:

Paint this flame following the steps and once you get that, try to paint your own flames and use different shapes.

1

2

3

4

5

6

① sketch & basic colors

② add gradients

③ start working with a brush

④ add details
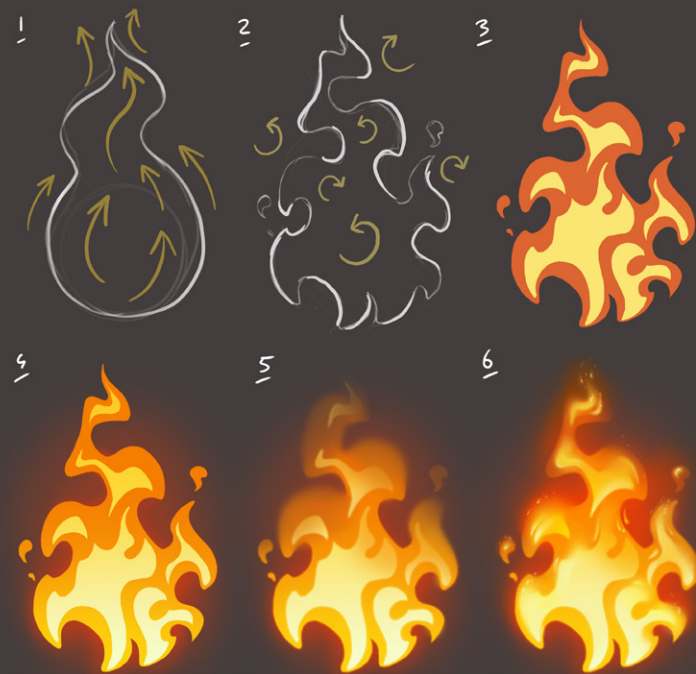
Explosions

Drawing explosions is fun, try to add force to it. With an explosion, the force moves outwards from the inside. So try to paint it as if the force is moving outwards.

1. create rough sketch
2. create color shapes
3. add gradients
4. add details

Adding glow

① ② ③

Water
Painting water can be tricky, but drawing it step by step makes it way easier. So again, I start with big shapes and add details to it. For the splashing parts I use transparent layers.

Try it yourself:
Use this sketch or draw something like a waterfall!
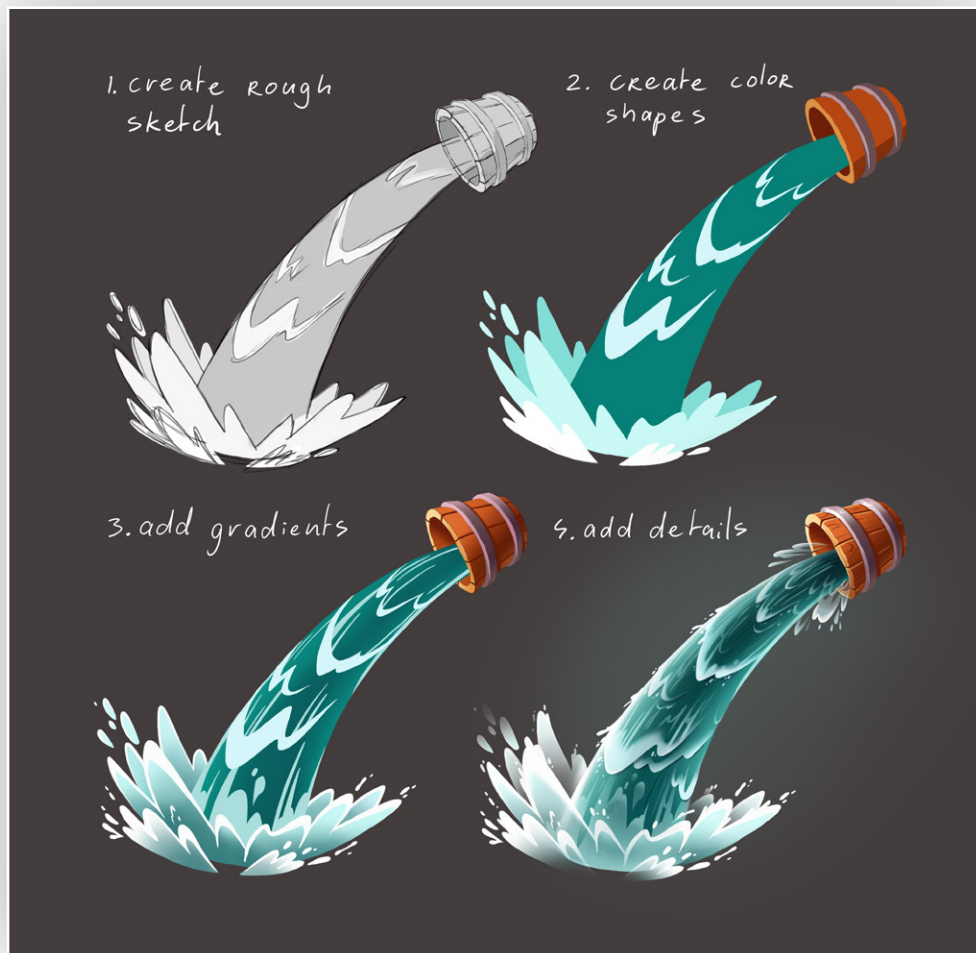
Thunder
Pick a big hard brush and draw random lines hitting the ground and branching out into thinner lines. With a layer effect in Adobe® Photoshop®, you can add a glowing effect. You could also paint this in with a soft brush.
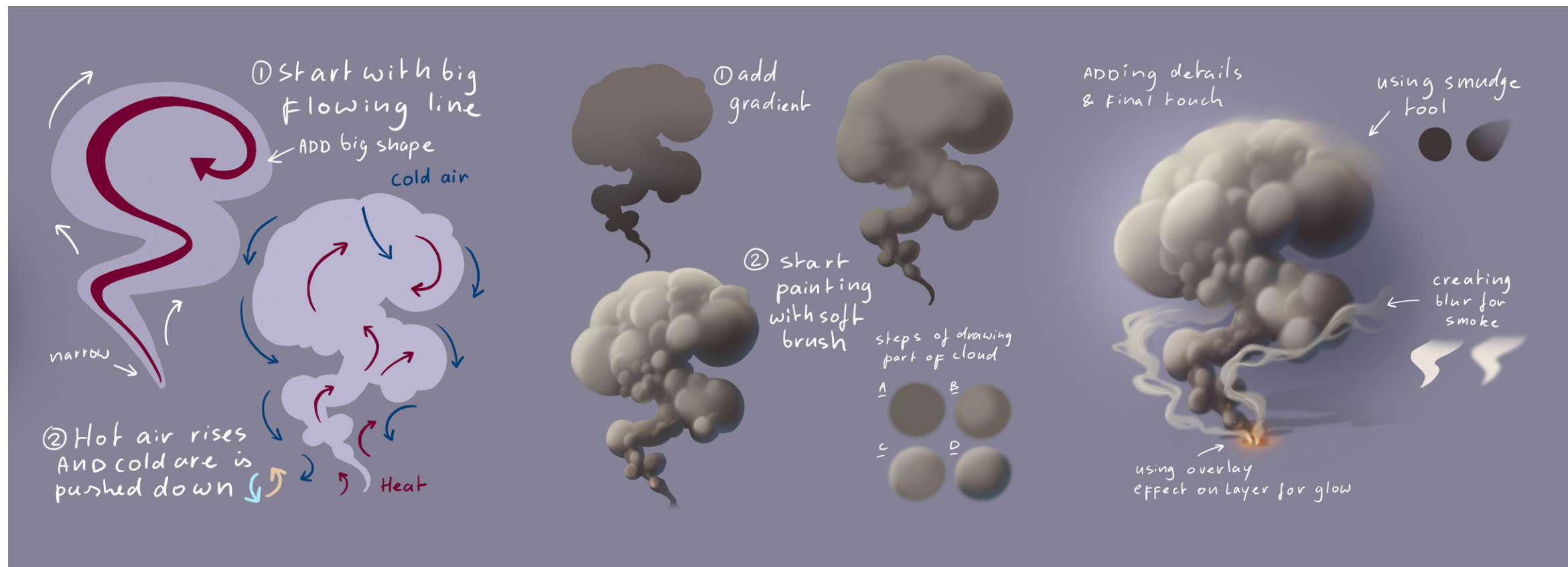
Smoke

Here I'm showing how to paint smoke. Similar to how I paint fire, I start with a big shape. And like fire, heat rises and cold air moves down, that's how smoke gets its shape. I start by painting the silhouette, then I add a gradient to it, followed by painting some soft spots in. From there on, I further define those shapes. The image shows my process; I first paint a big round shape with a soft brush and with a hard transparant brush I remove some parts. You can see in the example that some edges are soft and others are sharp.

Try it yourself:
Follow these steps and try to create your own smoke trail.

① Start with big flowing line
ADD big shape
cold air
narrow
② Hot air rises And cold are is pushed down
Heat

① add gradient
② start painting with soft brush
steps of drawing part of cloud
A B
C D

ADDING details & final touch
using smudge tool
creating blur for smoke
using overlay effect on layer for glow

CHARACTERS

This is the fun part: painting characters! When you've practiced painting ball,s you'll notice that painting a character is not that different. The biggest difference is that a character is made of different types of matter. Glass-like eyes, hair, skin, nails and more, all in one character.
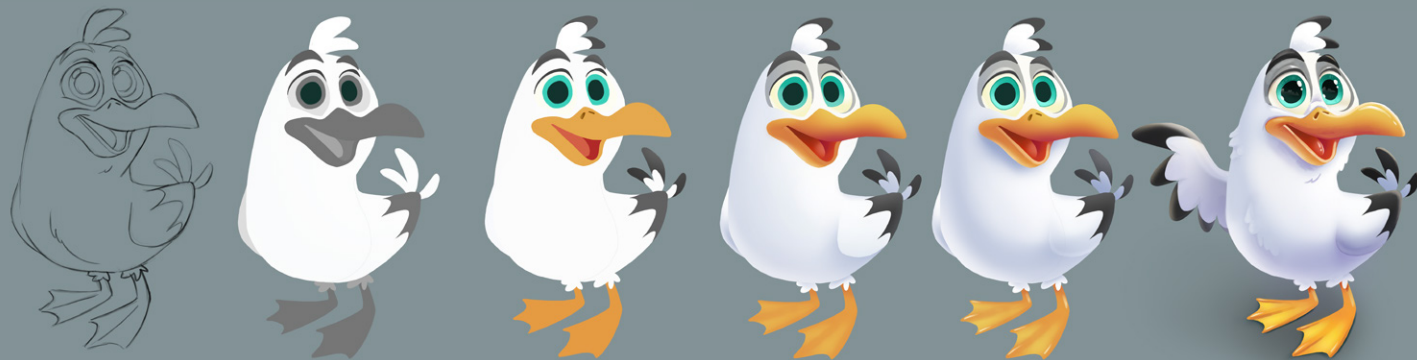

With characters I start with a sketch. On a layer underneath the sketch I start adding the big shapes, like the body or the legs. I often start with grey tones so I don't have to worry about color and focus on setting it up and creating all the shapes. Once the shapes are all in place, I start adding color and when that is done I add gradients. To create basic

shading, I use the gradient tool and soft brush in Adobe® Photoshop®, but these settings are so basic this approach should work in all drawing software. After this, you basically just keep adding light and shadow in the way I've shown in the ball tutorial.

The snail is a great character to start learning to paint characters. Mainly because of the simplicity of its basic shapes, which are basically just deformed spheres.

Try it yourself:
Take the design from this snail or create your own and paint it just like I painted this character. Of course, you could try using your own colors if you want!
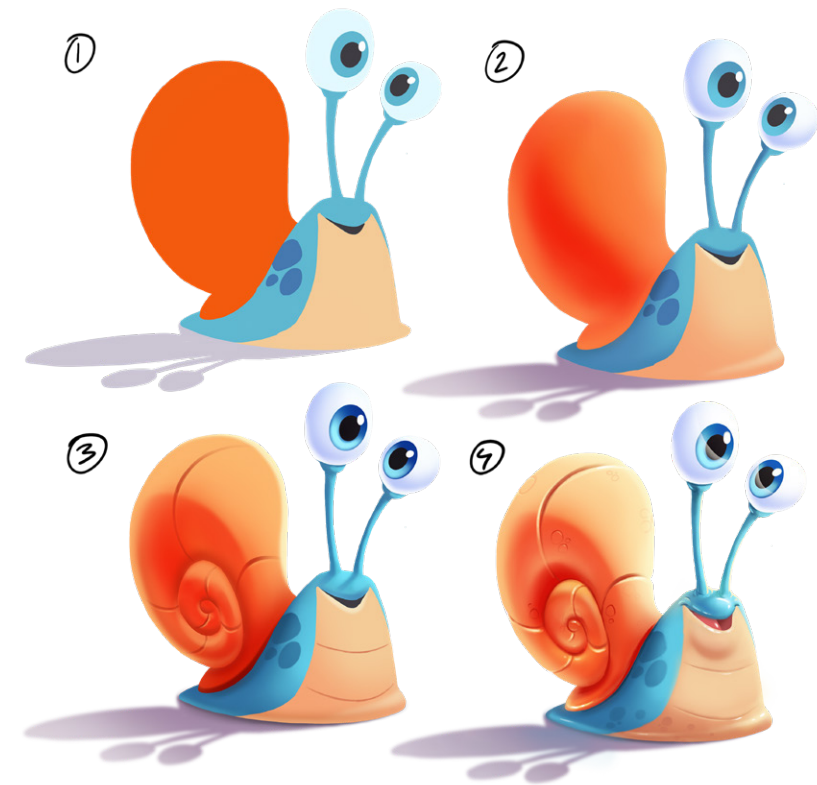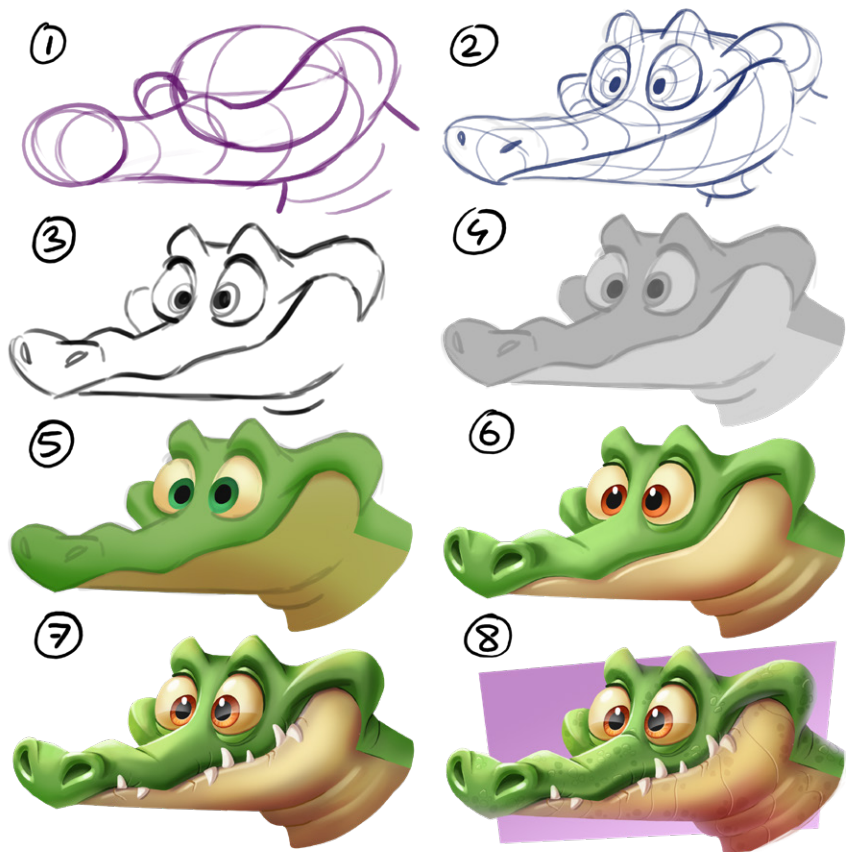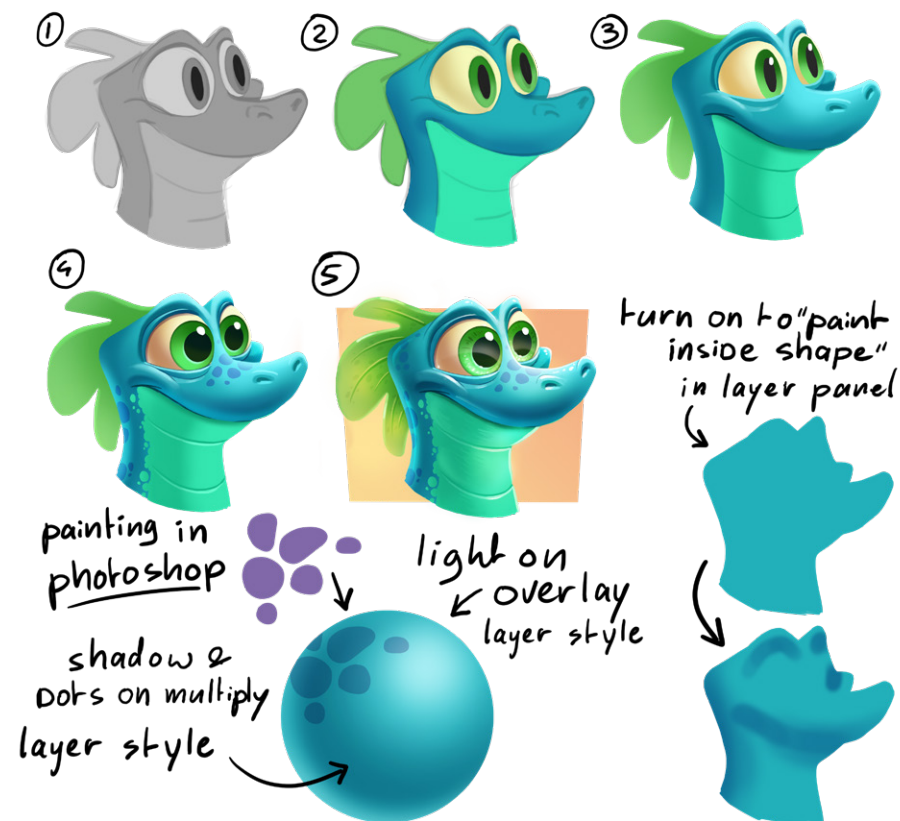
Heads

Here I'm showing how to paint a crocodile's head. I start with construction and work from there. Although construction is a part of drawing and not painting it certainly helps to understand the shapes. And if you understand the shape, it helps a ton to paint the character because you know where to add the shadows and highlighted parts.

Here I'm showing how I work in Adobe® Photoshop®. Especially the little icon "turn on to paint inside shape" in the Layer Panel is really helpful because you don't have to make any masks to paint a character. In some cases, I also start drawing a ball first and use that as reference for painting the character.

painting in photoshop

shadow & Dots on multiply layer style

light on overlay layer style

turn on to "paint inside shape" in layer panel

TEXTURES ON A CHARACTER

Dragon skin

I like to paint my textures on the characters manually, so I don't use any fancy brushes. Like with this dragon I first paint spots and add light and shadow to it, which creates a sense of depth. I believe that when you paint it manually, there is more life in your painting. Using brushes can be way faster, though. And if you don't have that much time it can be really useful.

Try it yourself:
Create your own dragon or creature and add a a texture to it. Or use this sketch to paint over it. Maybe you can first create a ball with a texture and skin and when you are satisfied with that, start painting it on the character.
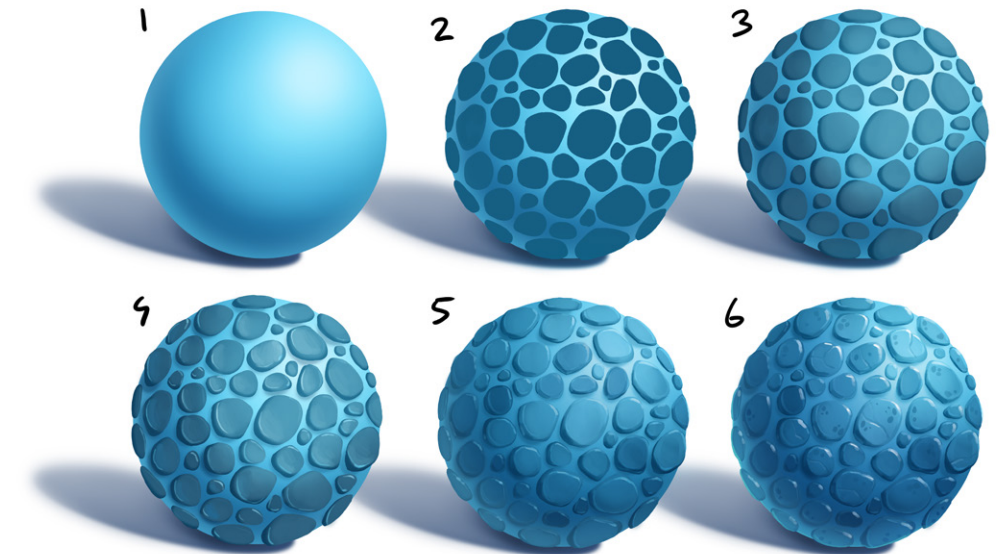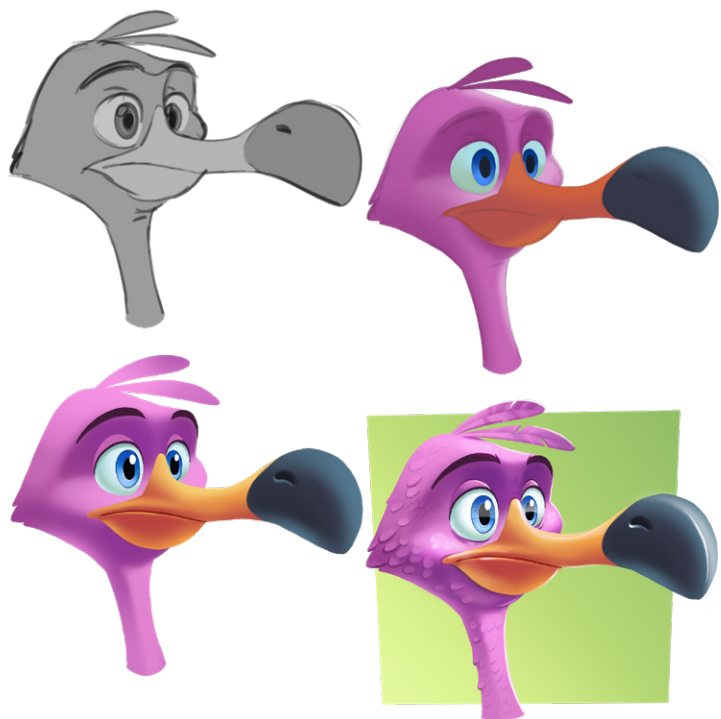
Feathers

Just like with the hair, I draw the feathers on the character. What I often do is start with a hard brush, draw a feather-like shape with a lighter color. Then, I take a soft brush and erase a part of it. If you want and if it's necessary you could add some more details.
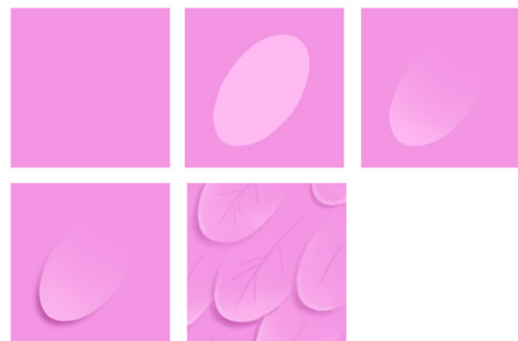
Drawing the wing is basically the same as the rest of the body. Notice the pattern of feathers in the wing; I created 3 rows of the feathers. And I give them a direction, just like with drawing hair and fur. It's the same idea as with the fur ball I showed earlier in this book.

Try it yourself:

Try drawing your own character with feathers, try to think of how they grow and how they flow. Give them a direction, don't just draw/paint them randomly.

Fur

If you want to paint fur, the first steps to take are the same as in the other painting tutorials. The main difference is that you'll paint the hairs on top of the shape. They aren't random but follow the shape. I personally like to paint all the individual hairs. Sometimes, I select a group and copy and paste them. I don't really use hair brushes to create these textures, but you could definitely try it yourself.
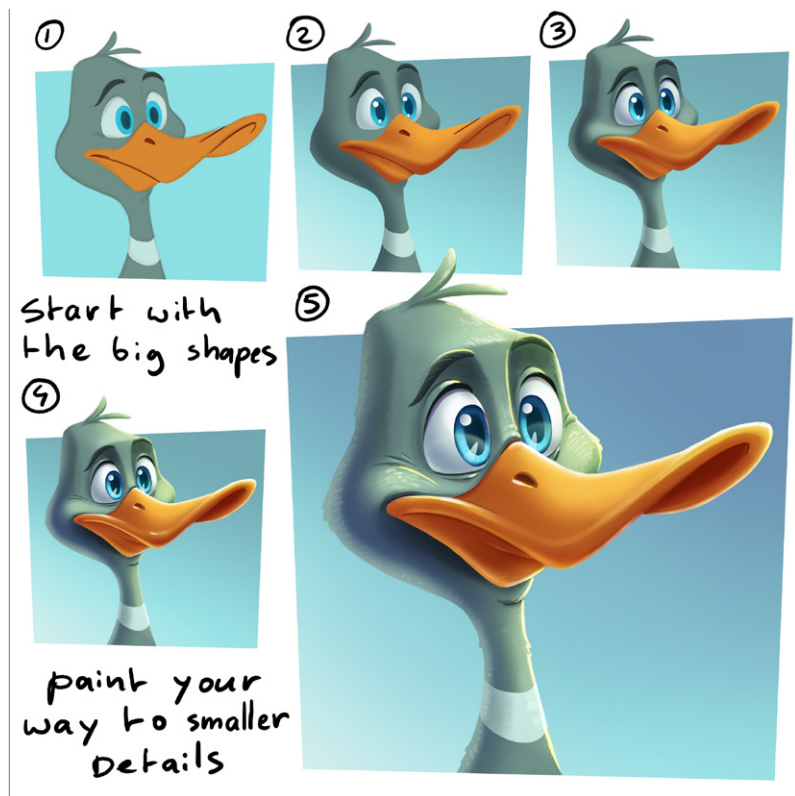
Try it yourself:

Paint an animal with hair. Try looking for the shapes and follow the shape when drawing/painting the hairs on top of it.

ADDING
hairs with
basic brush
↓
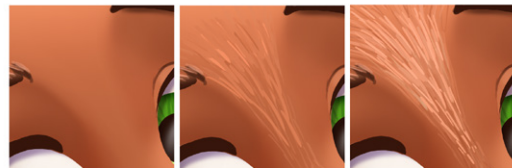
This beaver is a good example of how the hair follows the shape of the character. Do you see how the hair is moving over the character?
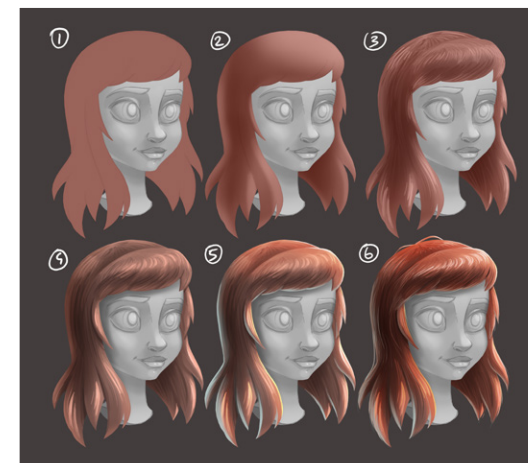
Start with
the big shapes

paint your
way to smaller
Details

When add fur or feathers?
If you're painting a character, it's not always necessary to draw all the feathers, like I didn't with this character. Try to decide yourself what fits best and how much detail you want to show. Personally, I like clean designs because they are easier to read. Too much detail can be distracting, so be careful with that.

Hair
Drawing human hair is similar to drawing hair on animals. The only difference is, that it's often way longer. And of course, us humans wear their hair in particular styles.
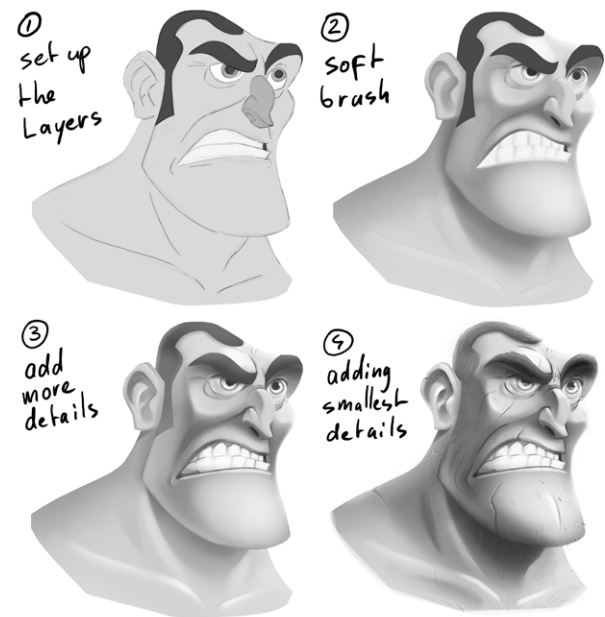

In this example I start with a shape. Before that, I made a sketch to determine the direction and flow of the hair. I use this sketch throughout the process, until I don't need it anymore and turn the layer off. In these steps you can see me adding more and more details. In the last step, I add some extra overall shadow and highlights to give it more depth.

Here you can see some more close ups of drawing the human hairs. Again, the most important thing is to follow the lines of the big shape and think in groups of hairs. Try adding small groups, medium groups and big groups for variety.

Try it yourself:
Come up with some cool haircuts and paint them. Think of the shape of the hair and how all those groups of hair follow the shape.

① set up the Layers
② soft brush
③ add more details
④ adding smallest details

ADD color layer

ADD more colors

start painting on top of it

lighting →

Painting a head
Sometimes, I like to start with values as I did here. The big advantage of this is that you are focusing on the contrast in values first, taking one step at a time.

When I'm happy with the values, I add the colors on top of it with a color layer (Adobe® Photoshop®). Don't expect it to be 100% right immediately, but at least you have the values the way you want it. I add some more colors to the color layer.
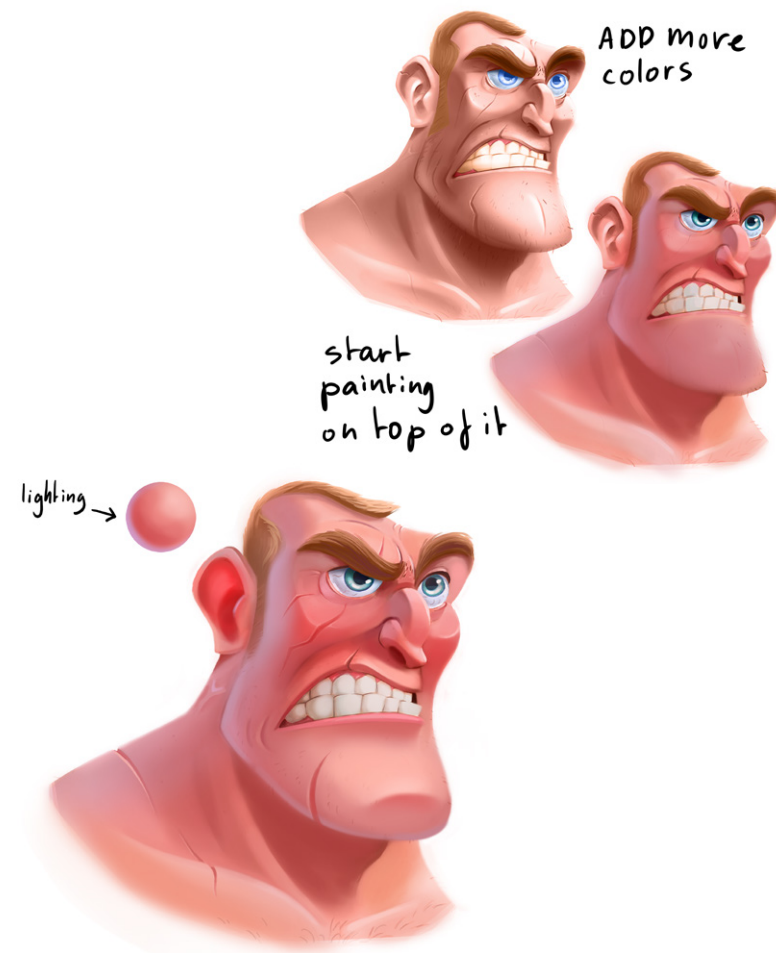
Once those are in place, I start painting on top of it until I have something I like. The disadvantage of this method is that it needs a lot of post work. So, I tend to use the method of directly using colors more, but I do sometimes start with values first to practice painting values. I would advise you to try out different methods so you keep learning and having a fresh look on things.

Try it yourself!
Start painting a head or character first, just using values. Take your time for this, see it as a learning process to better understand values and how to add color afterwards.

Female character

Painting the whole human figure step by step. Humans wear clothes, which means you'll have to paint a larger variety of different materials. For this character, I kept it all quite basic and not too detailed. It's not always necessary to paint in extreme detail.

Painting a cute girl. I added extra reflection in the eyes to make her extra cute. I also gave her rosy cheeks to make her look even more innocent.

Male character

Here, I'm working directly with color. You can also see all steps of the drawing part. Although this book is about painting, the drawing part is really important. Because when you are drawing it's really good to already think of volume and shape.

When you are adding shadow and highlights you start to see that volume more and more. So a drawing with good volume is more suitable to paint.

Step by step process of drawing the whole body. You can see that I started with clean shapes. Once those are done, you can start adding the basic shading and keep adding details. In the last phase, I added all details and textures. I add texture on the shirt by putting a layer in multiply mode on top of it and erase the texture with a soft brush in some places to make it not too distracting.
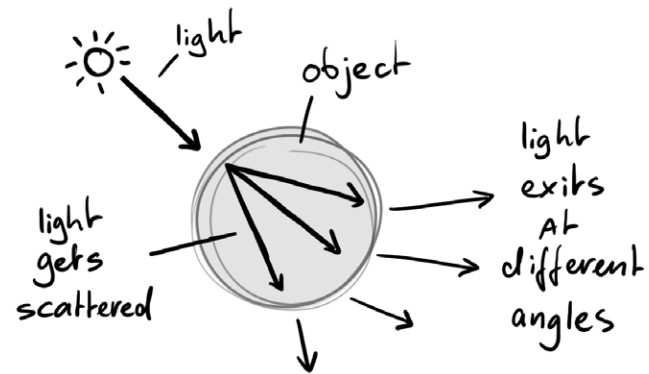
Try it yourself:
Try to draw yourself and paint your character!

SCIENCE OF LIGHT

Subsurface scattering

Subsurface scattering is a name for the phenomenon where light penetrates the surface of a translucent object. The light gets scattered by going through the material and leaves the object in different directions.

Subsurface scattering makes things seem to glow. That's why it works really well for this little strange alien. You can also use it for magical crystals or glowing plants.
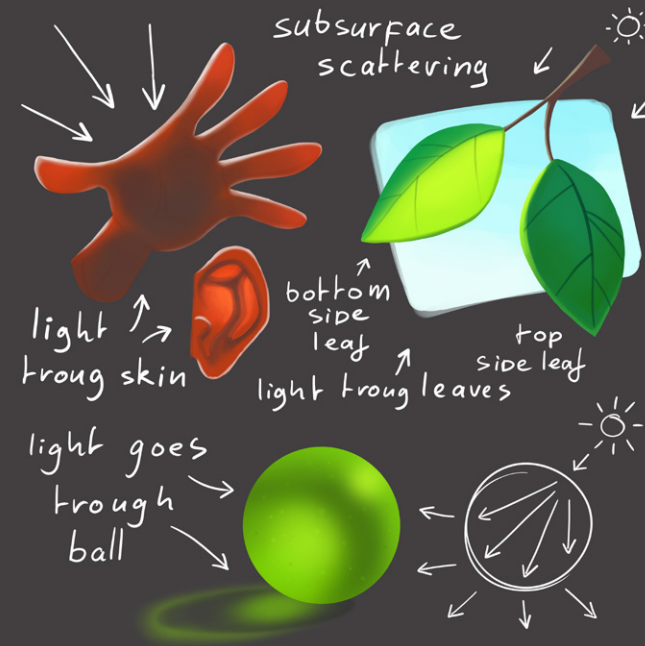
Our skin is also translucent. You can see it if you put your finger close to a light source, watch out that you don't burn your finger! You also see it with ears or other parts where the skin isn't that thick. Leaves are also translucent, that's why the lower side of young leaves have these high saturated colors.
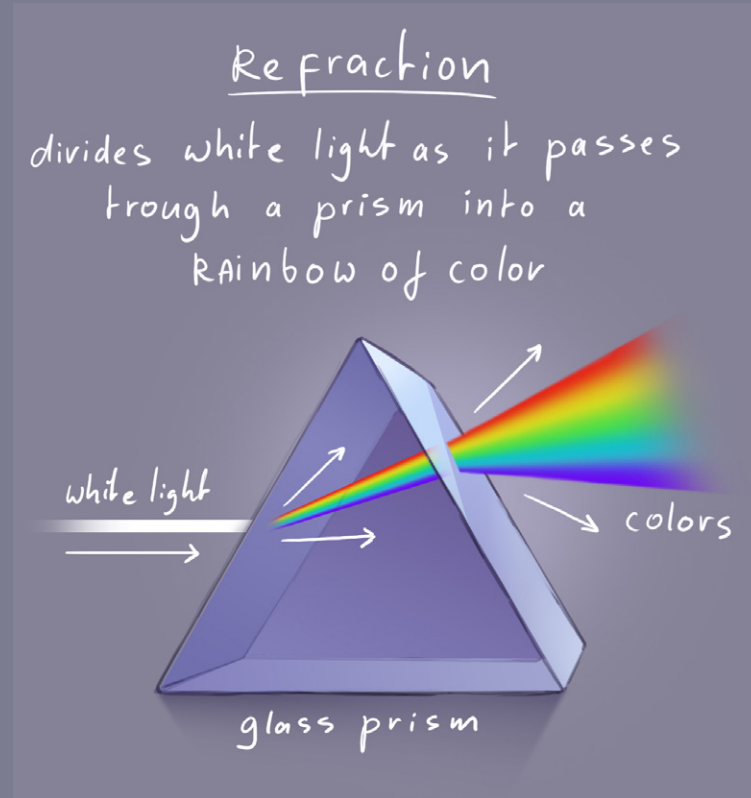
Try it yourself!
Draw a funny glowing creature!

Refraction

In physics, we speak of refraction when waves of light bend before passing through a transparent object or substance. For example, lenses and magnifying glasses cause refraction.
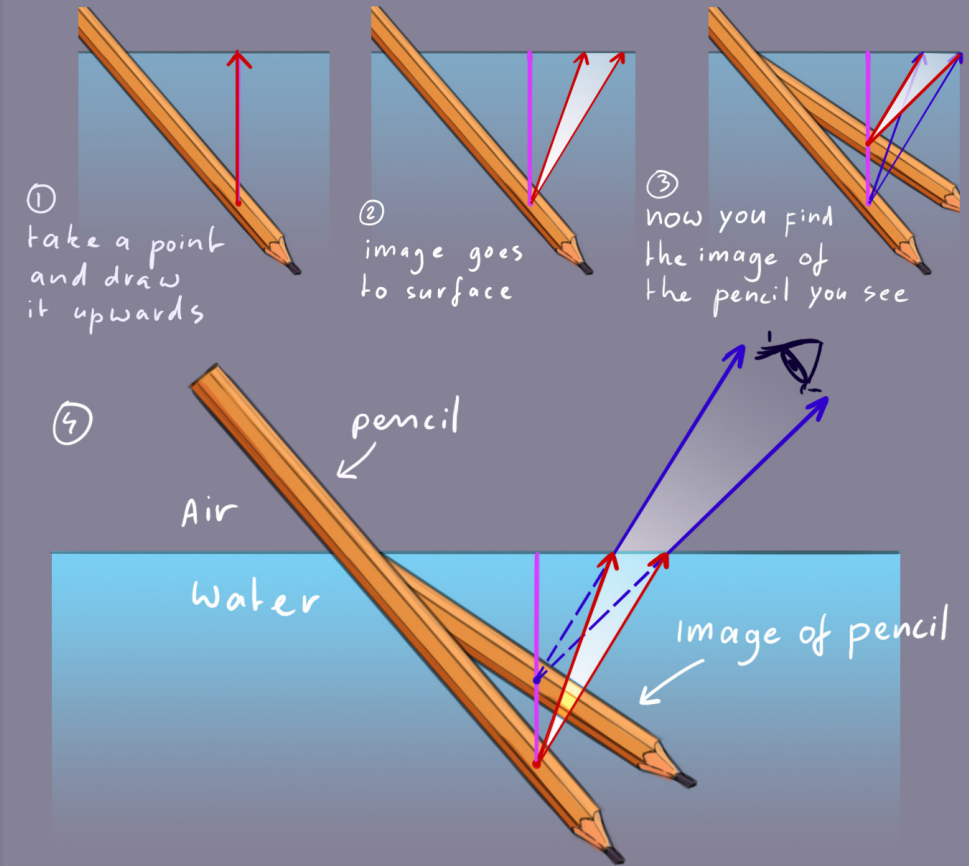
When you see an object going into the water, the part that is in the water looks different. This is another example of refraction; the penetrating light is bent by the water, which causes deformation.

Looking at a prism, you can see that the passing light breaks. White light consists of all colors and when it passes a prism breaks into the whole spectrum of colors.

Refraction

divides white light as it passes trough a prism into a RAinbow of color

white light

colors

glass prism

Refraction — When you look at a pencil going into water it appears bend because of refraction

① take a point and draw it upwards

② image goes to surface

③ now you find the image of the pencil you see
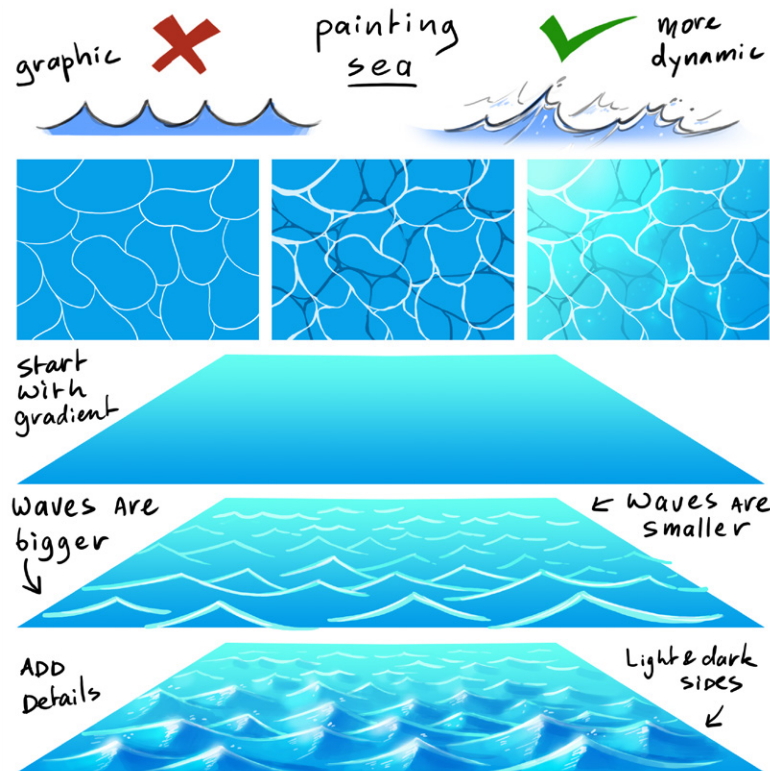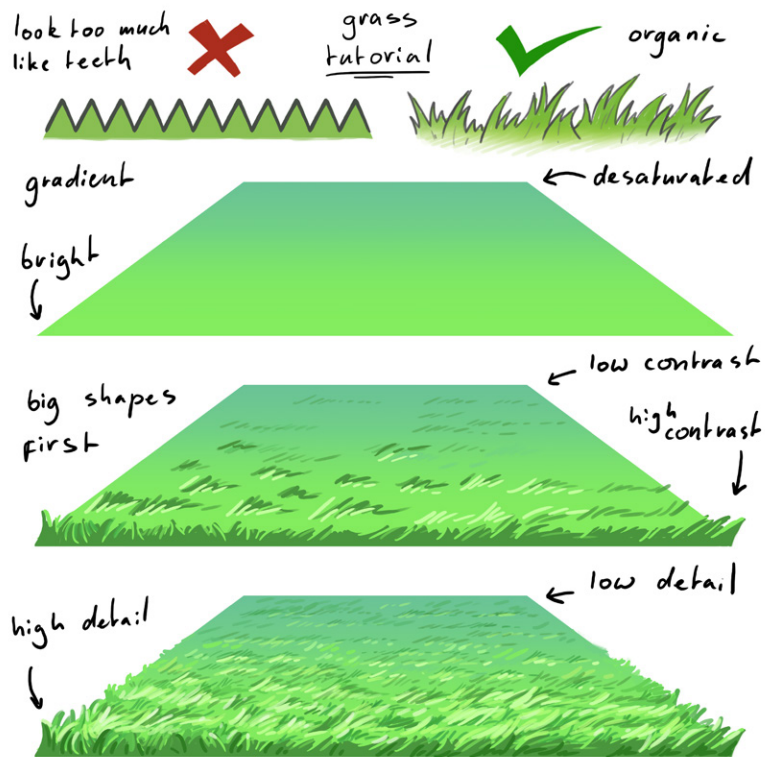
④

pencil

Air

Water

Image of pencil

SURFACES

Water

Painting water can be really tricky. But following a couple of steps makes it way more approachable. Most importantly, start with a big shape with a clear flow in it. And on top of that big shape you add smaller shapes, like the wave in the example below. Add the foam on top and thin lines that follow the shape of the water.

Try to avoid repetitive shapes in the water. Try making big waves, medium-sized waves, small waves etcetera. In the case of still water, you often see a pattern. First create random shapes and when you have shapes you like, add thickness to it. Try to give your lines different weights and make it as random as possible. This will make it feel more organic and natural. If you make things too symmetrical and even, it might look less believable.

graphic ✗ painting sea ✓ more dynamic

start with gradient

Waves Are bigger

Waves Are smaller

ADD Details

Light & dark sides

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

look too much like teeth ✗ grass tutorial ✓ organic

gradient ← desaturated

bright

← low contrast

big shapes first high contrast
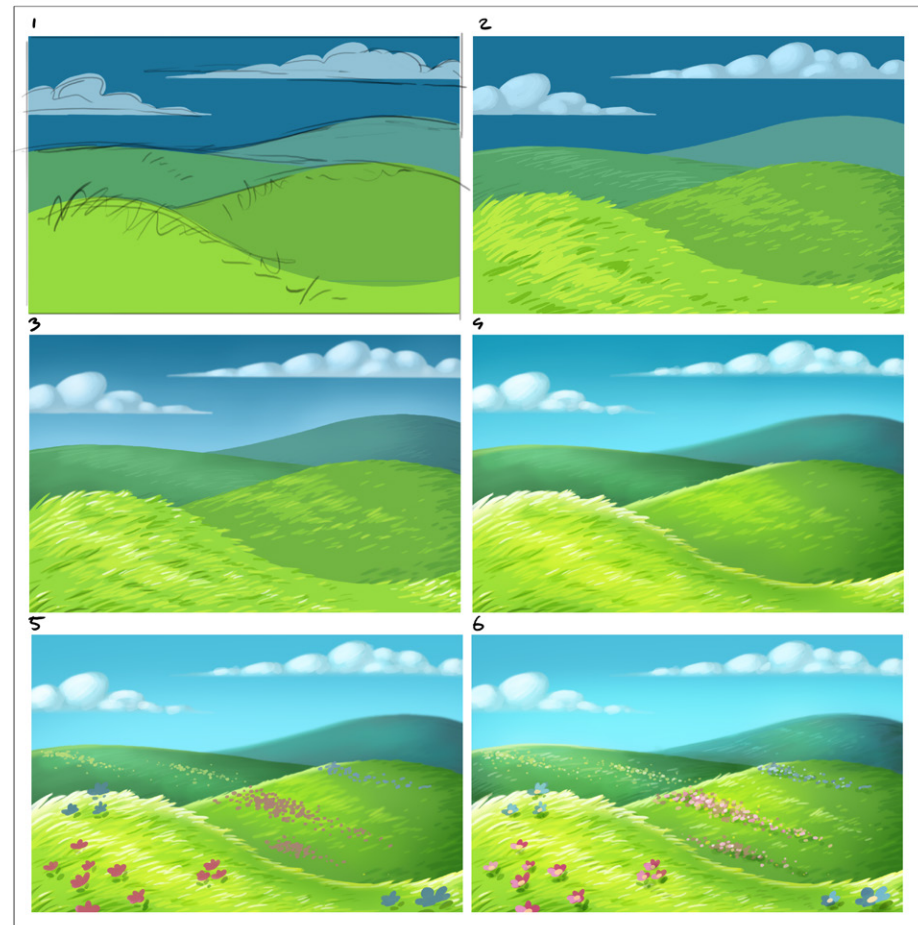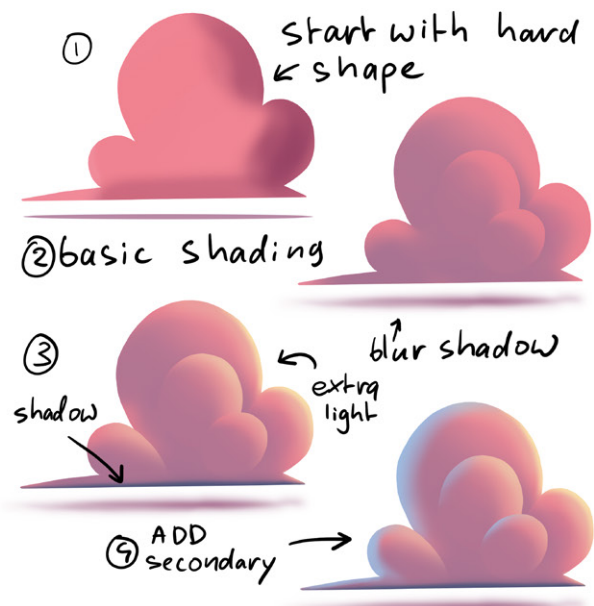
low detail

high detail

Grass

Drawing fields of grass, can be a lot of work. But you don't have to draw every strain of grass. You draw the detail closest to the camera/viewer. The further away, the less detailed it will become.
The same goes for drawing a forest. You don't have to draw every tree, you only have to create the illusion of a forest.

This also works when drawing grass fields on hills. Notice it's the same with the flowers. Close to the camera you see them individually and the farther away, the less detailed they get.

Try it yourself!
Try drawing a grass field, or a forest, or a sea. And think about the level of detail in the front and in the back.

Handwritten annotations on left diagram:
① start with hard shape
② basic shading
③ shadow — blur shadow — extra light
④ ADD secondary

Handwritten annotations on center diagram:
moon light, rim light, sunlight, First sketch
core shadow, cast shadow, highlight, center light, halftone, terminator, occlusion shadow
core shadow, cast shadow, light source
mitch leeuwe

Clouds

Painting clouds is fun because you can go crazy with all the shapes. It's also great to practice your design skills, because it has abstract shapes. Again, try using small, medium-sized and big shapes to create a variety of clouds. Once I have the shape I use a soft and hard brush to create that fluffy feeling.
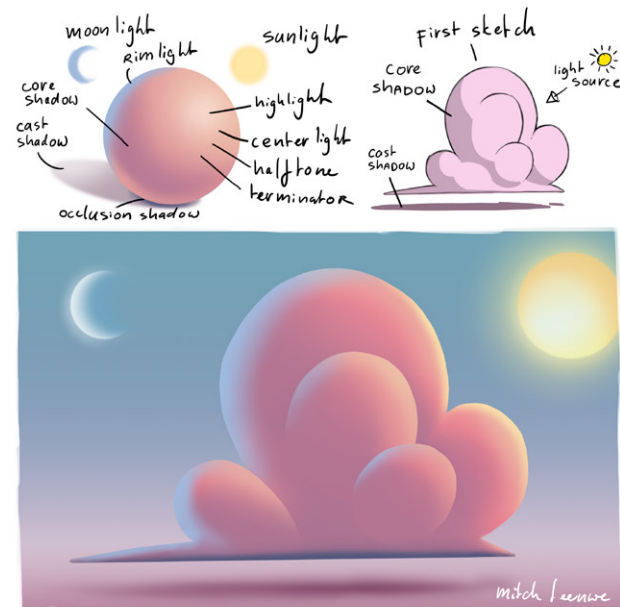
Each part of the day has its own colors. In photography there is the golden hour, which takes place twice a day; in the first hour after sunrise and the last hour before sundown. In those hours the light has this beautiful gold/yellow/orange glow. This light gives your art or photo a soft look and feel. The shadows are subtle and the light isn't as bright as in the middle of the day.
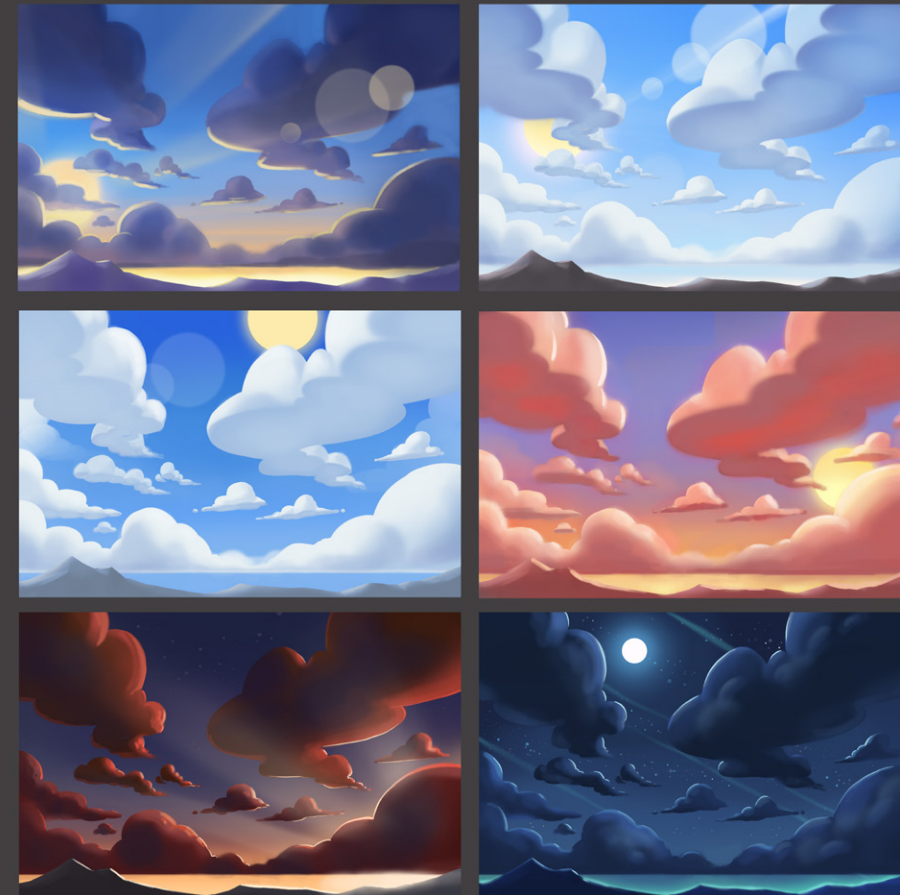
Try it yourself!
Try notice the different effects of the different times in a day. And ask yourself when painting an environment, which time of the day fits your setting best.

USE A GAMUT MASK

Earlier on, I mentioned the gamut mask. In this example, I'm showing how to apply it to painting a ship step by step.

① colorwheel ② triadic color scheme

③ Gamut mask

A GAmut mask is A tool to help you pick out colors

First, I take the color wheel and create a triadic color scheme. After I have picked a color scheme, I create the mask. In this case, I picked yellow as the most saturated color and red and green as secondary colors. Now you can apply these colors to the mask to color the ship.

① sketch

② values

block in all the objects to color

Once I have the sketch, I add the values. I put all the objects on separate layers so it's easier to color later.

Now it's time to pick the colors for the ship. I didn't follow this rule completely, but I try to go for 50% red, 30% yellow and 20% green. Again, it's a way of using big (50%), medium-sized (30%) and small (20%) shapes.

gamut mask

color wheel

1. block in colors
2. shading
3. add details
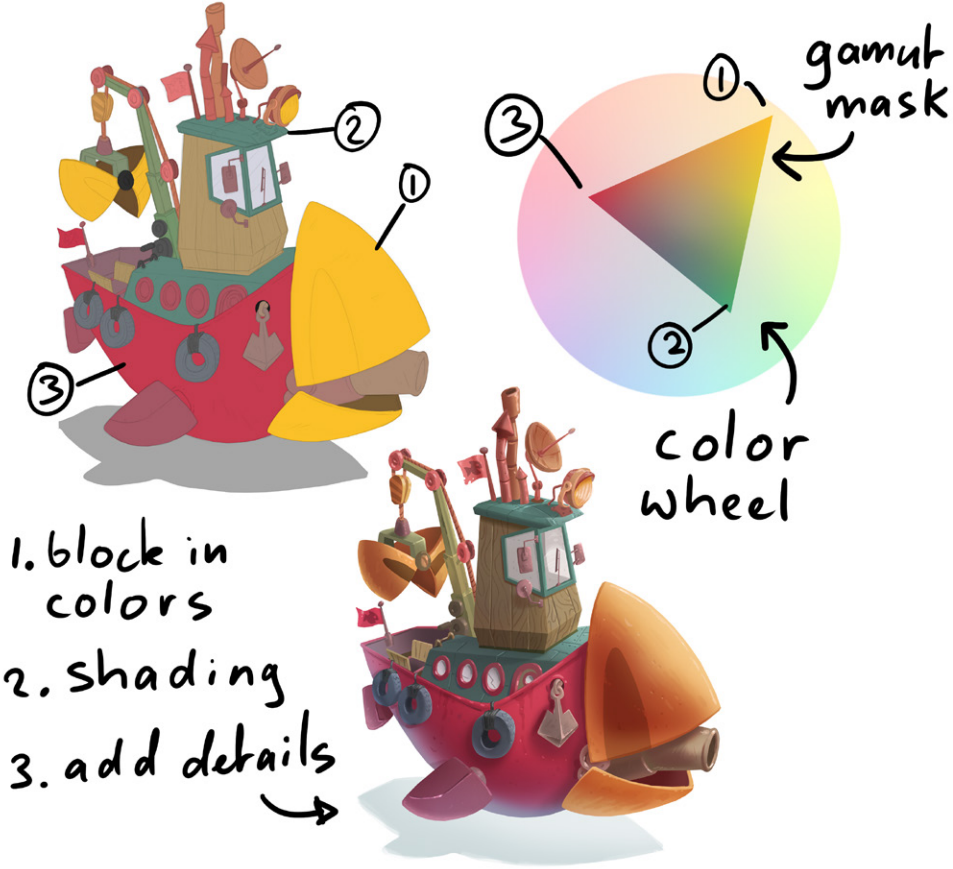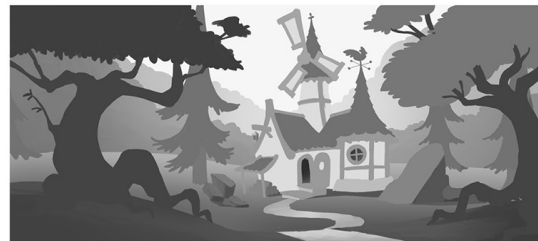
PAINT AN ENVIRONMENT

Painting environments/backgrounds can take a lot of time. They are also more complicated than characters because you have a surface and all these different objects on top of it. All those objects interact with each other. It can be overwhelming to work on.

What helps me, is to first put everything down in values. In this case I started by giving each object its own layer and value. After that, I added colors. When adding the colors, it's important to think of contrast and harmony. In this scene I tried to put the focus on the building. The building has colors and contrast, the rest of the scene doesn't have this, or at least in a lesser regard.

After coloring, I add the basic shading and slowly I put in more details. Sometimes, I already start adding details early in a particular part of the scene. I do this to find the right style and to keep it fun for myself. I find that important because it takes so much time to paint a background.

Once I'm confident with the way it's starting to look, I add all the details. It's funny that sometimes the last 20% takes 80% of the total time. And don't worry too much about how long it takes you to finish a painting like this. Especially when it's your first time. Try to learn how to do it first, after you learned to make environment paintings like this, you can try to improve your pace.

Try it yourself
Use this sketch to paint this scene.

Aerial perspective

Aerial perspective or atmospheric perspective is the effect the atmosphere has on distance. The further away an object, the less the contrast is. Colors become weaker and less saturated. They usually gravitate towards the background color, for example the blue sky. You can use this phenomenon to create a sense of depth in your painting.

aerial perspective
colors gets weaker with greater distance

Far

close

distance
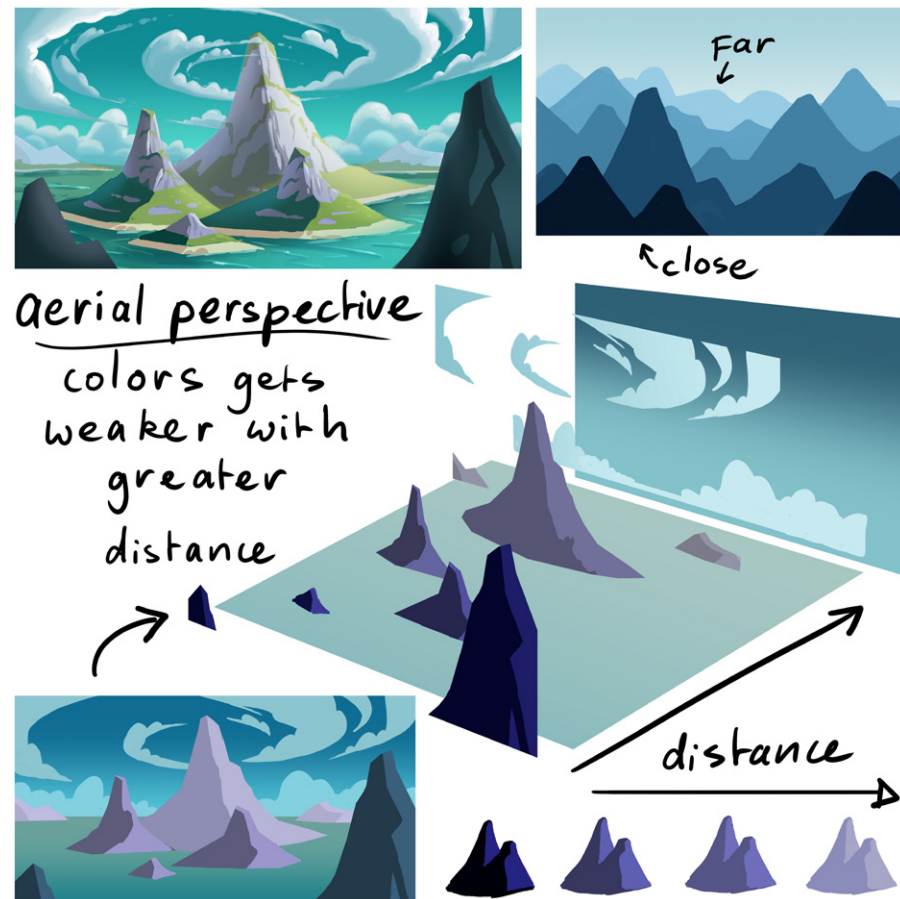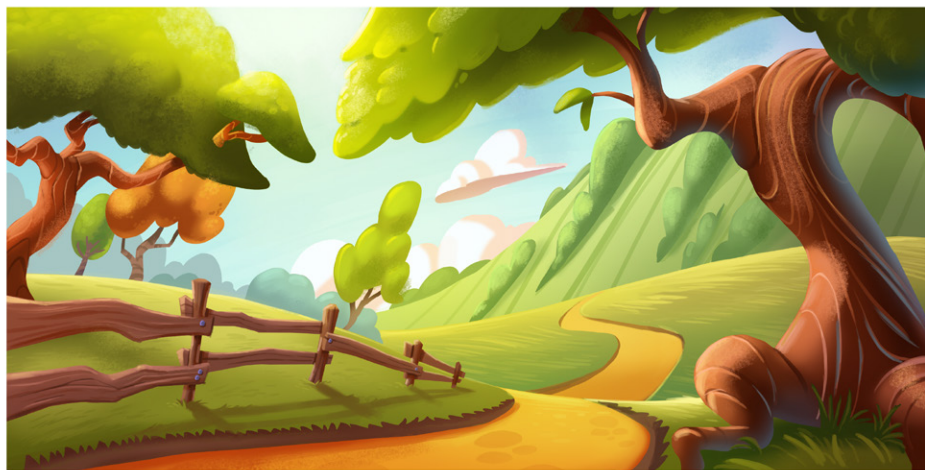
Here, I use the same painting method as in the background with the house. I start with a sketch, then add layers with values followed by colors. The next steps are shading, adding details and extra light effects. With light effects I mean adding extra layers in Adobe® Photoshop® in 'overlay' and 'multiply' mode. If you're using Adobe® Photoshop® or any other more advanced software I would advise you to play around with it and see what works for you. If you're using a more limited app and don't have those options you could paint on top of it. Like in this example, you see that the sunlight creates a yellow glow on the leaves. It's something you could also paint on top yourself.
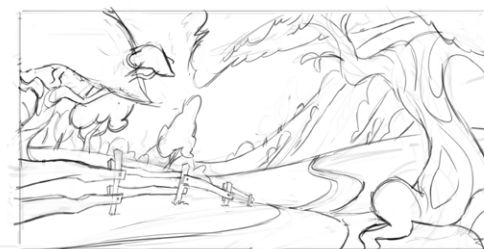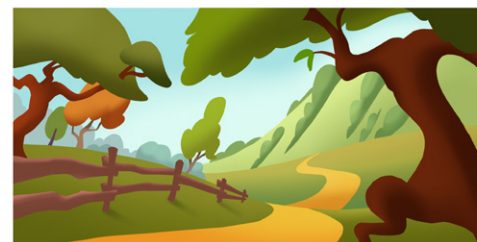

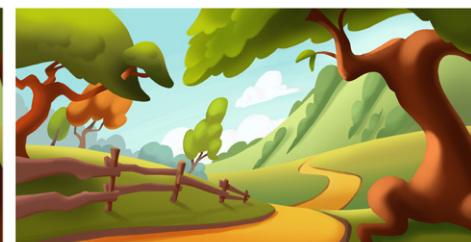① Start with a sketch, can be Rougher than this sketch.
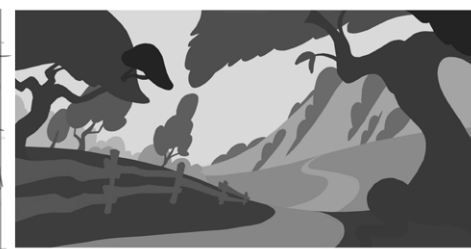
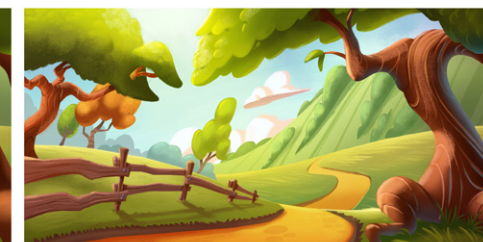② add values. Values are the brightness of the colors.

③ Start adding color. In the distance there is atmospheric perspective.

④ Start adding shading with a soft brush. Start with the big shapes.

⑤ now add the shading to smaller objects & add shadow.

⑥ add details, textures & add some lighting effects.

CONCLUSION
& THANK YOU

THAT'S IT!

Thank you for reading this book. I hoped you learned something from it and had fun using it. Digital painting is something that takes a lot of time to learn. It can be very daunting and it could be that it feels like you aren't making any progress, but don't give up. Take your time to learn and practice this. It's really useful to learn how to paint your own work. There are even professional digital artists that are really focused on this and their work is to color other people's work.

But even when you're an artist that won't be painting that much, it's still useful and meaningful to learn. Because maybe you want to paint some characters or environments to make your portfolio stronger. Or even when it's just for a better understanding of the painting process so you can give feedback on a painting. A basic knowledge of painting could help you tell a digital painting artist who paints your drawing what you want to achieve.

Color and light are a great elements that help convey emotions and tell a story, so although there is a lot of technique involved, ultimately you're trying to tell a story and that is the most important part of our job.

It could take a long time to get to the level you can get hired, but once you get to a certain level you can start finding work. Some people tend to think it's all talent. But talent can only help you to get started. The most important thing is hard work. If you are talented but lazy, you'll have a hard time to get to the next level and learn new things. But if you're a hard-working person and motivated to get there then this is your chance to become a digital painting rock star. People tend to overestimate what they can achieve in a short amount of time, but they underestimate what they can achieve in a big amount of time.

Contact me
Instagram   Mitch Leeuwe
Patreon   patreon.com/mitchleeuwe
Gumroad   gumroad.com/mitchleeuwe
Website   mitchleeuwe.nl