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Fin to feather

Rebecca L. Rogers

Fin to Feather

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Rebecca Rogers

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STORY

Creation

Coming up with a concept for this film was a huge challenge; I had less than a month to flesh out a story, choose an advisor, draw up a proposal, and pitch the thesis idea to a committee of five faculty members. Having just completed an animated film two weeks earlier, I came into this project completely drained of all creative energies.

My films have always explored the dynamics of personal relationships. I wanted my thesis to engage the audience on an emotional level and let them feel a connection between the story and their own experiences. Every film that I had created so far wrapped up with a happy ending. I felt that I had thoroughly explored stories that contained two-dimensional characters, honey-dipped morals, and light-hearted endings. I felt drawn to take my thesis in another direction; and to leave the safety of my creative nest. I began to sift through recent events in my life.

I decided feelings of love and loss would be the great theme of my film. While I knew what emotion I wanted to evoke, I had no strong ideas about the setting. I knew that the cast of characters would be members of the animal kingdom. There was never a doubt in my mind that I would use animals to tell the story. For me, animals bring an innocence and freshness to the screen in addition to making any subject matter more accessible. I've always felt very detached from animations that use hyper-realistic humans as their main characters. I began auditioning characters and environments in my mind, jumping from one mediocre idea to another, growing more and more distressed over time.

Inspiration

Every day after classes I would pore over stacks of books on wildlife, hoping to find a bit of trivia that would spark an idea for a story. One evening as the television droned on in the background, I heard a quote that struck a resounding chord in me:

"A bird may love a fish…but where would they live?"

The quote literally made my jaw drop. It handed me my main characters and presented a reason for the downfall of their relationship (this would later change after the dream sequence solidified, but proved inspiring nonetheless). All that was left was to choose the setting in which a bird and fish could meet and interact. I smiled to myself when I realized that the idea also touched upon the expression of "the one that got away", which perfectly typifies love and loss. I had not considered actually using a fish to convey the idea, maybe because I thought that it might be too literal. I had been confining my search to two characters within the same species and had yet to break the barrier of inter-species dating. My writer's block was broken and finally more ideas started to come to me. As they washed over me in the following days, I was overjoyed that I had finally found a direction.

Brainstorming

In order to create a film without cluttering the storyline, I needed to find its center. Was it about the pet shop, or the animals in it? Was it about animal captivity and the depression it must bring? Was the shop going out of business, introducing the catalyst for Bird and Fish's separation? Who was the main character, Fish, Bird, or both? Was the story about inter-species dating? What was the obstacle? Time? Space? Love? What was the imminent danger? Would there be other characters?

The first draft of *Fin to Feather* featured an older Macaw as Bird's best friend. He was extremely jealous of the attention that Bird lavished upon Fish and tried to sabotage their relationship in several ways. It was intended that he occupy a good third of the story, but I decided that his storyline might divide the audience's loyalties and detract from the main themes of true love. I wanted a clear message, elegant story, and loveable characters, so I would focus solely on Bird and Fish, using the extra time to further develop their relationship.

PRE PRODUCTION

Storyboards and Balancing Personalities

Now it was time to start putting the images I had in my head down on paper. The earliest storyboards for *Fin to Feather* told a story about Bird and his love affair with Fish. However, since it was told primarily from the viewpoint of Bird, it was unclear if Fish loved him in return, or was an unwilling participant in his crush. She had no true personality and functioned more as a prop for Bird's story than anything else. To shift the focus and balance the story, the dynamics of their relationship would need to be changed.

In the second iteration of the storyboard Bird was bold and self-assured, a definite scene-stealer. He was an all-around alpha male, winning Fish over without much effort or concern. However, his abundance of personality eclipsed hers, leaving her no room to shine. Throughout the solidification of the storyline it became clear that there was no intrigue or hook to engage the viewer; no doubt that Bird would win Fish over in the end, making their interaction uninteresting. Fish was insecure and lost in the story. She needed more power and confidence to regain the title of co-star.

To give Fish a more prominent role, I decided to make Bird less overwhelming. I took away his cocky swagger, redesigned him to be smaller and slightly dainty, and decided that he would always be looking to Fish for approval. He transitioned from aggressive to charming and disarming in that instant. For help in sculpting Fish's personality, I reflected upon similar female role models. It became clear that she needed to be enthusiastic, happy, and empowered by her sexuality. Her body would be curvaceous, her expressions subtle, and her tail alluring. I wanted it to flow like a skirt: silky, soft, and feminine. Beyond capturing the heart of Bird, she would have to entice the entire audience to love her and mourn her loss. I began to understand that Fish's performance would need to carry the film.

Camera angles were also very helpful in establishing Fish's personality. After completing yet another version of the storyboard, I realized that almost every shot featured Fish from afar. I had instinctively laid out each setup to capture the entire fish tank, which was wholly unnecessary. When I brought her directly in front of the camera, her eyes immediately commanded attention, solving the problem of composition and giving her an effective presence.

Setting

Pet Shop

Choosing the pet shop as the film's venue came fairly easily. After researching various types of fish I knew that I wanted to animate an Oranda goldfish, and small, equally petite bird. The film could take place in a human's home, at an Oriental goldfish pond, or in a pet shop. I had extremely little interest in animating humans, so the first setting was quickly crossed off the list. The goldfish pond would have been too similar to the setting of a previous film of mine, so it was nixed as well because I always want to

avoid using the same characters or settings after they've been explored. The pet shop proved to be the best candidate for the film because it could contain a nice diversity of animals and props. As I began to sketch things out I realized that I would need to create a building, stock shelves with products, model and rig small animals, as well as texture and light everything included in each shot. As my 'to-do' list grew, my film began to intimidate me.

Dreamscape

I wanted the second act to retain a theatrical feel while using a stage with no boundaries. Bird and Fish needed to be able to fly through skies, seaweed, and clouds, towards the camera and away from it, while still leaving us the option to watch them from above. In keeping with creating that setting, I needed to create atmospheric elements such as lightning, clouds, and flat cardboard props for the background. Originally, hand-drawn props were suspended in space with shiny, highly reflective strands of fishing line. But while the lines were aesthetically pleasing, they kept breaking up the composition of the scenes that they were in, so they were removed in the end.

Storyboard Animatic

By now, every shot from the film's storyboard had been sketched out onto blank note cards that I brought to a meeting with my advisor. After seeing such a large stack in my hands, she recommended that we spread all of them out onto tables in the faculty lounge. When we had finished, two hundred and thirty-seven cards covered three cafeteria-sized tables. The sight sent was a very clear message: it was time to down pare the film.

While many shots were shortened or removed, a few were lengthened with pauses for dramatic effect. Any awkward scenes were shuffled around in the timeline

until they fit or else were removed outright. By the end of the meeting I was replacing shots so frequently that I no longer used color and detail, instead settling for outlines and gestures to demarcate where Bird and Fish would exist in the scene. The film slimmed down to one hundred and twenty-five shots, becoming a tighter and more cohesive story. When I arrived home, I scanned in every note card that had made the final cut, and composed the first version of an animatic which would be my guide in the coming months. After completing the animatic, I believed that the structure of the film was largely locked down, but more changes would be made.

Moral Support

Hesitation

Starting with an enormous mountain of work can be discouraging to almost anyone. This 'Finimanjaro' both alarmed and bothered me, keeping me from starting production several times. Now that pre production work for *Fin to Feather* was finished, the task of bringing it all together was on my plate. I had in front of me a list of more than six characters to model, texture, blendshape and rig, an entire pet shop full of products, and a dream sequence filled with dynamic props and effects that I had no idea how to create. I grew frustrated because I had chosen a film that was much bigger than my skill set and the time that was available to me. I would prove myself wrong.

Encouragement

When I found myself doubting my abilities and needing reassurance, my advisor, Stephanie Maxwell, was key in making me feel that I could pull this off. I had split the film up into one-hundred and twenty-five scenes, and she suggested that I break the film down even further into acts. The story inherently had two natural breaks in it, so

this was easily done. I can't stress enough how much it helped. It showed me that the film could be completed in passes, not just all at once. While it didn't lessen the workload in any way, it definitely calmed my fears.

PRODUCTION

Pet Shop

Creating the store, furniture, and the products that stocked the shelves took me well over a month. The shop alone required one-hundred and eighty-two textures to be created from scratch. Wood and surface textures were either photographed by me, created in Photoshop, or drawn with Prismacolor markers and later scanned in as jpegs. I enjoyed creating product labels the most because they were bright, colorful, and silly. Whenever I could, I turned the product name into a pun. For example, a canister of snake food was labeled "Snake Bites", and a bag of chopped cedar for hamsters was called "Hamsta' Time". I derived small pleasures in looking for them and remembering their creation as I watched the film.

Bird

Since I already had a concept in mind for Bird, I began to model him first. This expedited the process because it eliminated nearly all of the creative dead-ends and roadblocks that I later encountered with Fish.

Modeling

Bird's design was streamlined and simplified so that he could accompany Fish in scenes without stealing the limelight. I had planned on making his wings extremely realistic: no hands or fingers, and mostly no anthropomorphizing of his arms in any way.

However, after modeling his wings I thought they looked rather bulky and crude. It became apparent that the lack of form and definition in Bird's arms was going to greatly limit his dexterity and thus make animation quite difficult. To solve this problem, I gave him four feather-shaped fingers and added wrists to define where his hands began. I am very satisfied with the direction that I chose, especially in the scene where Bird collides with Fish, holding onto and petting her while drawing her closer to him. I believe that realistic and flat wings would have made their embrace look clumsy and awkward.

I went completely overboard while modeling Bird, and created such an obscene level of detail that he required no smoothing operation when I finished.

Texturing

Texturing Bird was pretty much a walk through the park. I knew that I wanted to use the colors of a Sun Parakeet and I was able to follow all of the reference materials that I had found pretty closely. I used Maya's 3D Paint tool to rough out Bird's features within the scene file and then exported the generated map as a tiff. After bringing that file into Photoshop, I was able to use it as a guideline for the placement of various details such as Bird's eye sockets and tail feathers. I flipped back and forth from Photoshop to Maya to preview any changes I had made until I achieved the desired look. I also used a bump map to raise small feathers on his arms and made slight adjustments to his specular map to create highlights on the tip of the each feather.

Molting

The biggest shift in Bird's design occurred when I decided to forego feathers altogether. Maya's Paint Effects had proven render-intensive and very unnatural, and using a card-based system was impractical for my needs and time available. This forced a slight change in Bird's performance in Act One. During the scene in which he now

stretches his arms and smiles, he was previously going to preen and ruffle his feathers in a display for Fish. Because I relish in animating subtle animal behaviors, I was truly disappointed that I was not able to animate Bird to my original idea. But as it turned out, the scene evoked a ripple of laughter from the audience, so I don't totally regret the change.

The feathers that are seen streaming off of him towards the end of Act Two were individual image planes that I animated without the aid of dynamics.

Fish

Modeling

I decided to use the body of the Red Cap Oranda for Fish because of its hourglass-shape and dramatic tail. The tail rests higher up on the back of the body than on most fish, and flows much like silk underwater. Modeling Fish felt akin to a surgical procedure. During the process of adding bulk and carving out her lines, I wasn't sure that she'd make it through the process without coming out looking bandaged and bruised. One moment she looked fine, and then the next she was practically grotesque. It was quite discouraging. When I finished sculpting her body she looked just like an Oranda, but she was not sexy, and she definitely had masculine features. I had a hard time imagining her turning out well. I moved on to texturing because seeing her in her current state made me very nervous.

Texturing

Fish was originally meant to have a white body, light blue eye shadow, and a red cap for her head. But when I painted that texture onto her body in Maya, the combination of colors made her look like a clown, and she looked ridiculous.

I tried switching between different combinations of eye shadow and body colors, and it became clear that she looked best in gold tones. So, while I kept the geometry of a Red Cap Oranda, I ended up using the color palette of an ordinary goldfish. I wanted to avoid humanizing her too much but her eyes were definitely holding her back. The original eyes were simply too cartoony and simplified. I developed a large number of absurd results after trying many variations of eye shaders and textures.

Fish's scales were generated using five maps: color, transparency, specularity, reflected color, and bump. Honestly, it was the result of an absurd amount of trial and error. I had never been very interested in texturing and until that point had very little exposure to it. Fish's maps were my one big shot at learning and perfecting a method of texturing. Countless hours went into creating various maps for Fish, and a majority of the work turned out to be detail-oriented painting, tiling, and UV troubleshooting. Her UV maps were frustrating to work with because I needed her scales to tile perfectly as three separate UV maps transitioned from her body to her tail.

Eyes

After finalizing Fish's model and textures I moved onto technical issues. After constraining her eyes to a target rig and animating it, I decided that her eyes should not swivel around inside their sockets. Any extreme movements of her eyes made Fish seem anxious and panicked. So I locked them into place and also removed the whites from them. This took away the *'surprised'* look that she had been wearing and replaced it with a cool confidence which made a tremendous difference. On a whim I gave her feathery eyelashes to draw attention to her eyes. They bordered making her look too human, but they softened her whole face, so they stayed.

SPECIAL EFFECTS

Water

I explored many techniques to create the right look for the water in Fish's tank. I first experimented with Maya's fluid systems, and then I tried to use a geometric cube with a ripple deformer that could be animated across its surface. I even tried to fake the refraction that comes when viewing objects underwater by using Mental Ray, but render times would have been too much of an obstacle. I began to be discouraged, and as I often did when stumped, moved onto other tasks.

While I was still in the brainstorming stages of *Fin to Feather* I had thought about buying a goldfish to keep as a reference for my film. Thinking of that, I headed to a local pet superstore. I trekked past the rodents and terrariums to find their aquarium section located at the back of the store. I sat down on the lower shelf of a display and began to watch the fish.

I recorded as many observations as I could about the contents of each tank. After noting 'crystal-clear water', 'colorful backdrops', 'seaweed', 'bubbles', and 'different kinds of gravel', I began to break down how all of it worked together to create such a lush environment. As I was reviewing the list, a brightly lit aquarium at the end of the row caught my eye, and I walked over to it.

When I realized that the tank was devoid of fish, my eyes came to rest upon shoots of seaweed moving lazily from side to side and a sheet of bubbles rising along the back wall. In a moment I understood that these two components were vital to capturing and representing the weight and mass of water in the tank. As I watched the bubbles rise, I realized that the surface of the water wasn't visible from straight-on. As I looked back up the rows of tanks, I realized that every aquarium's water level was just above the

plastic rim of a tank cover. I couldn't even see any water at all; my mind had filled it in for me. I was relieved knowing that I could skip the aggravating trouble of creating realistic water and move on to the task of creating the *illusion* of it.

Seaweed

Maya's paint effects were used to create all of the seaweed featured in *Fin to Feather*. For my first attempt, I modeled several stalks of seaweed and skinned them to NURBS curves. The models looked great, but they deformed poorly and required loads of time and attention to detail to look just right. For the amount of shots that seaweed would be featured and animated, the task began to seem unfeasible. In addition, the heavy geometry of the model slowed down any movement within the scene. Starting over, I began investigating paint effects and exploring all of the options that the tool had to offer. There were plenty of brushes designed to paint gooey tentacles and extraterrestrial trees, but I found that making a realistic stalk of seaweed proved easier said than done. After spending a few hours creating the look of seaweed, I then rigged the geometry to a curve and gave it animate-able clusters to control movement as needed. Originally I was frustrated that Maya didn't come with a set of aquatic plant life brushes, but after I had designed a few of my own I was glad that I had been forced to make it from scratch.

Bubbles

The bubbles that stream in the background of the aquarium were also created using Maya's Paint Effects. I found a brush that could produce large soap bubbles and painted a stroke of them across the back of the fish tank. After rummaging around in the settings of the brush I figured out how to manage the size, quantity, and speed of the bubbles onscreen, as well as how to create a tapered effect as they approached the

water's surface. Because their speed was constant they did not need to be animated or altered once I had captured the right appearance and behavior.

Cloth

The transition from Act One to Act Two is intended to create a feeling of closure and a new beginning. To achieve this I would need a soft, sweeping animation that could bring calm to the room and let the audience take a deep breath, relax, and prepare for the next act.

Through the use of experiments and tutorials I learned how to create a rich and velvety texture for the stage curtain in the second act. Using that texture as a jumping off point I began to alter it to look like an appropriate material for a birdcage cover. I varied the shader's maps and sliders until the material transformed into a sturdy felt drapery.

From the start I had several reservations about using dynamic cloth and pictured elaborate scenarios in my head of things turning disastrous. I held off on designing a rigging system for cloth until I could see if any additional constraints would be needed. Because the needs of the scenes in which cloth appears were simple, there was no need to give the cloth a skeletal system. I only needed to place a sheet of Maya cloth over a piece of simplified birdcage geometry and let the simulation run. After seeing promising results through Maya's cloth simulation, I returned to the cloth's properties and adjusted values such as friction, tension, and gravity to further polish its animation. Early tests were exciting as it brought a new depth and sophistication to the film.

Originally, I wanted the cloth to cover the cage and fall to rest, part down the center into two panels and draw to either side of the screen just as a theater curtain would. However, a great deal of technical difficulties arose when I tried to make each swatch of fabric (the cage cover and stage curtain) to collide and animate without

clipping, interpenetrating, or collapsing into each other. So, I opted to drape the cloth over the birdcage, pause and drift while changing colors, and then rise back up from where it came. I added pauses in the curtain's lifting animation to hint at the idea of stagehands at work in the background of the film, running their hands up the rope that would raise the stage curtain. I rendered the entire animation twice: once as red velvet and then again as blue felt. After that was completed, I layered each pass on top of the other and added a cross-fade between the two colors in After Effects.

Lightning Bolts

Maya's built-in lightning toolset worked beautifully. By using its basic creation tools and shaders I was able to create intense lightning bolts in vibrant hues of pink and purple. Since nearly all of Maya's lightning properties were keyable, I was able to thicken and thin the shaft of each bolt for emphasis at pivotal moments during the act. I also created starbursts and flares on several bolts and animated them running up and down the length, striking at the moment that key notes in the score sounded.

Clouds

Having had such great success with Maya's lightning, I moved on to Maya's built-in volumetric cloud creator for the clouds in Act Two. After running through a few tutorials I ran test renders on a small patch of clouds. They rendered beautifully; they had depth, fluid reactions, and even interacted with lights. I went on to fill the scene with clouds, and when I finished, I started a render and walked away for a little while. When I came back more than ten minutes later, the frame had not finished rendering. I left and gave it an additional ten minutes, but upon my return, it was still not finished rendering. Maya's volumetric clouds were so render-intensive that I was not able to render enough cloud cover to fill the skies of Act Two. I had to find another way.

Thankfully, after a few hours of research over the Internet I found a website that explained how to create clouds using particles that were painted onto a planar surface and then rendered using alternate options that could simulate the appearance of fluffy clouds. This non-volumetric method cut my render times down from over twenty to one-and-a-half minutes a frame. By adjusting the particle settings in Maya I was able to produce clouds in light pinks and purples and continued to play with their hues and saturation levels in final edits using After Effects. This method was used extensively in scenes towards the end of Act Two, when the sky grows progressively darker and more threatening as trouble brews.

Stage Props

I had envisioned all of the props for Act Two as slices of cardboard twirling in space. I wanted each piece to display a small edge of corrugation between each painted side as it rotated. But like many concepts, when this idea was taken into 3D, the weight and bulk was exaggerated when I added depth to each panel. When I reduced them down to double-sided planes, they became light and airy: far more playful and visually appealing than the chunky blocks they started out as.

ANIMATION

Blocking

After the storyboard animatic was finished, characters modeled, and sets designed, I began to prepare individual scene files in Maya. I approached the task of animation as you would paint a house. The job had to be done in passes, with each new layer of work building upon the last. The layout of each scene had already been

composed in the storyboard animatic, and now I needed to recreate each shot, saving one after the other as a separate file in Maya.

This wasn't a terribly arduous thing to do, but it did take a fair amount of time. I recommend that you do not use the 'import' option to bring elements, props, or characters into each scene. Referencing them as separate files will save you incredible amounts of time should you encounter the need to edit the original files of a character or setting.

For each of the pet shop scenes, characters or clusters of props were referenced into the master shot scene file from their own Maya file. For example, the files included in scene were listed in the reference manager window were like so: petshop.mb, bookshelves.mb, aisles.mb, tank.mb, cage.mb, hamster.mb, bird.mb, and fish.mb. It's important to note that the scene files such as 'bookshelves' and 'aisles' were already stocked with cans and other products in their original file. By doing it that way, continuity was preserved and items didn't scoot around from scene to scene. If an element of the pet store would not be visible in a specific shot, I would remove the reference from the scene file. In addition to making it easier to pan and dolly around the scene, that also freed up memory and sped up processing times in Maya.

Because Bird and Fish were in the 3D animatic for reference purposes only, I did not need to animate them. Instead, I moved them into position for each scene and locked them down. Next, I rendered a playblast of the scene with the same duration as the corresponding scene in the storyboard animatic. These shots were then edited together in After Effects and reviewed weekly in meetings with my advisor.

Watching the static completed 3-D animatic often brought up any issues with the film such as composition, story, continuity, and editing. After each review, I always found myself with a notepad full of shots and issues that needed to be addressed.

Passes

Now that each shot had been blocked out, I began to construct a 3D animatic. I would place the characters within each set so that I could begin to see the film as a whole, and find any flaws in the story thus far. After this was finished, each shot would be revisited with a second pass for further refinement of timing and blocking.

Before I began, I created an Excel spreadsheet in which I listed every scene and created separate columns for entering complexity and priority values. I rated the complexity and priority of each scene on a scale of 1-5, with 5 representing an extremely difficult or significant scene. For example, a close-up of Fish in the first act was valued at 1 because she was the only entity that needed to be animated. There were no extreme movements in the shot, only a few slow blinks and a lazy swish of her fins.

Because of the larger scope of Act Two, almost all shots were valued a 3 or above, with a few shots ranking a 5. Layers of clouds were placed, varied and adjusted, Bird soared through the skies, animated props peppered the background of the set, and lighting bolts struck and exploded with starbursts of light. When Fish was torn from Bird's arms and hurled into the sky, her tail needed extra attention to ensure that it didn't shear or crumple up into a paper ball. With each pass, more refinements and polish went into each character's performance. Facial expressions and follow-through were roughed out in the third pass and polished if needed in a fourth. Virtually every shot received a third pass of animation, and any scene rated higher than 3 received a fourth or fifth pass as needed.

Act One

Act One was the first to be tackled and also the act in which I began to discover what each character was capable of. I was finally getting the chance to animate my characters and having a fantastic time doing it. Bird's prance was merry and silly, and Fish was flirty and alluring.

Bird's rig was fairly simple with bones and IK chains, so it did not give me much trouble at all. During the entire animation process, I crawled into the graph editor nightly, and lived among the curves and their tangents. After finding and deleting stray keys, I removed any hiccups and skews I found in the animation curves. After the first few passes of animation, I was delighted with the faces that I was able to create with Bird, and felt that his best performances in *Fin to Feather* were greatly enhanced when I added just the right expression.

With two pairs of fins, Fish was essentially a four-legged character. I animated her front fins similar to canoe paddles, and her back fins as if they were horse tails. While her strong front fins could propel her through the water, her weaker back fins drifted behind her animated to closely follow the broader movements of her body. Fish's tail was rigged to six bones that ran along the top and five along the bottom, and the fleshy middle of it used cloth dynamics. Each time that I animated her body, I also had to animate each of her eleven tail bones and adjust the tension and friction settings of her tail to make sure that it reacted to the motion while behaving properly.

I've always enjoyed animating follow-through, so once I had the bulk of animation roughed out I found it rather relaxing to polish any secondary motion. While Act One was a large body of work, no specific scene sticks out in my mind as being a troublemaker. This isn't to say everything was a cakewalk; animating Bird leaping up to

his perch, and Fish's dive into the seaweed (dealing with collision bodies and paint effects) nearly broke my spirit. There would be more to come.

Act Two

Fish and Bird's embrace in the middle of Act Two was by far the most complex scene, as it dealt with various constraints on each character, Fish's delicate tail, and two bodies that could collide but not intersect while holding onto the other. The intricacy of the shot intimidated me, and I delayed working on it until I had reached the middle of Act Two. I wanted to wait until I felt that I could animate a stellar performance for Bird and Fish. I went far beyond a fifth pass for that scene, spending well over two days animating and polishing it. I wanted this scene to tug at the audience's heartstrings, so I gave it all that I had. I called my mother immediately after I was finished. I had a tremendous emotional response to Bird and Fish, and it threw me for a loop. My film had pulled me in, and I was truly feeling their love and joy as they snuggled and wore soft smiles. I dreaded having to tear them apart so completely.

Bolts of lightning proved difficult to animate because they required a render preview each time that I applied a new effect or modified an existing one. Tweaking variables such as bolt brightness, path, and amplitude, as well as starburst position and size helped to generate the look and feel of lightning.

It was also necessary to render full previews of particle-generated clouds each time they were modified. Even in today's version of Maya, particles are displayed as flat-shaded green spheres which are not helpful at all when trying to compose layered clouds within a shot. Flinging Fish across the sky was easily done and almost comedic, but most of her animation needed to be toned down so that her tail didn't penetrate her body or

crumple into a ball of polygons. Her velocity also needed to be slowed in order to clearly show her expressions of fear and surprise.

For Bird's streaming feathers, I created about 25 planes and applied a position constraint, binding them to his arms. At the right moment, I keyed the value of the constraints to zero, freeing each feather and animated them streaming off of his body.

For the bubble's bursting effect, I knew the look that I wanted to create before I began. I wanted the bubble to rise, bob, crack, show beams of light peering out from within, and then explode. The shards would then fall to the ground gently, like leaves, not jettison off-screen like shrapnel. I wanted the burst to evoke feelings of loss and the death of hope, not aggression or anger. While I knew how to shatter and animate the bubble, I was having a lot of difficulty in achieving the right lighting effect. Luckily, I found a wonderful tutorial on HighEnd3D's web site illustrating how to use fog and shadows to produce beams of light radiating from inside an object. The tutorial was a great start, and I took it further by rendering all of the elements in multiple passes so that I could manipulate the timing, color, saturation, and opacity of the beams of light. I also animated the background of that shot with a warp effect so that the whole screen bows inward, holds, and then bursts outward with the shatter of Fish's last breath. After Effects was instrumental in making this scene 'pop'. I've taken a screenshot of the expanded timeline so that you can see what effects I used.

I still think that I could have made Bird and Fish's separation more traumatic, but I didn't believe that I needed to tear the film in two to do it.

Act Three

By the time that I began to animate Act Three I was in the home stretch of my film. Since I had already animated Bird and Fish in this setting, and their range of movement was limited, this act was a nice break from the chaos of Act Two. One of the major differences that I notice between this act and the other two is that the synchronization of music and animation is much tighter. This is because I actually had the final music in-hand, and was able to listen to it and match its timing. Bird's startled awakening and Fish's somber nods flow from one to the other with the current of the music.

I was somewhat disappointed with the composition of the score at the very end of the film. I felt that the piece written for this act was perfect; right up until it was revealed that Fish had been purchased and would be taken away. When Bird rears back and cries out to his love, there is no instrumental cue for his voice in the score. Upon discovering this I contemplated changing his animation to fit the music. I envisioned Bird silently reaching one arm through the bars towards Fish, his hand curling into a fist and dropping as he begins to understand that his love is lost forever. But when I pictured it playing out in my head I felt that it was not an appropriate ending for a tender love story. I was sold on making Bird cry out for Fish in anguish. So I went ahead, stubbornly sticking to my original plan and polishing the animation as it had been laid out, saddened that Bird had no true voice in the score. I'm so glad that I did. After animating the entire act and watching it a few times, I found it even more powerful and symbolic that his cries went unheard. I've meant to ask Daniel if that was what he intended, or if it was just a happy accident.

LIGHTING

Three-Point-Lighting

For a long time I believed that the theory of three-point-lighting meant that a scene could only be lit using three lights. This of course explains why the first 3d film that I completed at RIT was lit so poorly. I had studied a bit of lighting at RIT and learned even more during my time at Red Eye Studios creating full-motion sequences for video games. I was hired as an animator and normally spent the workday modeling, rigging, and animating, but during a particularly nasty crunch time everyone was asked to help the lighting and rendering teams to meet their deadline. I was shocked when I opened up a scene file that contained over thirty-two lights. Sure that it was a mistake, I stood up from my computer and headed for the lighting department. I assumed that somehow multiple lights had been cloned or imported into the scene by accident, but I was wrong. One of the lighting artists brought up Maya's light linker and began to show me exactly what lights were affecting which objects. This was a complete 'eureka' moment for me, since I had not yet seen that tool in action. I used light and object linking extensively throughout the process of lighting *Fin to Feather*.

My Method

I approached lighting much the same way that I had treated the rest of my film: I broke it up into layers. I made sure that each light had only one job. Either it affected one character, one prop, or the background as a whole. This made it easier to adjust the lighting if one element needed more contrast, more illumination, or less light in general. I used key, fill, diffuse, bounce, and rim lights for each object or group in any given scene. Anything metallic, shiny, or reflective also needed a different kind of light to generate a

specular pass. Dark niches and corners found in the pet store needed to be lit so that they receded into the background without being pitch-black. The opening scene in the pet shop featured Fish in her tank, Bird in his cage, stocked aisles, shelves, a lazy hamster, and one hundred-and-eight lights.

The first shot that I lit was the pet shop sign; also the title screen. Remembering the techniques that I had absorbed from work and college, I began to position lights throughout the scene. After much trial and error I hit upon the right lighting to give the sign depth, contrast, and highlights. The wood grain texture of the signage needed to accept shadows as well as highlights in order to make it pop, so the lights had different intensities and angles to counter or assist the other accordingly. After basic lighting was roughed out, I found that I needed to mitigate the blown out effects of overlapping pools of light. My solution was to employ spotlights as negative intensity emitters that dimmed the target area. I softened edges and the underside of the sign by using a bounce light and the handle benefited from an intense rim light positioned almost directly behind it.

Characters

Bird had at least six lights parented to him at all times: a dim fill light projecting onto his chest and neck, a rim light at his back, a bounce light angled up from the ground to his belly and the underside of his tail, an overall key light that was positioned based on the scene, and two fill lights to light each half of his face: one dimmer than the other.

Fish was particularly difficult to light because of her extra appendages and the fact that her body was so bulbous that three diffused spotlights were needed in order to illuminate it from all sides. She was also rigged with two lights on each side and another on top that emitted only specularity to make her scales pop and flash as she swam across the screen. In addition to those eight lights, her eyes required six more of their own. Four

fill lights illuminated her eyes while another set of specularity-only lights created the highlights that made her eyes shine.

FILE STRUCTURING

Layering and Naming Conventions

In order to render out *Fin to Feather*, I separated each shot into multiple layers that would later be composited or altered in post-production. I kept all props, characters, cages and clouds on separate layers so that I could adjust color correction, speed of animation, or placement within After Effects. This method saved me an amazing amount of time in situations where only one element of a shot needed to be re-lit, re-animated, or re-rendered.

By adding three or four-letter suffixes to file names, I was able to identify a rendered sequence or Maya scene file at a glance. Each file name gave the act or sequence, the scene number, and the content that would be displayed. For example, a file labeled 'Seq01_Scn04_FISH.tif' was a file that contained Fish in scene four of the first act. Typical abbreviations that I used during my film were:

BIRD = The character Bird.

FISH = The character Fish

SFX = Special effects

PFX = Paint effects seaweed

BUBS = Bubbles at the back of the fish tank

GRVL = Gravel in the fish tank

TANK = all still elements of the aquarium such as the blue backdrop

CLDS = Clouds

PROP = Prop

BOLT = Lightning bolts

The list goes on, but for the sake of brevity I will end it here. Every so often some of the above layers had more than one occurrence within a given scene. In such cases, each layer was also numbered based on its distance from the camera, such as Seq02_Scn08_PROP_01. Foreground and background layers that were only required to be rendered for one frame were designated with the suffix BKGD or FORE depending on each case.

The scenes in which Bird is in his cage best represent this method of breaking up a shot into layers. After saving off a version of the completed scene file, I would turn off any unneeded layers and apply background shaders to any geometry that would not be in the final render. Next, I would save the scene file off as a version, complete with a new and extended name containing scene, act numbers, and acronyms to designate which layer it would generate. For the birdcage shots I rendered the bars at the front and back of the cage in separate passes so that I could dim and blur them separately to represent a greater depth of field. Bird was rendered on his own layer, and the cage floor and pet shop background were rendered out as separate still images.

RENDERING

Rendering in Maya

After I screened my film, everyone that I knew asked if I had rendered out *Fin to Feather* using Mental Ray. I literally burst out laughing the first time I heard the question because renders in Mental Ray take such a long time that it would have been absolutely impossible for me to use it to that extent. I'd like to think that successful textures, delicate lighting, and a collection of effects created in post-production worked together to mimic the results of an advanced renderer such as Mental Ray. With the exception of seaweed

plants and stage curtains, the entire film was rendered using Maya's built-in rendering utility.

During the five months in which I produced my thesis film, I spent two months simultaneously rendering, animating, and compositing. I drove to RIT's 3D lab at 11 o'clock every night to secure at least four computers. After setting up batch renders using Maya's default renderer, I drove home and animated through the night until 8am, when all renders were stopped by lab assistants to make way for incoming classes. I then retrieved all completed renders from the FTP site and compiled and rendered them out to Quicktimes using After Effects. While I reviewed the clips I took notes on which renders were final and which needed major or slight changes. Before going bed, I would make sure to create new executable batch files for the next series of renders. I made sure that I knew which scenes were finalized, which would need to be re-rendered, and which would be animated the following day.

Brute Force Fixes

The sweeping pan through the pet shop in Act One was a disaster to render. Whenever I ran batch jobs in or outside of Maya, only the first 175 frames would develop and then the rendering would come to a halt. I tried to render that shot five times using different computers, but it always ended early. After asking everyone I knew for suggestions, I saw that my only alternative was to render the scene out by hand, frame by frame. I spent five hours one day setting the frame, hitting render, waiting for it to finish, saving off the file with the appropriate frame number, advancing one frame in the timeline, hitting render, and repeating the cycle.

This went on until the scene finished at frame 460, two-hundred and eighty-five frames later. I encountered this problem three more times with different scenes across the

first and second acts, but I never found a common anomaly among them. The only advice that I can give is that sometimes things like that just happen.

Mental Ray

I used Mental Ray to render out cloth paint effects in *Fin to Feather*. While Mental Ray produced fantastic results, it also came with ridiculously long time render times. Using two computers of equal speed and specifications, I could only render out one pass of cloth for every six passes of Fish and Bird in the same amount of time. One of the biggest headaches I experienced when using cloth and paint effects was render interruption. If a render job was ended prematurely, I had to start the entire render over again from the beginning of the scene. Dynamic simulations such as those needed to complete in one pass.

The preview options for displaying paint effects in Maya can become very detailed, but the only display level that my computer could run in real-time were akin to bare curves. I could not enable the geometry that would be generated and preview animation because my computer was simply not powerful enough. I also could not animate using the display curves because since Fish was going to dive through the seaweed, I needed to see each leaf cluster that would be generated so that she didn't penetrate it. Without knowing exactly what the end result would look like, I couldn't animate Fish properly. I was forced to render out the scene every time that I made an adjustment to see what changes needed to be made. As you can guess, I had a very difficult time wrangling the seaweed stalks in Act One, as it required many, many tweaks and re-renders.

The Early Bird

I was incredibly grateful and completely thrilled that I was able to render a majority of my film before the rest of RIT entered the crunch mode that occurs just before final exams and projects are due. While I had been rendering through April and May the lab had, at most, four other people in it at closing time. Several nights I could have used up to ten computers if I had needed to. It was almost eerie how quiet the labs were, and I often thought of it as the calm before the storm. Sure enough the lab became packed as the end of the quarter drew near. During my last week of rendering I was only able to render on one computer a night. Even so, I was able to turn *Fin to Feather* in a full day early, one of the best feelings that I've had while attending RIT.

SOUND

Silence

The film I had completed just before beginning my thesis was very dialogue-driven. Finding actors, writing and recording dialogue, importing sound correctly, and synching the animation was all very time-consuming and proved to be troublesome time and time again. So I began to review my previous works and saw that the strongest films had no dialogue or sound effects, and were instead animated to music. I opted for that same approach hoping that it would leave me more time to polish animation, effects, editing, and continuity. I would need to find a composer who could quickly grasp the film's themes and quickly compose a score for an animatic. From that I could follow the tempo of the music while I animated, adding a richness to the performance and merging the two mediums seamlessly. During the middle of March, considerably later than I had

planned to, I began posting "Composer Wanted" flyers at the Eastman School of Music, regretting the time I had lost and hoping that I'd find someone soon.

The Search Begins

When I first began to search for a composer, the only media that I was prepared to show were test renders, model turnarounds, and a storyboard animatic illustrating scene layouts and the staging of Bird and Fish. I wanted to find a composer who could write and record music fit for a love story, and on the flyer I emphasized this along with a commission of three hundred dollars. I failed to hear from anyone for two weeks.

During the last week in March, I was contacted by a composer who was interested in working on my film. I asked if we could meet as soon as possible to discuss things further, but he explained that while he was busy at the moment, he would be available in a week's time. After waiting over a week to hear from him, I began to try to reach him. I had zero success. I didn't hear from him again until two weeks later, when he sent me a short e-mail saying that he had decided to spend the last two weeks of the school year relaxing and hanging out with friends instead of working on another project. I was floored and upset; I had lost three week's time and was still without a composer. My quest to find a composer was becoming fiercely discouraging, distracting, and stressful, so I decided to set the task aside and return to it later. I needed to focus on finishing my film with what little time I had left.

The Search Continues

I returned once again to the Eastman School of Music (ESM) during the last week in April hoping to find a composer. I redesigned my flyers and posted them all over ESM. It was more than a just little disheartening to see my old flyers still thumbtacked to the bulletin boards, apparently unnoticed. This time I had a finalized 3-D animatic and

plenty of reference material to show anyone who responded. I was especially proud of my animatic as it was turning out just how I'd imagined, and 40% of the shots in it were on their second pass of animation. On May 2nd I received an e-mail from a graduate student of Eastman.

Daniel Black was finishing up his MM in Orchestral Conducting and had been looking for a chance to compose music for an animation such as *Fin to Feather*. I immediately phoned him and pitched my story. He was thoughtful and quiet at first, but grew talkative and enthusiastic by the end of our conversation. After we hung up I was beyond ecstatic and called nearly everyone that I knew. I wanted to shout aloud that I had found a composer in very last month of my thesis.

Score

Daniel and I met two days later at a coffee shop near Eastman to discuss the film and brainstorm ideas for the soundtrack. After watching the animatic, he had loads of ideas for the ensemble and score. I explained my wishes for dark and sleepy motifs for the pet shop and spirited and happy ones for Bird and Fish's dream. I also expressed my hopes of using pure, unprocessed sound. More specifically, I wanted a soundtrack in which the audience could instantly recognize every instrument being played. I referenced the musical classic, *Peter and the Wolf*, where each character is identified through the use of a particular instrument or octave.

He agreed whole-heartedly with the direction and recommended that we stick to using woodwinds and strings such as clarinets and violins. I was absolutely delighted and felt that those instruments would fit the film perfectly, but I was wary of trying to find more musicians, having had such a hard time finding Daniel in the first place. He reassured me and explained that he already had a list of people in mind and would

contact them after our meeting. He asked if I would be willing to pay each of them fifty dollars, both as an incentive and a reward. I was already paying Daniel three hundred dollars for his work, and to pay four performers at fifty dollars apiece would bring my music budget up to five hundred dollars, nearly double what I had budgeted. But I felt that this was an opportunity I couldn't pass up, and accepted. Everything that had been discussed was beyond every expectation that I'd had, and I was ready for it all to begin.

Daniel agreed to complete a score for *Fin to Feather* two weeks from the day of our first meeting. I apologized for the extremely short deadline, but he shrugged it off with a smile. He worked extremely fast, so that when we met a week later we were able to discuss the completed composition. After we watched an updated animatic I had brought with me, he took a stack of papers out of his bag and began to spread it out over the table. For a moment he paused and his face clouded a bit. When he looked up he said, "I just realized that you might not be able to read sheet music..." It was ironic, awkward and hilarious all at once..

I shook my head as we laughed, and he offered to hum what he had written. I imagine that it's very hard to hum on command, but he conveyed the gist of the score well enough for me to feel comfortable giving the go-ahead. He had the names of a cellist, a clarinetist, an oboist, and a violinist. We would meet in four days to record the soundtrack. During that time, Daniel secured the four musicians who would contribute their talents to the score.

Performance

We recorded on a rainy Friday in a room at the Eastman School of Music. I had brought my film and my advisor's laptop, and Daniel had reserved a room with a projector and brought recording equipment. As I queued up the animatic that Daniel

would conduct to, the performers filed in, chatty and pleasant despite the rain. None of them had seen the sheet music in advance, so this was going to be a hectic sprint through tuning up, rehearsing, and performing the final piece. While Daniel passed out the sheet music, I resolved technical difficulties and was able to project the film onto a blank wall in front of him, behind the semi-circle of musicians. When the bassoonist, Amelia Fannin, reached around for her instrument she saw Fish projected on the wall, and everything came to a halt. Professional demeanors gave way to excitement and giggles as the performers grinned and begged Daniel to let them watch the film before rehearsal started. Even without any sound at all, they laughed at Bird, gasped at the dream sequence, and cooed over Fish. I hadn't shown the film to anyone besides my advisor, so I was ecstatic that Fish and Bird were so adored and appreciated. After watching *Fin to Feather*, the entire room was energized and the musicians plunged straight into rehearsal. Even on the first round of practice they sounded wonderful, and my eyes welled with tears.

We spent the most time polishing the first and second acts, trying to match the pacing of the film while allowing musicians to play through important pieces of the score. From start to finish, the entire recording session took a mere two hours. We had recorded less than ninety minutes' worth of sound, and Daniel offered to sort through it since he would be the best judge of the final work. He imported the music, separated takes into separate tracks, and labeled each with conductor's notes that cited which he felt were the most successful and for what reasons. It would have taken me at least a full day if not longer to tackle the task alone, so this was a tremendous help.

POST PRODUCTION

Final Editing

Since I already had a working timeline leftover from my animatic, I simply saved off a version of it and continued working on it for the final edit. Storyboard panels were replaced with 3D animatic playblasts which were then replaced with final renders as soon as each shot was animated and rendered. This constantly gave me immediate feedback on lighting, continuity, timing, and sound. In the end, I value spending so much time on the two animatics because doing so saved me a great deal of work in the end. Editing merely consisted of making sure that each new shot was butted up against the last.

SCREENINGS

Proud

When I arrived at the School of Film and Animation's screenings at RIT in May of 2007, I walked into Carlson Auditorium on cloud nine. I was euphoric that I had completed my thesis film in five months, and was extremely proud of it. I was proud that I was going to tell a beautiful story, proud that I had created an animation far beyond what I had felt I was capable of producing, proud of the fantastic score that Daniel Black had composed, and proud that soon I was going to share it with everyone.

Audience Response

As I sat among the audience watching *Fin to Feather*, I realized that I could not have asked for a better experience. They chuckled as Bird hopped about his cage and flexed his tiny arms, sighed and smiled when Fish appeared for the first time, and

murmured a collective 'aww' as Bird and Fish embraced each other among the clouds. The image quality and color levels were just right and the sound resonated well within the packed auditorium. People left their disbelief behind as Bird and Fish flirted in the pet shop and soared through the clouds in their dreams.

Almost everyone immediately realized Fish's predicament at the beginning of Act Three. There were several gasps, nods to neighbors, and hands pointing up at the screen once it was revealed that Fish was in a plastic bag and had been purchased. The audience was subdued as the house lights came up, and once I approached the podium, the first question was "Why didn't you write the story so that Bird and Fish found a way stay together?" This was exactly what I wanted to hear because it meant the audience had taken the relationship into their hearts, and were saddened and moved by the sudden and tragic separation. I had wanted them to feel the characters' joy, love, confusion, and loss, and it was obvious that they had.

Reactions and Feedback

All other responses were questions asking how I had created a certain technique or look, or generous compliments. Nearly everyone favored Fish, calling her gorgeous, graceful and sexy, while a few others found Bird impish, cheerful, and huggable. The audience ranked both as loveable, well-developed characters. One faculty member, Skip Battaglia, gave high praises for using a theatrical dream sequence, and I was glad that it had been recognized as a stage.

At the program's intermission, I met with just about all of the School of Film and Animation faculty. Besides my advisor, none of them had seen me at RIT in over a year, and everyone expressed their surprise at my unexpected return and congratulated me on creating such a delightful film. Everyone that approached me absolutely loved

Daniel's work and was amazed when I explained that he had composed and conducted the score in only two weeks. I did not receive a single negative comment on my thesis film that night, which is something that still amazes me.

Summary

I adore this film. Every time I watch it, I want to squeeze Fish's plump body, pat Bird on the head, and smile like a fool. Once I finished producing this film, I felt it break away from me. I began to appreciate it as an entity independent from anything that I have previously produced. I understand that I created *Fin to Feather,* but it felt as though I channeled something larger than myself to do it, and I'm still inordinately proud a year later.

Fin to Feather

Appendix A ~ Original Proposal

School of Film and Animation Senior Project Approval Form

Proposal Title Just Above the Surface: Under the Clouds

Student(s) Name(s) Rebecca Rogers Responsibility _____

_____ Responsibility _____

Advisor's Name Stephanie Maxwell

Type of Project: Narrative/Non-fiction/Animation/Experimental/Script/Film/Video/Other

Discussion Notes:

Dreamspace: they have a "baby": a flying fish?

Good work.

Approved ✓ Date for Resubmission _____

Dpt Approved _____ *Project to be Completed By* _____

Conditions of Approval:

Advisor's Signature Sr Dept. Chair) Stephanie Maxwell Date 4/26/04

I (we) accept that the above is an accurate record of the conditions of approval of my (our) Senior Film/Video/Animation Project.

Student's Signature Rebecca L. Rogers Date April 26th 2004

Student's Signature _____ Date _____

Student's Signature _____ Date _____

Rebecca Rogers
Thesis Treatment
March 25, 2004

This will be a 3D animation
A bird may love a fish, but where would they live?

Set in a pet shop, a parakeet and a goldfish fall in love with the other from afar. The parakeet lives in a cage upon the checkout counter, while the goldfish lives in a tank among many others along the back wall. The pet shop is small and untidy, and a general grayish brown color dominates, with blues highlighted by dim florescent lights. The two are oases of color in the dismal shop. A flash of gold captures the parakeet's attention one day, and they meet. Beguiled by the fish's delicate beauty, the parakeet falls in love with her, and she with him.

The two connect across the distance, each staring and twirling flirtatiously, and begin to dream of what it would be like to be together. We see their dreams, in which they never think of if they will breathe air or water, they simply float along together in a suspended pink reality, with both clouds and seaweed floating past them. The dream sequence will involve 2D cutouts as well as 3D clouds and AE distortion effects.

The space between them is unbearable, and so they begin to try to be with each other. The parakeet climbs all over his cage, trying to unlatch the door with his foot, and ends up thrashing about inside of it. The goldfish tries to dig through the gravel to get out, tries pushing against the glass, and jumping out of the tank. Neither is successful, and ends their day still, sad, and gazing at the other.

The next day fades in, and we see the goldfish (seemingly) inside of the cage. It's a POV shot from the parakeet, and the goldfish is actually outside the cage, contained in a plastic bag. For a few moments, the two are together, and there is a pause moment in which they connect, happy and in love, for the first, and last time. The transaction complete, the customer walks out of the store, taking his new fish with him. The parakeet panics and thrashes about again, chirping and clicking, and then falls silent, as the customer exits, watching him pass across the bay window in front of the store, still and unbelieving, as she is taken away.

Description	Estimate	In Kind	Actual
Research	600	500	100
Script	1,700	1,700	0
Storyboard	1,600	1,500	100
Layout and Planning	800	650	150
Character Design	160	140	20
3D Character Modeling	1,400	1,175	225
Texturing	600	400	200
3D Character Animation	7,500	6,500	1,000
3D Background Modeling	1,250	1,050	200
Soundtrack Composition	400	300	100
Soundtrack Recording	600	600	0
Titles and Post	1,135	1,135	0
Compositing	2,135	2,035	100
Hardware	5,200	5,200	0
Software	8,500	8,500	0
Mini DV tapes	100	0	100
DVDs	300	0	300
Total	33,980	31,385	2,595
Contingency	3,400	3,200	260

Rebecca Rogers, thesis budget

When wings are not enough

Love can't live in a Cage

Soaring through the Bubbles

Swimming among the Clouds

Moment

Fleeting

Crushing

Without Wings

Beyond Fins

Beyond Bubbles

Under the Clouds and Above the Surface

Without Cages

above the sea, below the sky

Swimming among the Clouds

Without Wings

Perched and Swimming

killer bazooka parakeets O DETH

Just Above the Surface: Under the Clouds

by
Rebecca Rogers

MFA Imaging Arts/ Computer Animation
School of Film and Animation
Rochester Institute of Technology
Rochester, New York
April, 2004

Stephanie Maxwell

Stephanie Maxwell, Chair
Associate Professor
School of Film and Animation

Rebecca Rogers
Thesis Treatment
April 1, 2004

Set in a small town in the Midwest, we see a store squashed between two red brick buildings; one is a feed and seed, and the other, a florist. It is made of yellow brick, with a small sign held out from it on a wrought iron arm reads: Paws, Claws, and Jaws. The sign is faded with age and weather, but still legible and quaint. The storefront is made up of a large bay window with a great yellow and green-striped awning and a door to the right of it. The name of the store is also stenciled on the window, and we pan through it to the inside of the store.

Puppies frolic in the retaining area right beneath the bay window, churning up bits of shredded paper. The store is long and narrow, and dimly lit in the waning hours of the day. Great beams cross the eggshell ceiling of the store, running down along the sides. Products are stacked high on shelves on the walls, and there is a small oval island of merchandise in the middle. A counter runs along the right-hand side, facing the inside of the store while being close to the front door. Upon the counter rests a tub of fake mice and kitty toys, a cash register, and a bronze domed bird cage. Inside the birdcage is a golden parakeet with a scattering of green feathers, a red mask, and black beak. He is small and flighty, with bright eyes. On the floor to the left of this counter sits a parrot stand. A large blue parrot sits upon it with his back to the store, fast asleep - with its head under his wing. His feathers are faded, slightly ruffled, and thinned out. Looking towards the back of the store, hamsters and gerbils line the aisle that leads to the back wall. The wall itself is lined with aquariums, stacked about

three high. Tiny fish dart about inside of them. These 'prop' fish will be 2-dimensional animated planes, so that there will minimal work involved in propagating tanks full of fish.

The parakeet is sitting alone, singing quietly and rocking back and forth on the swing bar inside of the cage. His eyes are closed, and we see the sun on his face. He is content, but his song is slow and broken. The parrot next to him begins to stir, turning around carefully on his stand. He crawls off of his stand onto the counter, his talons clicking on the laminate as he crosses over to the cage. The parakeet breaks out of his reverie to look over at him. Using his beak, he nuzzles the cage, motioning in an affectionate way, tilting his head and looking up at the parakeet, which rests just above him on the swing. The two exchange a moment of silence, after which the parakeet flies down to the lower perch within the cage in order to interact with the parrot. The two click and nod, motioning and chirping back and forth.

It's obvious which bird is leading the conversation; the parakeet is not chatting much, merely responding with the perfunctory chirp or wing rustle. While in the middle of one of Parrot's lengthy speeches, a close-up of Parakeet reveals that he has stopped blinking and is now glancing upward. A flash of gold flits across his face, and he blinks back into action. He pauses briefly and begins to search for the source. After darting his eyes around, he leans over, stretching around Parrot to glance over his shoulder. A rack focus indicates to us (from over his shoulder) that he is looking towards the back of the store. He scans the back wall, with eyes resting on each tank while passing over them, and sees a glint of

gold again. His eyes dart back to rest on a goldfish swimming lazily across her tank.

She swims in and out of the plastic seaweed fields inside her tank. The gravel at the bottom is a motley bunch of grays and browns, and the back of the tank is a bright cerulean blue. There are no tank toys of any kind, and her coloring is striking against the drab setting. She has large, willowy fins and a pudgy, compact body. She has a reddish-orange splash of color above her forehead and along her back, a white underbelly, and green eyes. She swims in a circle and stops, drifting with the perpetual motion that she has generated. Her eyes have found Parakeet and they lock onto each other.

Parakeet smiles out of the corner of his mouth, half absentmindedly and half-wistful. Goldfish swims behind a stalk of seaweed and peeks out at him, smiles and darts deeper into the seaweed field.

Parrot reaches the end of his speech, straightens up, and looks back at Parakeet, cocking his head slightly. Parakeet breaks his stare and awkwardly begins motioning and clacking to Parrot in an attempt at a response. This apparently doesn't work, and Parrot waves his wings about in frustration. Parakeet glances over at the tank again, and Parrot, seeing his expression, follows the line of Parakeet's stare and pauses when he sees the goldfish. We see Parrot's reaction of surprise and a raised eyebrow. He quickly whips back around, clacking at Parakeet, shooing at him with his wings. Parakeet jumps back, upsetting his seed cup and perching again on a further perch. He is alarmed and

crouches down, nodding at Parrot with a furrowed brow, wings slightly out in a defensive pose.

While Parrot continues to rant, Parakeet watches the goldfish from underneath Parrot's wing. She is watching them squabble, and her expression changes to concern as she swims out of the seaweed, floating and staring. After seeing that Parakeet is still ignoring him, Parrot starts to squawk even louder and more aggressively. This time Parakeet is upset and begins to make noise as well, flapping against the cage and making it rock slightly. At this the owner steps over to the cage and unfastens a clasp at the top of the cage, releasing the cover. Parakeet is draped in darkness, and we see him pull his head back in reaction to this. Hopping over to the cover, he presses his beak against it through his cage. He rests his face against the bars, and from the outside, we see his beak creating a slight bump in the cover. He lets out a loud chirp, followed by a slower chirp of resignation. A bell clangs as the front door is opened, and shut, and the solid click of a lock is heard. After a significant pause, rustling sounds of feet and wings follow, and the squeak of the swing as it settles to a stop are heard.

Later on in the night, we cut to the inside of the cage, where Parakeet is snoozing, and we flash into his dreams. This sequence breaks into a different style. While Parakeet and Goldfish remain 3-D, the props involved look like cardboard cutouts. They are flat with rippled surfaces and the sides of cut cardboard, and textures that have been hand colored, perhaps using Photoshop or prismacolor markers. We see a hazy, pink realm where clouds, bubbles, tree tops, and seaweed mingle together to fill the screen. The clouds and bubbles are

dangling from fishing line and the other props are bobbing up and down on popsicle sticks. The parakeet flies into frame, taking leisurely flaps and searching around. The goldfish swims into view just over his shoulder and he stops flapping and floats as he turns to look over at her. The two are elated to see one another and begin to frolic and tumble all around in this weightless void. The background shifts from pink to yellow and back again very subtlety as the two begin to soar through the space, Parakeet flying while Goldfish swims next to him. The two encircle each other and float through clouds and bubbles alike. The main sound is light and breezy while a full, rich sound lives underneath the sparkly chimes, strums, and tings.

Muddy and abrasive sounds begin to break into the soundtrack: the clang of a brass bell, heavy thuds, and the 'ca-ching' of the cash register. In his dream Parakeet slows down, looking all around him. Goldfish approaches him and beckons him to follow. He is still distracted, so she tries to get his attention again, darting all around him. She starts to motion with her fins at him, and the background props are raised and lowered away like stage props, based on their position on the screen. He stops and looks at her now, trying to understand her and why the backgrounds are changing. In a flash of bright light the background wisps away. The cover on his cage has been lifted; it is the start of a new day in the shop.

He blinks and looks around, seeing Goldfish just outside his cage, so close, this time for real. She is still panicking, just as she did in his dream. He leans forward and begins to chirp and click at her, and she swims back and forth

to each side, crashing into the sides of the plastic bag that she is being held in. Parakeet looks up and realizes the magnitude of the situation. Goldfish is still darting around in her bag, and Parakeet begins to flutter and squawk as he tries to get to her. He thrashes against his cage, pausing to look at her in terror. He is clinging to the side of the cage with his feet, when a motion beyond her makes him look up. A customer standing nearby begins to move, withdrawing his hand from over the counter and picking up the bag. Parakeet and Goldfish are now hysterical and desperate. Their attempts to get to each other fail, and they slow down as they realize their fate. Both have expressions of heartbreak, and can do nothing better than watch each other as Goldfish is carried out of the store. The bell above the door sounds once more as the door shuts.

Above the Surface: Under the Clouds

Timeline

SPRING

March	**7**	Week 1	**Brainstorm**
	14	Week 2	**Brainstorm**
	21	Week 3	**Concept Sketches**
	28	Week 4	**Research** and gather resources
April	**4**	Week 5	**Research**, Thin Story, Commit to Idea
	11	Week 6	**Feedback and Revision** - Meet with Committee members
	18	Week 7	**Feedback and Revision** - Meet with Committee members
	25	Week 8	**Propose** Thesis / **Feedback and Revision**
May	**2**	Week 9	**Concept Art** and **Storyboard**
	9	Week 10	**Storyboard / Locate** Composer

SUMMER

May	**16**	Week 11	**Animatic** - scratch track sound
	23	Week 12	**Model** Pet Shop - Interior / **Meet** with Composer
	30	Week 13	**Model** Pet Shop - Interior
June	**6**	Week 14	**Model** Pet Shop - Props
	13	Week 15	**Model** Parakeet
	20	Week 16	**Model** Parakeet
	27	Week 17	**Contact** Composer again, check progress / **break** *Vacation*
July	**4**	Week 18	**Model** Goldfish
	11	Week 19	**Model** Goldfish
	18	Week 20	**Texture** Goldfish and Parakeet
	25	Week 21	**Collect Musical Score** / ***Contingency week*** *Resume*
Materials			
August	**8**	Week 22	*SIGGRAPH - LA*
	15	Week 23	**Model** Tank - Interior and Cage - Interior
	22	Week 24	**Model** Pet Shop - Exterior
	29	Week 25	**Model/Texture** Dream Sequence props and curtain

FALL

September	**5**	Week 26	**Refine** Parakeet and Goldfish Models and Textures
	12	Week 27	**Rig** Parakeet - basic joints and painting weights
	19	Week 28	**Rig** Parakeet - set driven keys, locators, etc.
	26	Week 29	**Rig** Parakeet - set driven keys, locators, etc.
October	**3**	Week 30	**Rig** Goldfish - basic joints and painting weights

	10	Week 31	**Rig** Goldfish - set driven keys, locators, etc.	
	17	Week 32	**Lighting** - Interior	
	24	Week 33	**Lighting** - Interior Continued and Exterior	
	31	Week 34	***Contingency week***	
November	**7**	Week 35	Water Effects Research	
	14	Week 36	Water/Dynamics Tank and Seed Cup	
	21	Week 37	**Test-Render** Dynamics and Water	*Winter / Fall Break*

WINTER

November	**28**	Week 38	Animation **Pop-thru**	
December	**5**	Week 39	Animation **Pop-thru**	
	12	Week 40	Animation **Pop-thru**	
	19	Week 41	Animation **Pop-thru**	*Break Begins*
	26	Week 42	**break**	*Christmas Vacation*
January	**2**	Week 43	Animation **Pop-thru**	*Break Ends*
	9	Week 44	Animation **Pop-thru** / **Edit** Animatic	
	16	Week 45	Animation **Pop-thru** / **Edit** Animatic	
	23	Week 46	***Contingency Week***	
	30	Week 47	**Refine** Animation	
February	**6**	Week 48	**Refine** Animation	
	13	Week 49	**Refine** Animation	

SPRING

February	**20**	Week 50	**Refine** Animation
	27	Week 51	**Refine** Animation / Render at night
March	**6**	Week 52	**Refine** Animation / Render at night
	13	Week 53	**Refine** Animation / Render at night
	20	Week 54	**Refine** Animation / Render at night
	27	Week 55	**Render** / **Identify** needed sounds and **Gather** from CDs
April	**3**	Week 56	Contingency **Re-Renders** / **Record** missing sounds.
	10	Week 57	Contingency **Re-Renders** / **Sweeten** Sound
	17	Week 58	**Editing** / Soundtrack **Mixdown**
	24	Week 59	**Editing**
May	**1**	Week 60	**Editing**
	8	Week 61	**Duplication** / **Distribution** to Festivals
	15	Week 62	**Screen** Film

Above the Surface: Under the Clouds

Budget Breakdown

Storyboard

32 panels at $50 each

$1,600

Research and Visualization

Full research and concept sketches

-Parakeets
-Goldfish
-Pet Shop architecture
-Props/Labels, etc

Three days of research

$600

Character Roughs

2 characters (see list below) at 2hrs each,
$40.00 an hour

$160

Character Modeling

2 main characters at $400.00 each:

Parakeet	$400
Goldfish	$400

3 minor characters at roughly $250.00 each:

Pet Shop Owner/Customer	$250
Generic Fish	$125
Generic Pets, misc...	$270

$1,400

Texturing

2D artwork, texture maps for characters and background
4 days at $150/day

$600

Layout and Planning

Animatic, Timelines, backing up files, camera moves, cinematography, etc.
4 days at $200/day

$800

Animation

To be broken down further when storyboard is complete

$7,500

Backgrounds

3D backgrounds at variable pricing

Pet Shop - Exterior and Interior	$700
Close up of Birdcage/Counter	$250
Close up of Tank	$300

$1,250

Sound

6 hours at $60/hour for studio time	*$360*
2 needle drops - $75 each	*$150*
Planning sound list, gathering sounds from CD and other sources 5 hours	*$150*

$600

Titles

Credits $45/hour

$135

Post

10 hours at $200/hr

$2,000

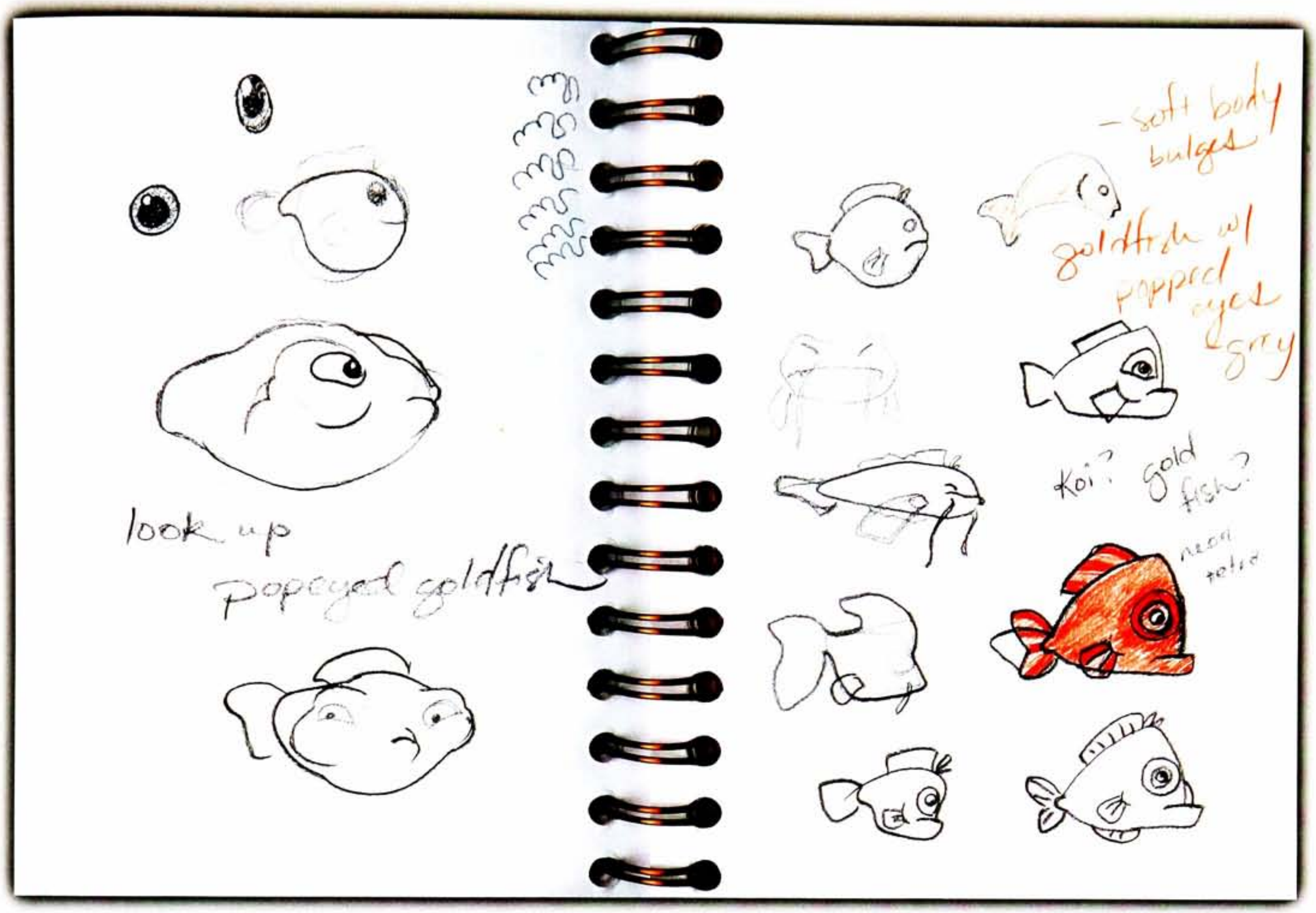
Compositing

4 days at $400/day

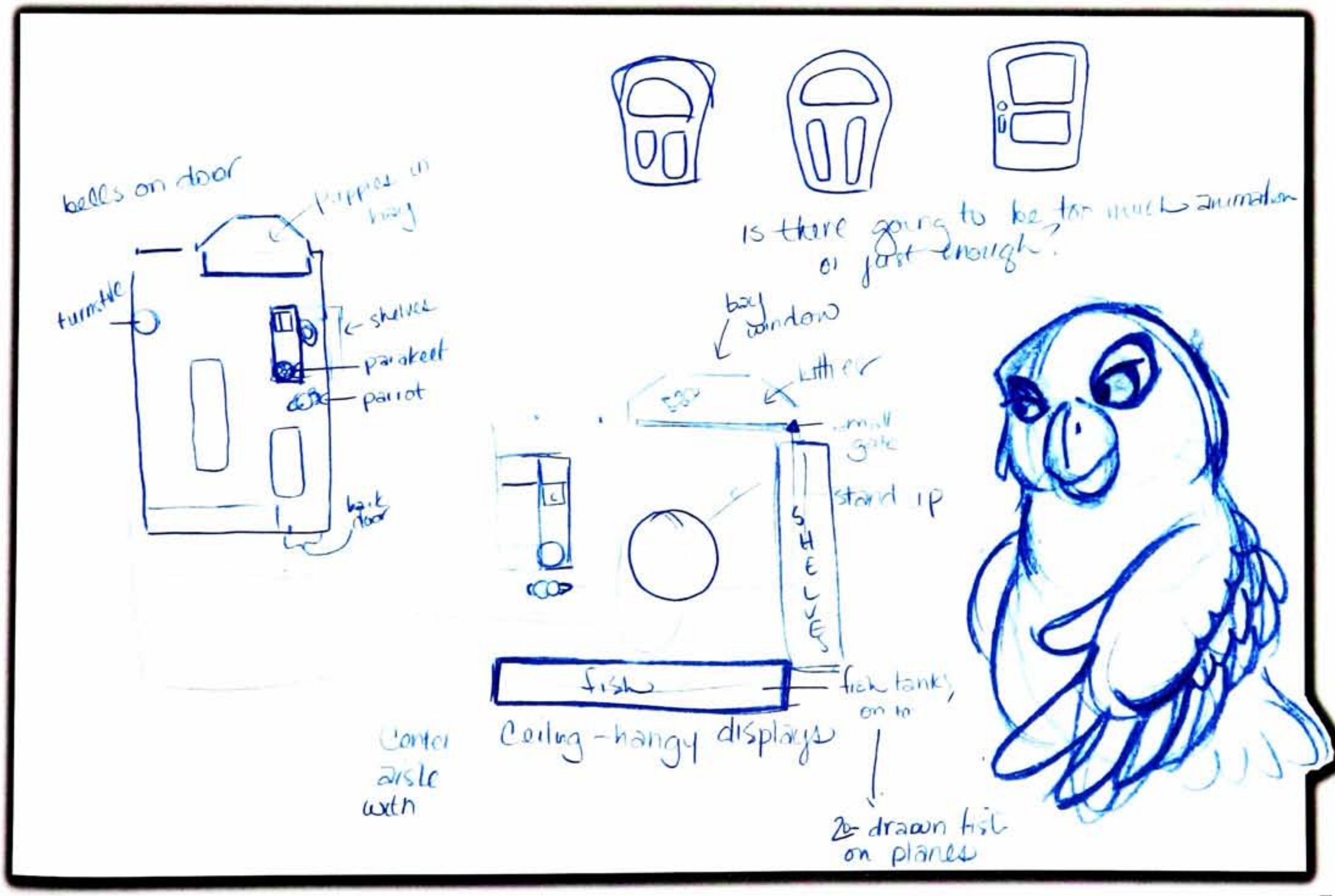
$1,600

Fin to Feather

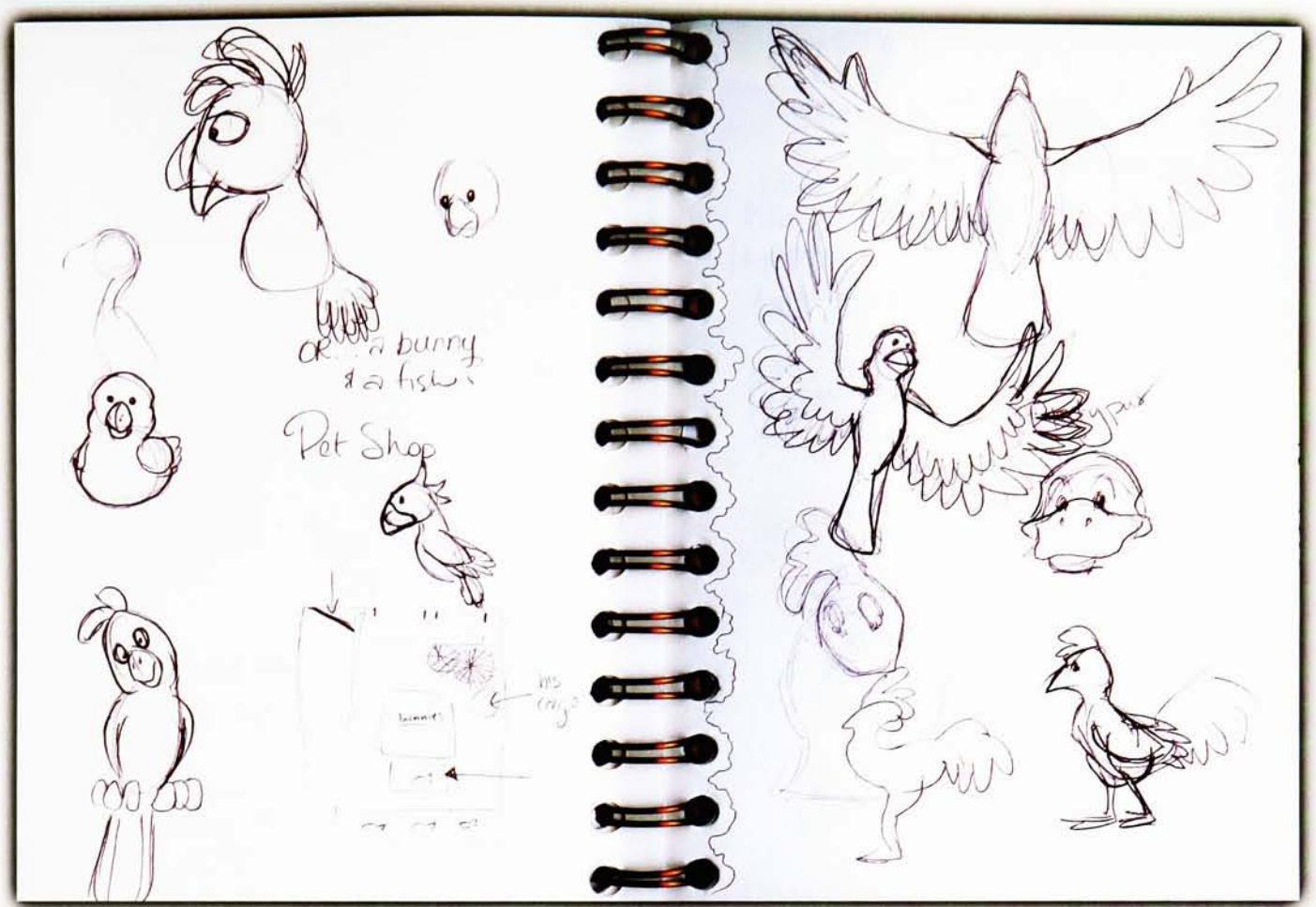
Appendix B ~ Pre Production Notes & Conceptual Art

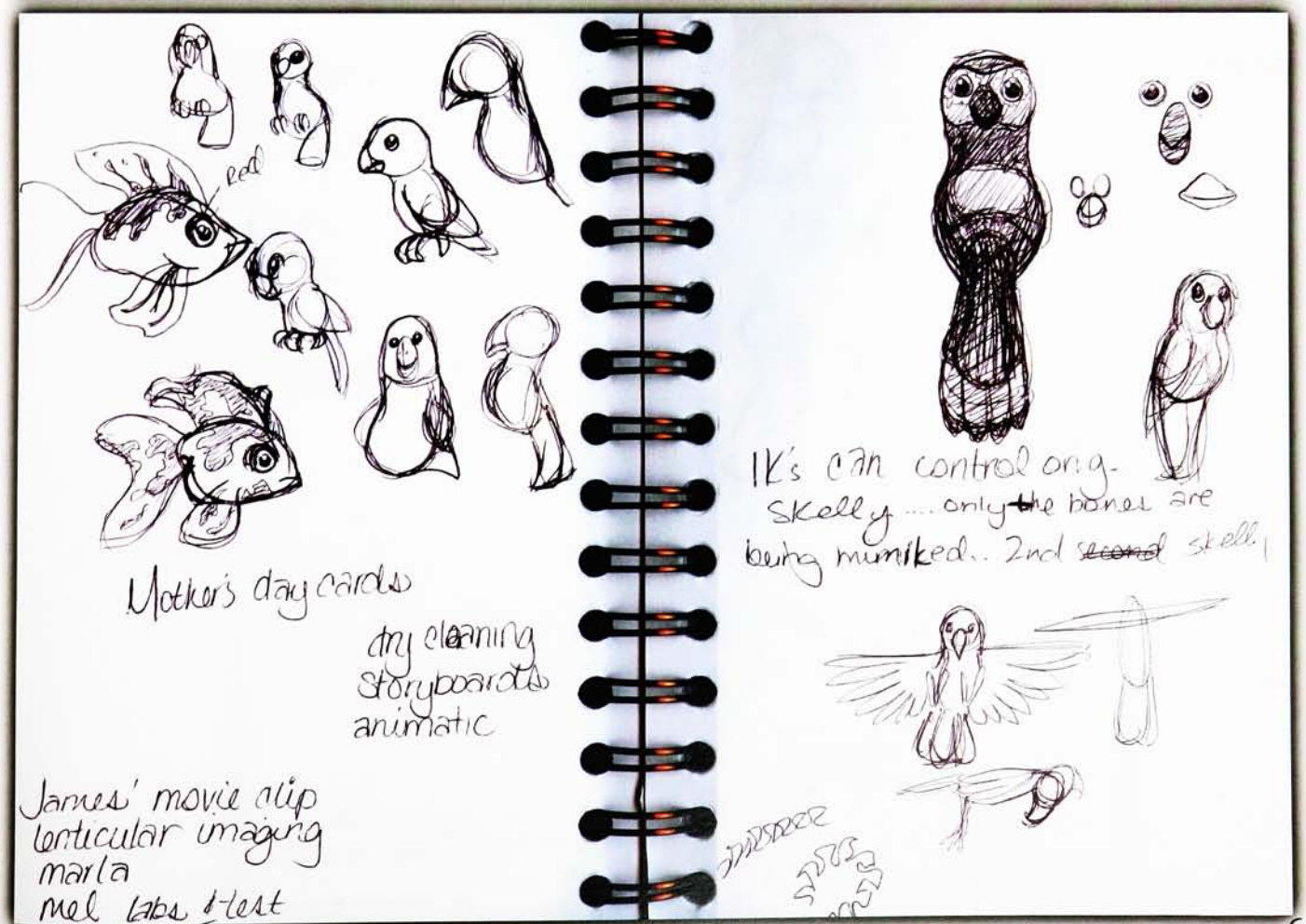


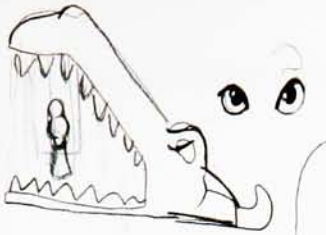
- soft body bulges
goldfish w/ popped eyes
gray
look up
popeyed goldfish
Koi? gold fish?
neon tetra

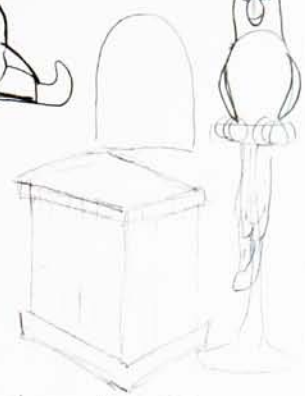


bells on door
shelves
parakeet
parrot
is there going to be too much animation or just enough?
bay window
litter
small gate
stand up
SHELVES
fish
fish tanks
Center aisle with
Ceiling-hangy displays
2D drawn fish on planes


a bunny
a fish
Pet Shop


Red
IK's can control orig. skelly .... only the bones are being mimiked.. 2nd second skell.
Mother's day cards
dry cleaning
storyboards
animatic
James' movie clip
lenticular imaging
marla
mel labs test





does it even need a cage?

to do:
Storyboard out thesis treatment, e-mail pot. advisor
e-mail Ryan
do programming exercises
lenticular imaging h/w
rig flower & pose

Thesis
does it need a cage?
paper cutouts? - dream seq.
look up popeyed goldfish
look up MacCaws & Parrots
Bird & fish Skeletons

Parrot interferes?
yellow fish entices?
Both stay on track.

- Focus on Petshop Camera
- add geometry for light sources
  - counter less shiny

Petshop

Birdcage - perch/swing
seed cup ← seed around it, spilled & outside
bottom?
scratch marks on bars
* cloth drape - work that out

Fish tank - complete tubing next to flor. bulbo
snail

Look at your Lion King Book!

{2D lightning?}

dreamscape
vapor
env sky ball
paper cutouts
* curtain
pfr to geo - changed

Lattice Eyes on Characters to fit
talk to Jon about the normals

Scale flat? take pic, posterize

Thesis Committee Feedback/ Questions

love & tragic loss – interspecies

Malcolm – ★

- not convinced of theatrical present.
- if dream theater, no theater intro to film
- hamster in rusty wheel is real to him.
- ~~toha~~ do animals understand a play....
- whose dream is it?
- goldfish swims, sleeps 1st, P wakes up
- Parrots feathers all around... when wakes up
- sound reveals

Pet Shop doors/ front slide away

flashlight goes out

Johnny →

- Japanese set of plays
- ? - shots out of dream to bird & fish dreaming & reacting, fish left lifting
- cash register sounds + thunder
- not torn apart

viscous atmosphere

bird flies slower, fish faster

Jack – glass window thunderstorm outside

problem - dreams still happen after she leaves - more

Wants to revisit....

Skip – What does title refer to?

"knuckleball" nice visuals & written "grubby"

★ Parakeet glides out from behind..." great sent.

Egg →

Steph – fluid air/

thunder lightning okay for now, maybe

M – together in dream
water baggie
wat are you leaving us with

J. – fishing net to get him out
no eyelashes or fish
Oppresive environment

double indemnity
together –

Out of sight out of mind

come out of Pet Shop slowly

Leif, Carolyn
the owl that married a goose
Inuit sand animation

entertain each other
lovely, beautiful

P.O.V. - fish
wave — seaweed blows
develop — fish
working a label?
SRE light off of nozzle aquarium
~~rendezvous~~ in event in dream shell caught in whirlpool?
to disappear?

everynight
signal
meet in dreams
habitual?
dillemmas & non dillemas
mist in dream
convey all night
world that transcends physical world
Santa claus syndrome-ish
In proposal!
At night, the two rendezvous, real place? bubble cloud seaweed trees

"A bird may fall in love with a fish, but where would they live?"

A parakeet falls in love with a goldfish.

Among all of the life in the petshop, the parakeet still feels alone. His life is full of ~~people,~~ activity, but he has no true love. A slight glimmer of gold catches his eye one day, & he turns to the back of the store. Beguiled by the delicate ~~beau~~ beauty, he falls in love with the goldfish.

The two connect across the distance, & each dreams of being with the other. The space between them is tragic, & soon they look for ways of escaping to be with the ~~other~~

~~the~~ parakeet thrashes in his cage/ tries to pick the lock, while the fish repeatedly ~~tag to toe~~ tries to jump out of the tank, & digs ~~through~~ the gravel to the bottom. Unsucessful, they rest, looking longingly @ each other.

~~the~~ next morning ~~they are still~~ ~~staring~~ finds keet asleep in her cage, but we hear water steps. The goldfish is now right next to her cage ... in front of her eyes! But she is soon carried away (in bag) in the arms of a child.

Set - Pet Shop Modeling

Characters - Main
- Parakeet
- Parrot
- Goldfish - male
- Goldfis - female

tertiary
- kittens
- 2D fish
- gerbils

compositing
editing
titles
distribution
2x each

Animation -
- ambient
- character
- Lighting

Props
↳ bird cage, stand, fish tank & filter, ... necessary toys within both...
↳ Pet shop merchandise
↳ Label Art/Magazine/display

Budget items:
- storyboards
- animatic
- visual / concept sketches
-

Sound gathering .. lists
Sound recording
Sound Editing
Music / Score / Composer

both asleep in the morning, snug together.

Intimacy, dining -

Settleing down to dream content.

Split-screen?

Spa Shop closes

elegant

Colors? swap? take?

no puppies

variety store

license plates

laziness
hot day
weather
flies
bored animals
rubbing on glass
- run down shop

night
too much detail
no film speak
- conceptual
a page - 2 par.

neglected, coarse background
where is this?
she gets knocked over?
accidental

economy of Shots

Repercussion of Humans
Use them

afternoon - morning

we cause accidents

Leak in tank?

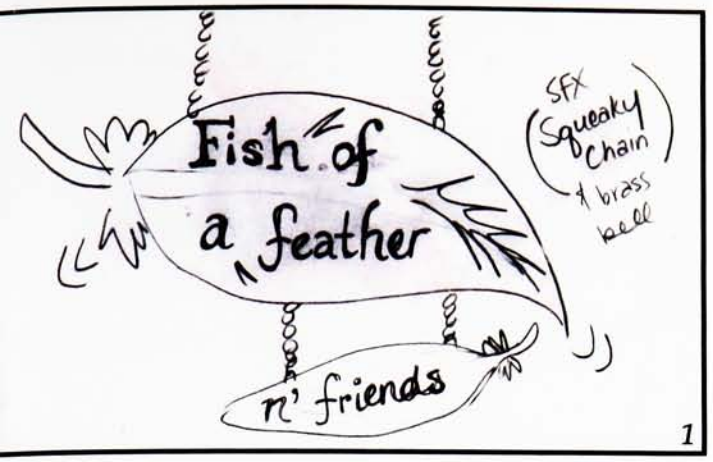
Woman in the Dunes

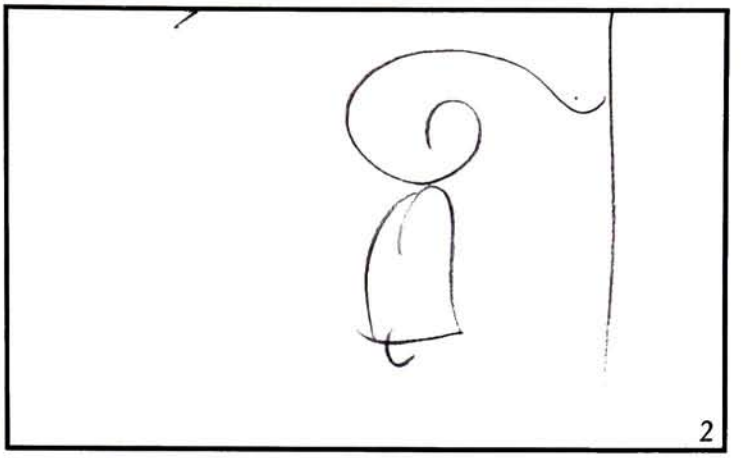
freedom

Old & Grey?
Parakeet
his youth →

Fin to Feather

Appendix C ~ Storyboards


Fish of a feather
n' friends
SFX (Squeaky Chain & brass bell
1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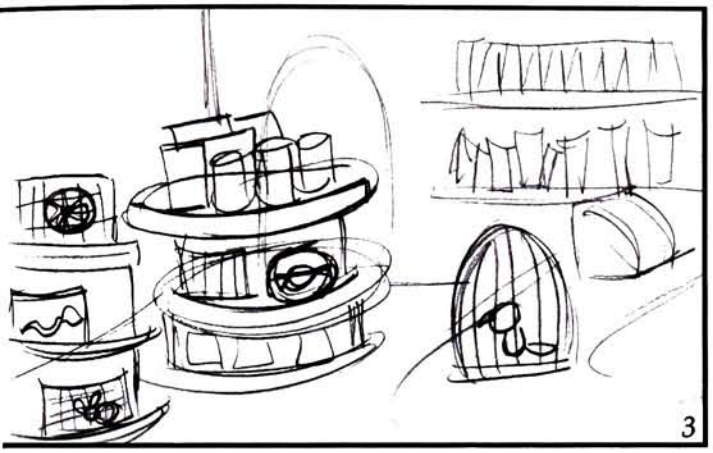
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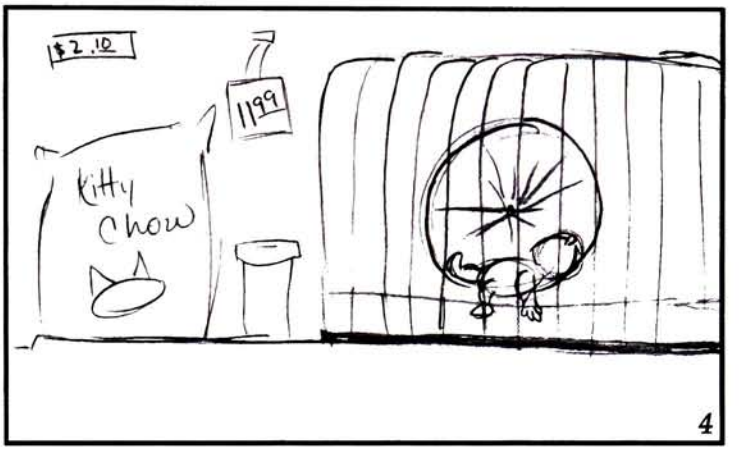
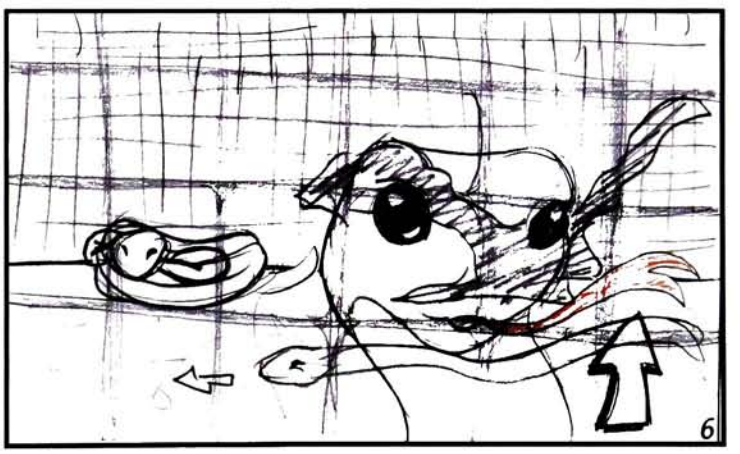

$2.10
1199
Kitty Chow
4


5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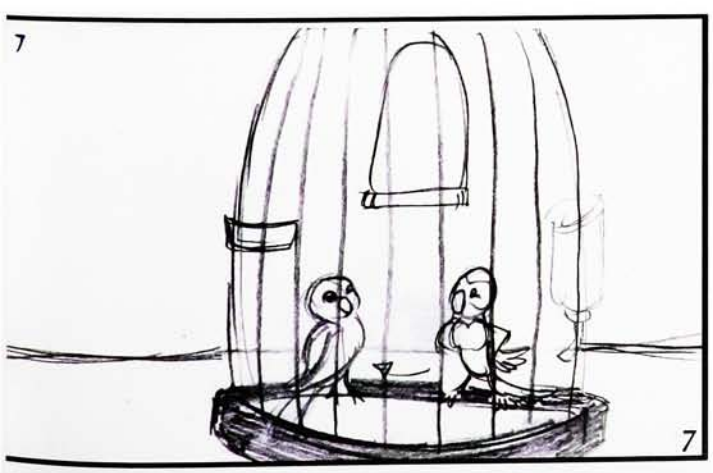
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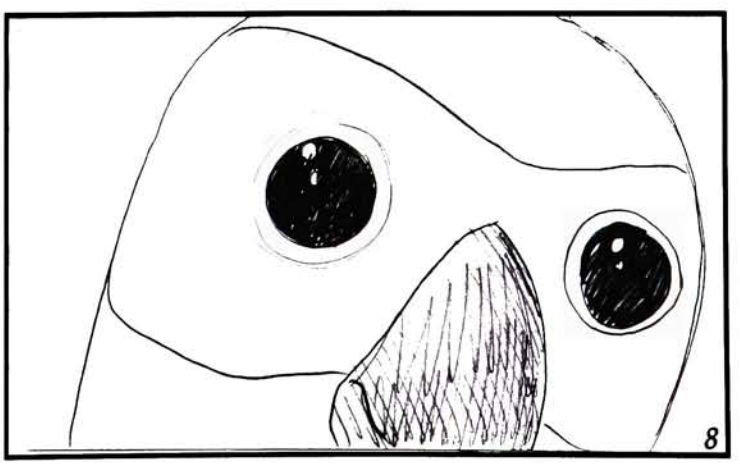
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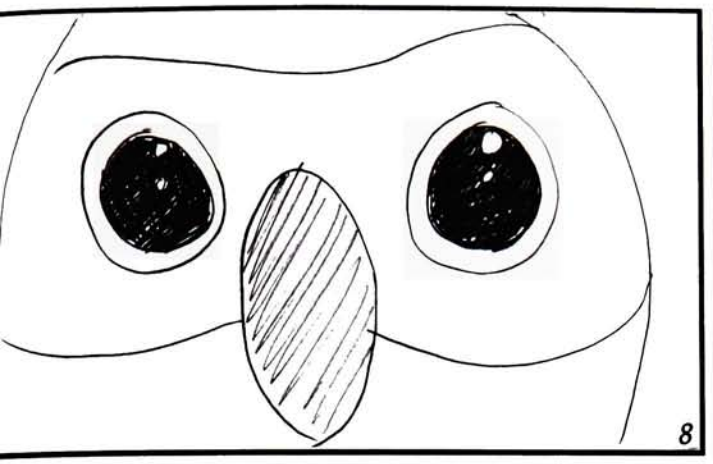
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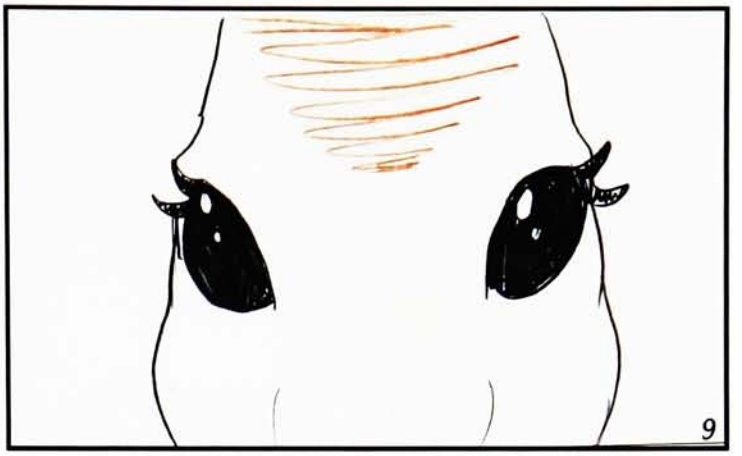
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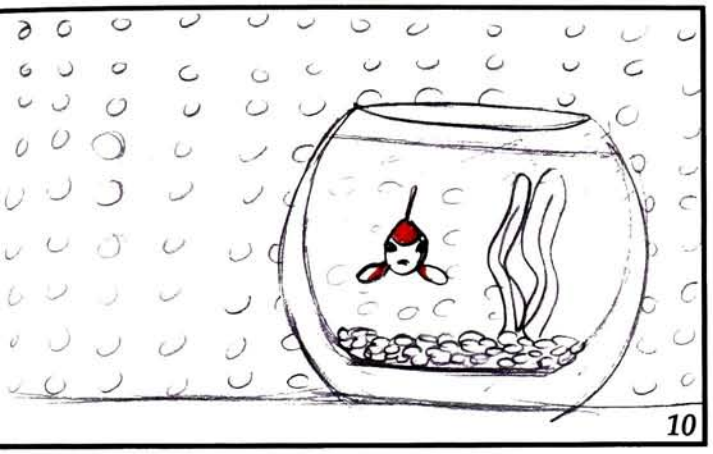
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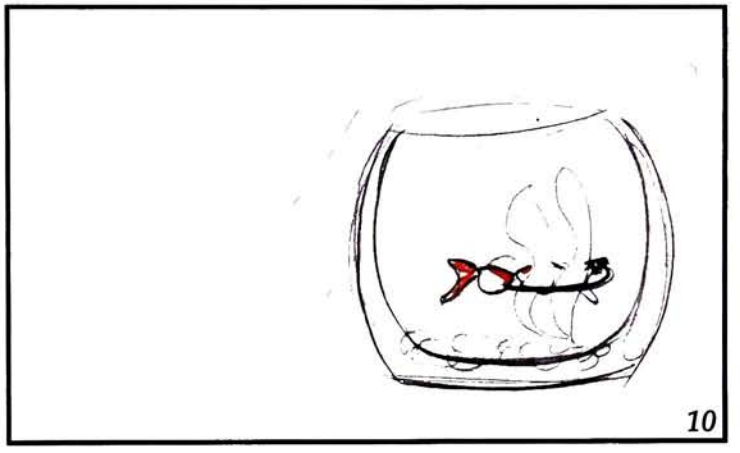
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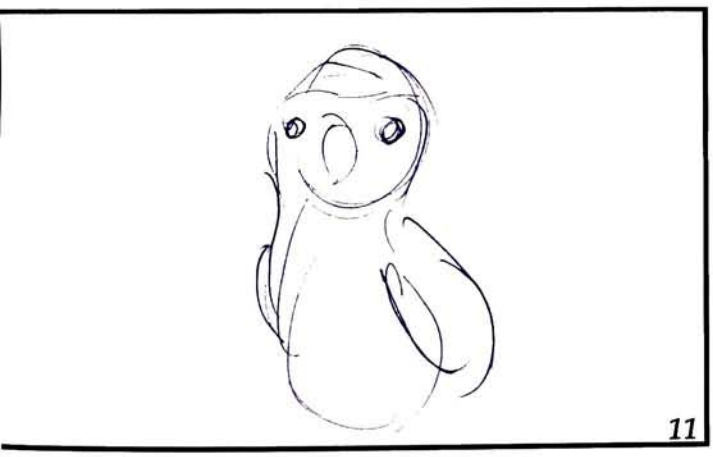
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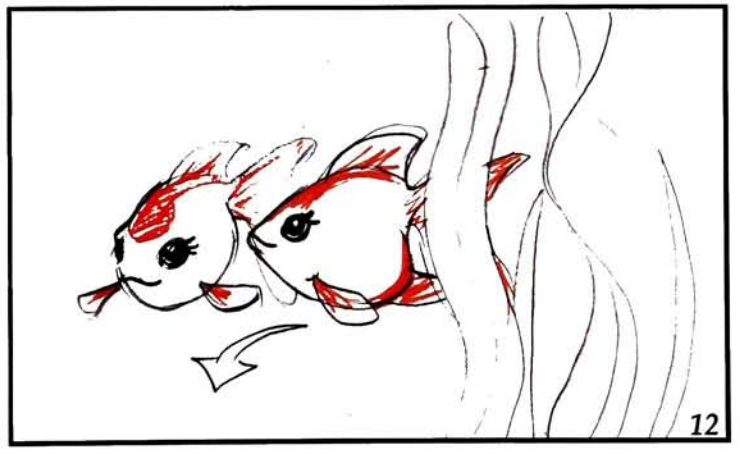
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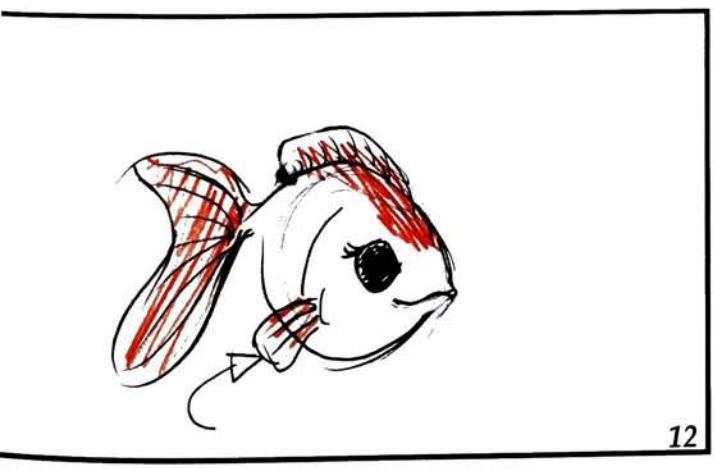
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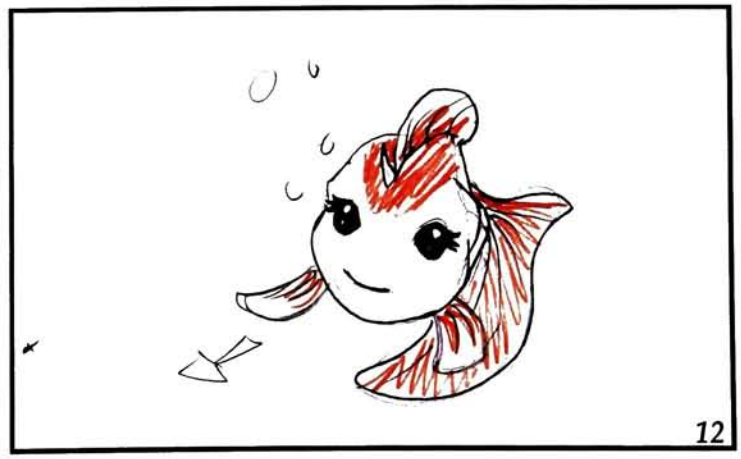
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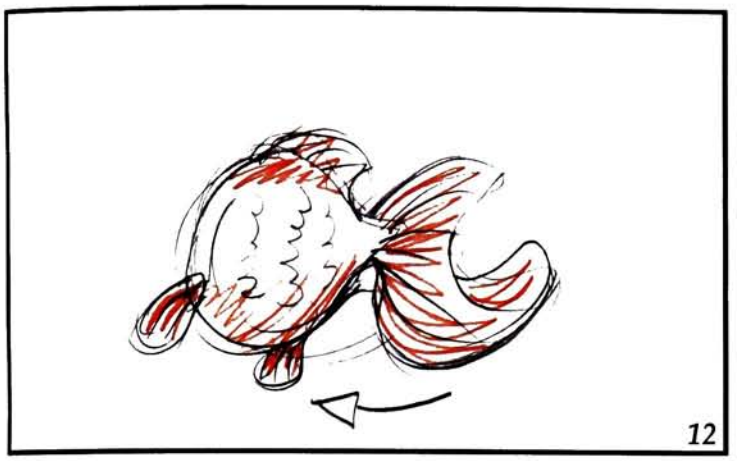
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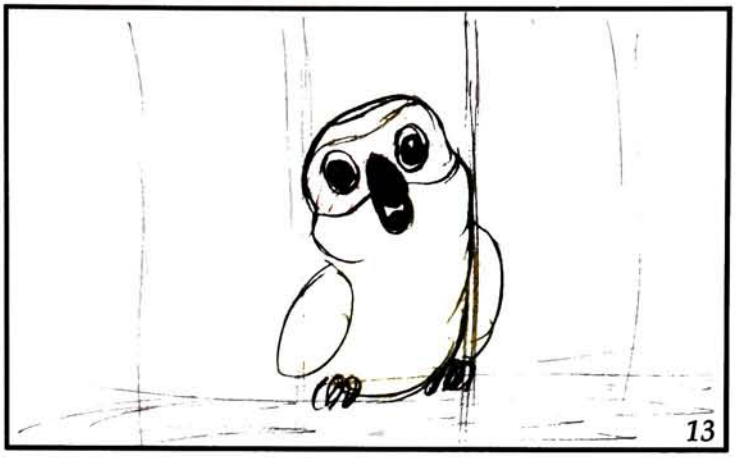
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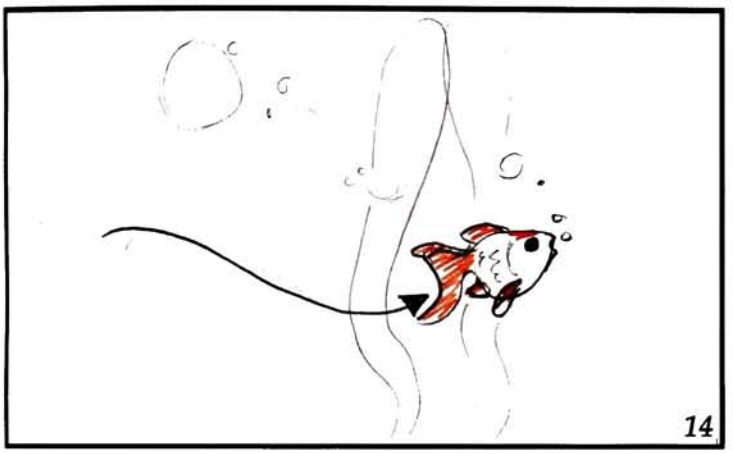
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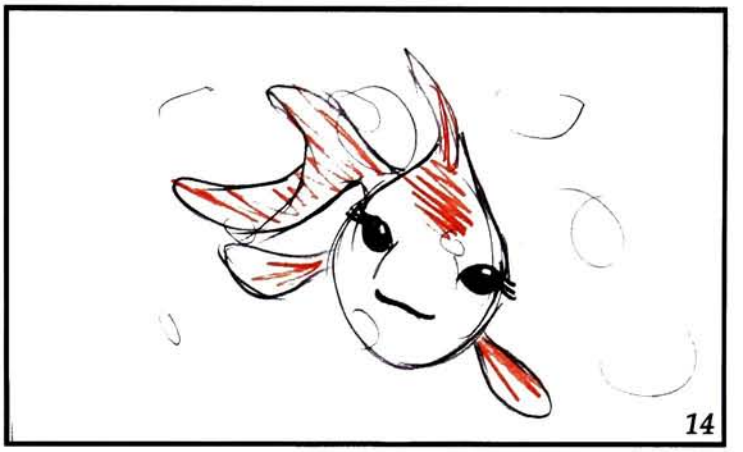
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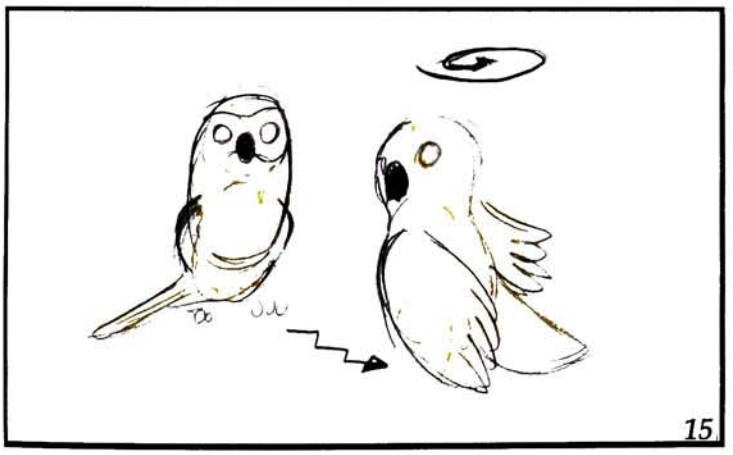
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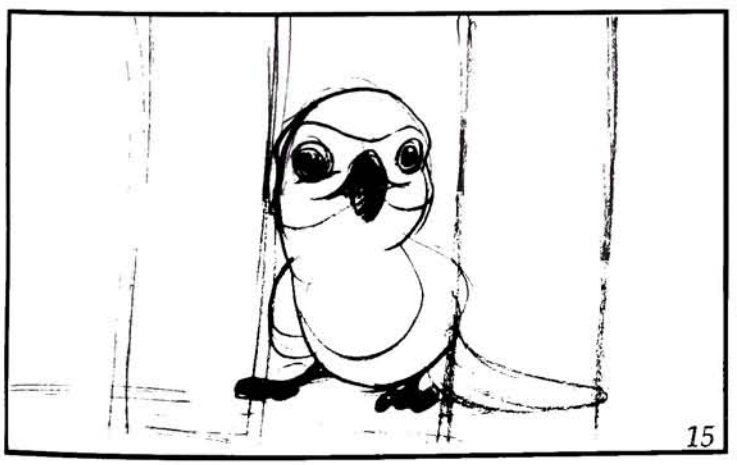
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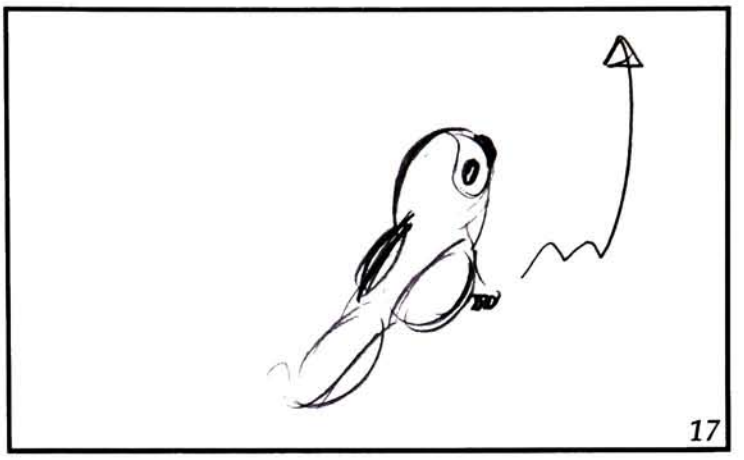

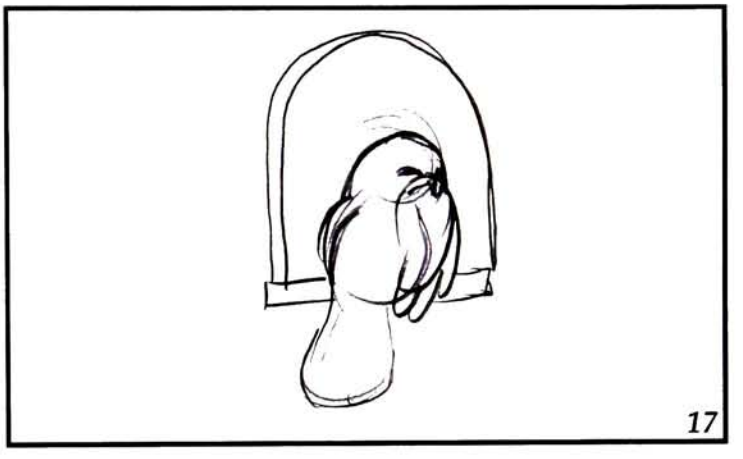

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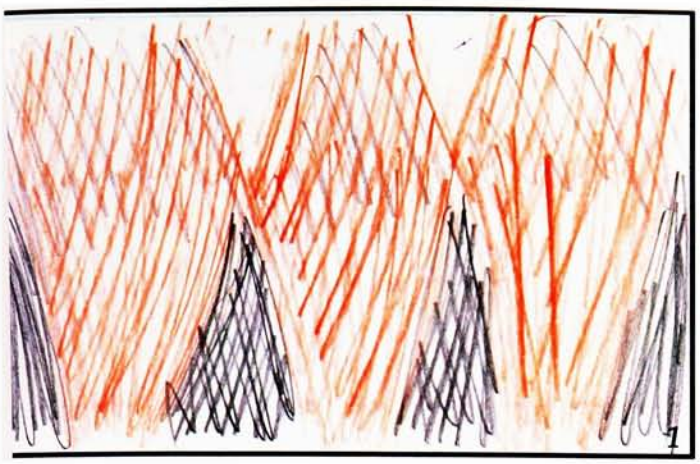
end of Act One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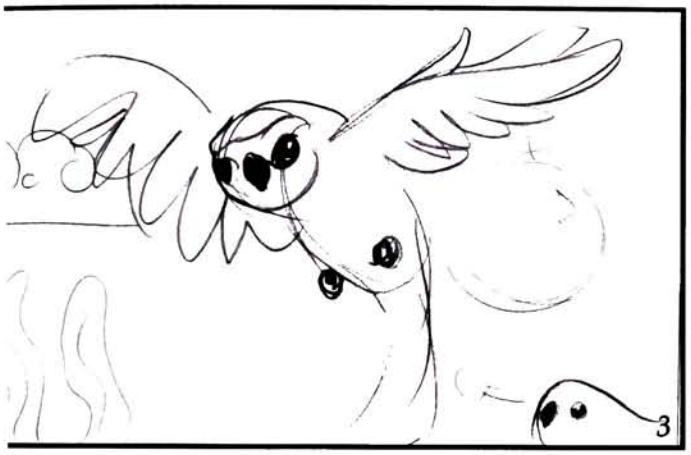
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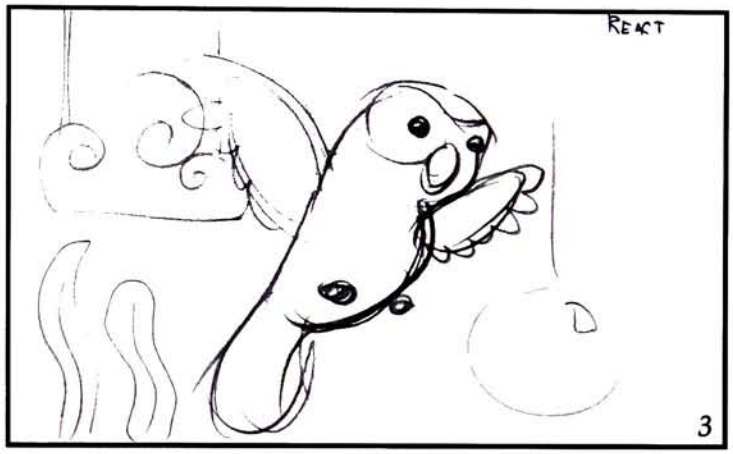
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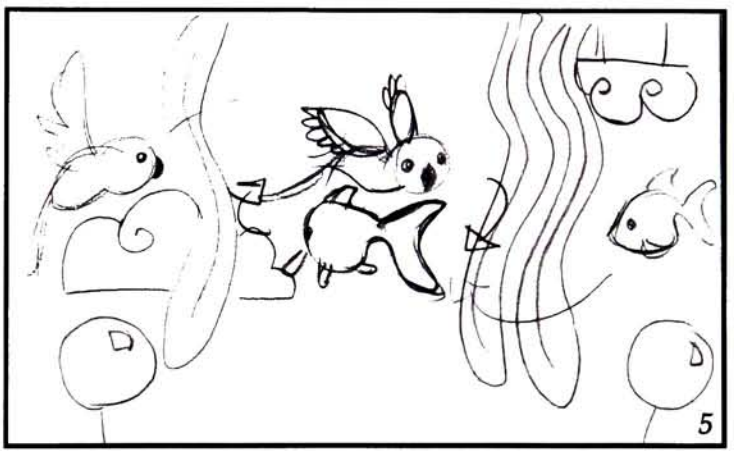
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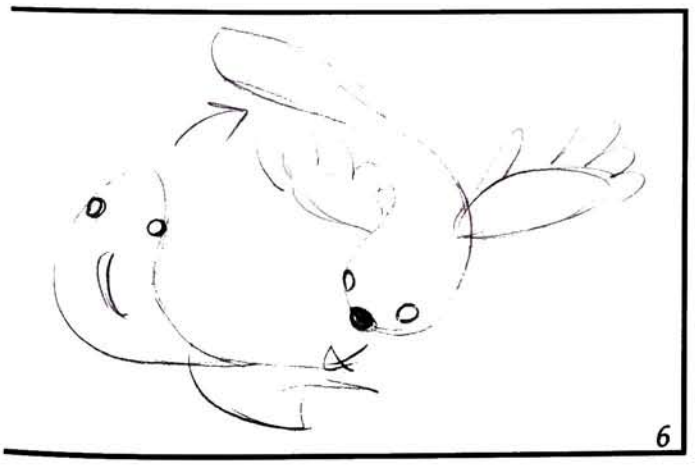
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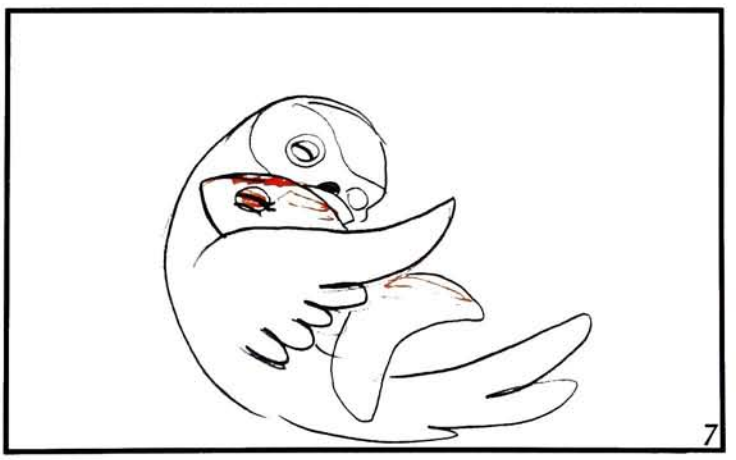
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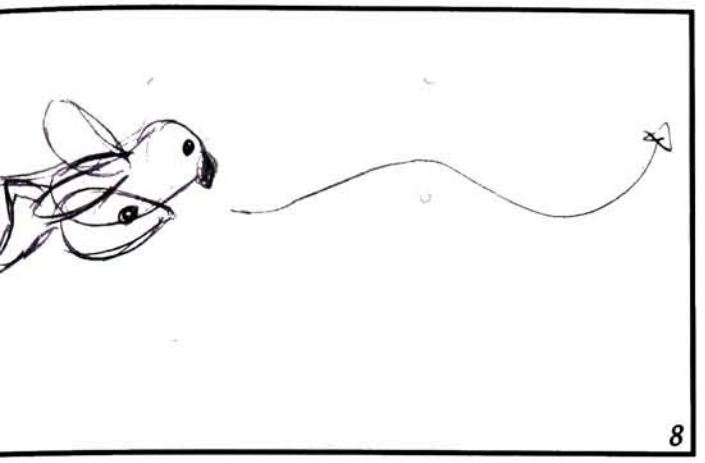
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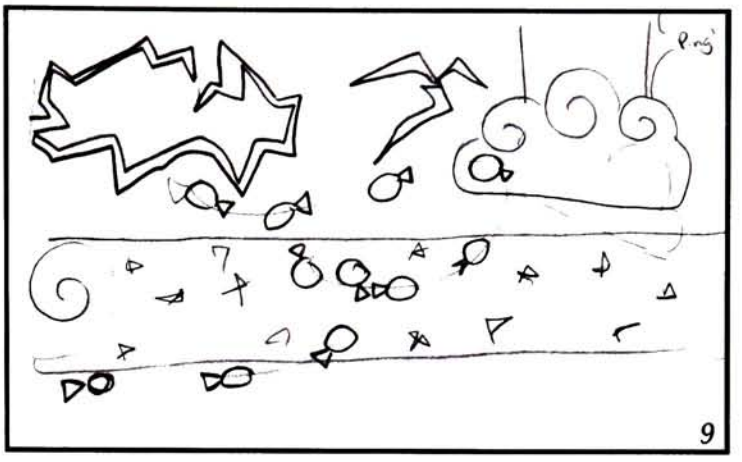
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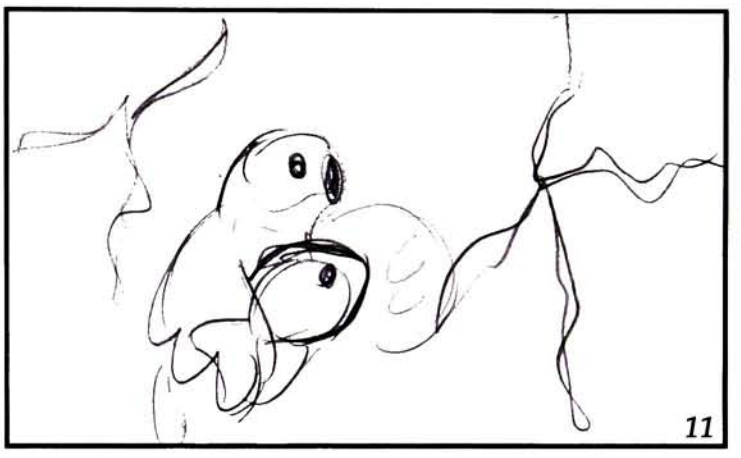
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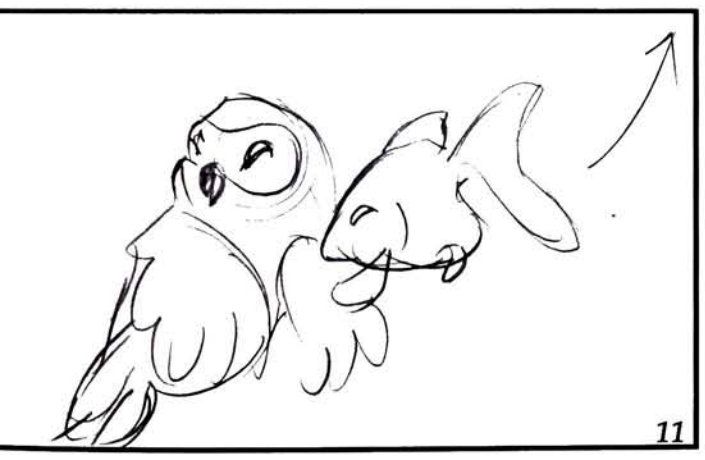
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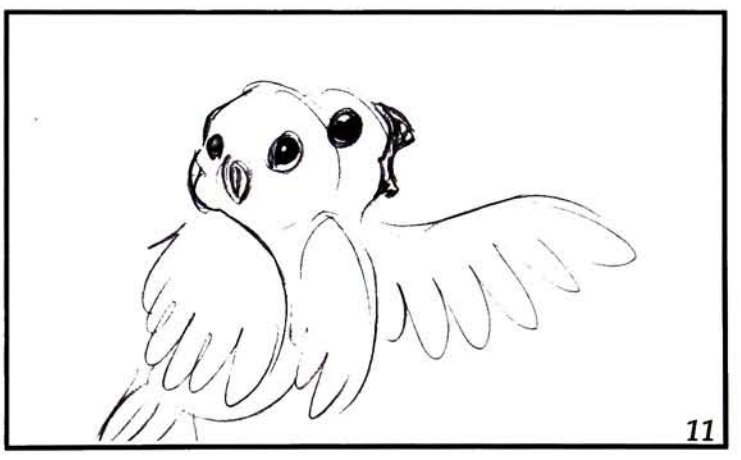
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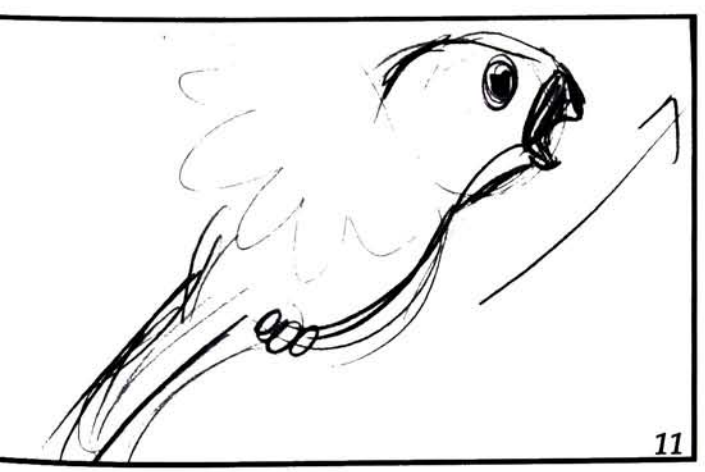
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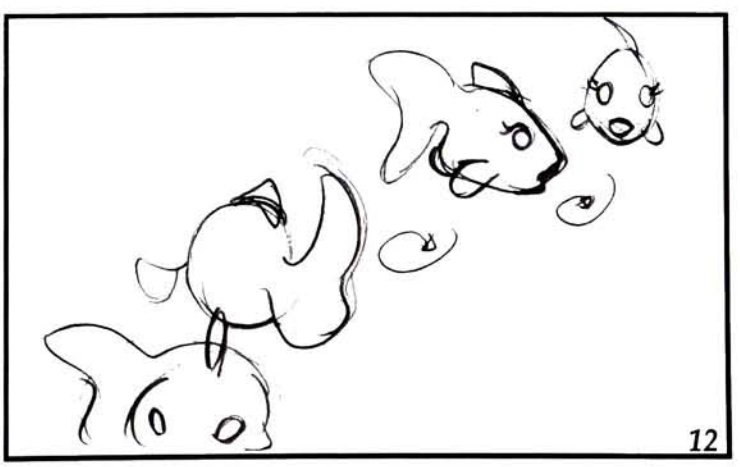
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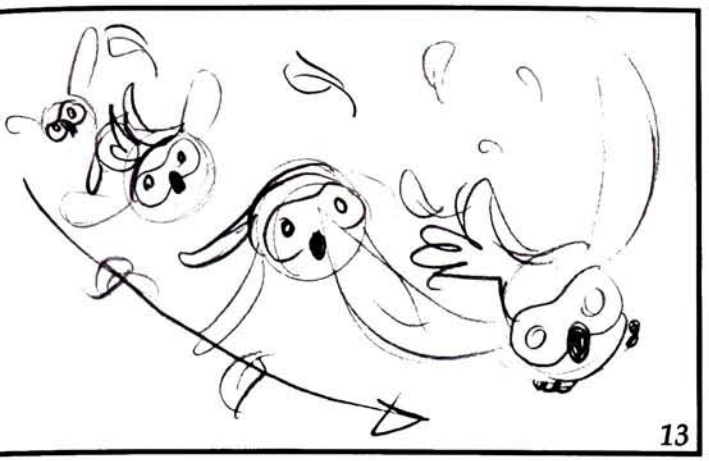
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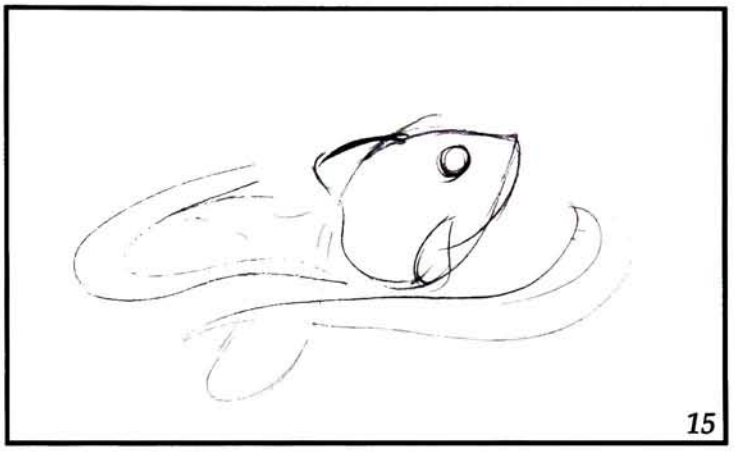
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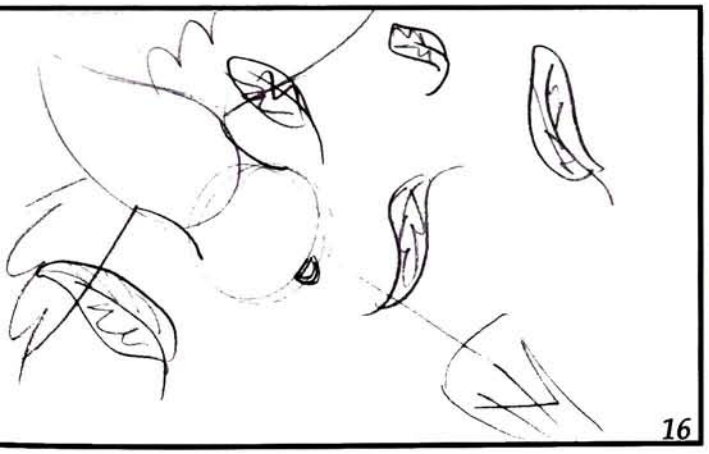
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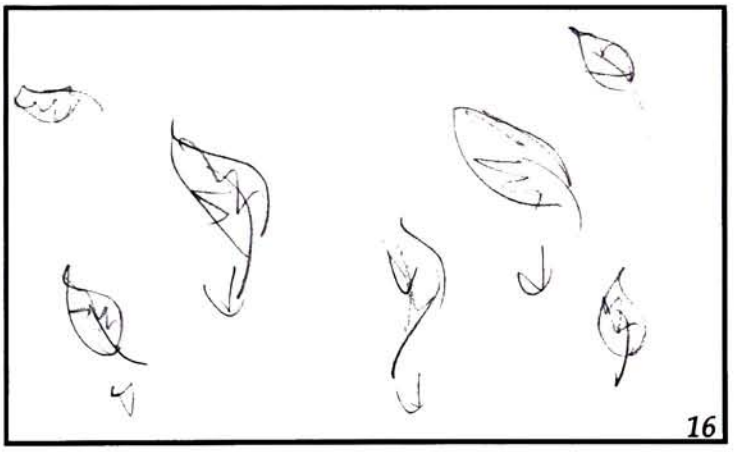
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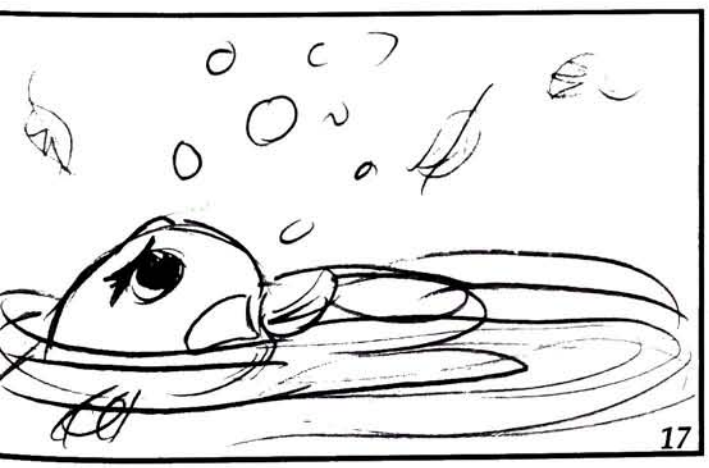
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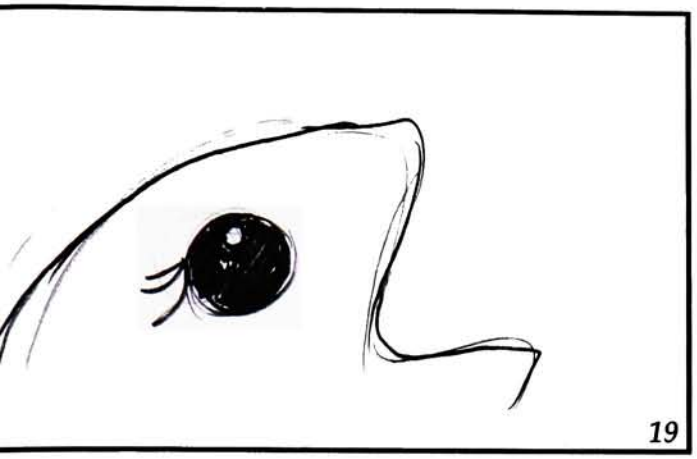
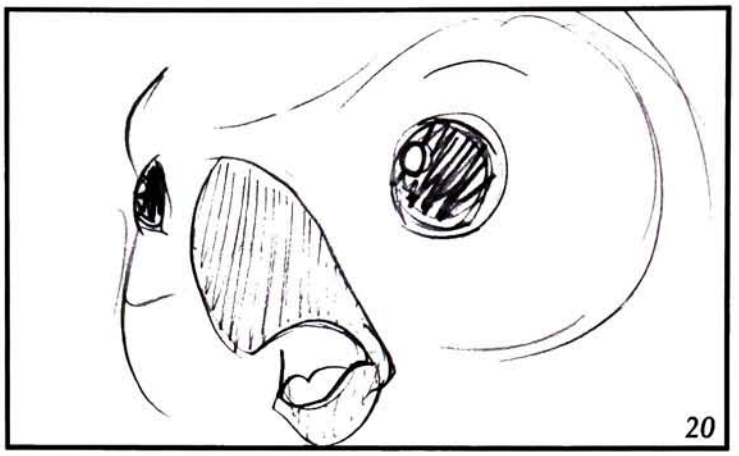
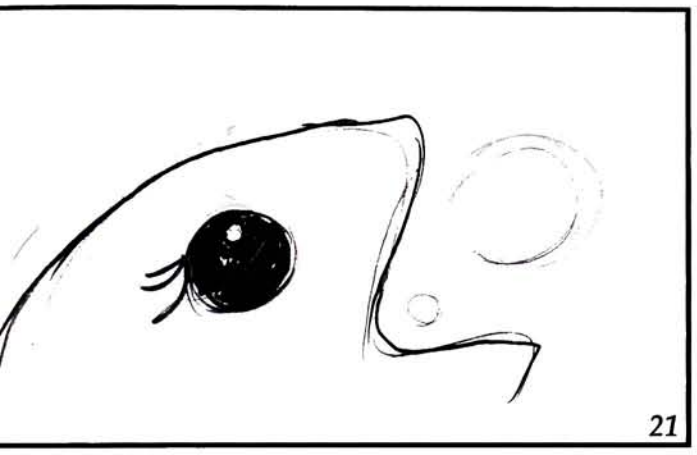
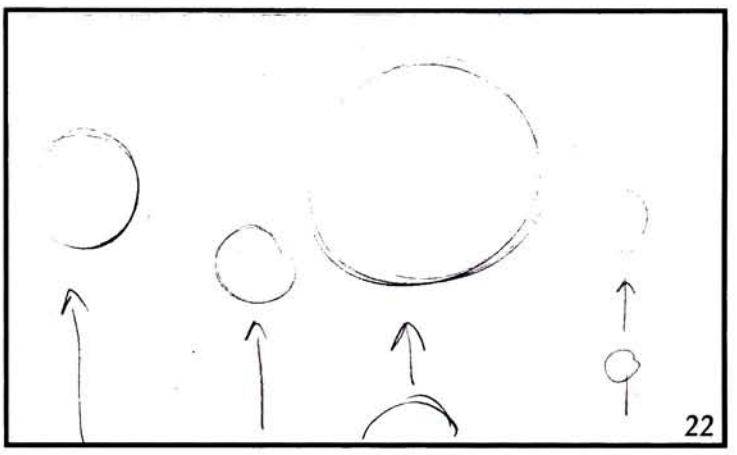
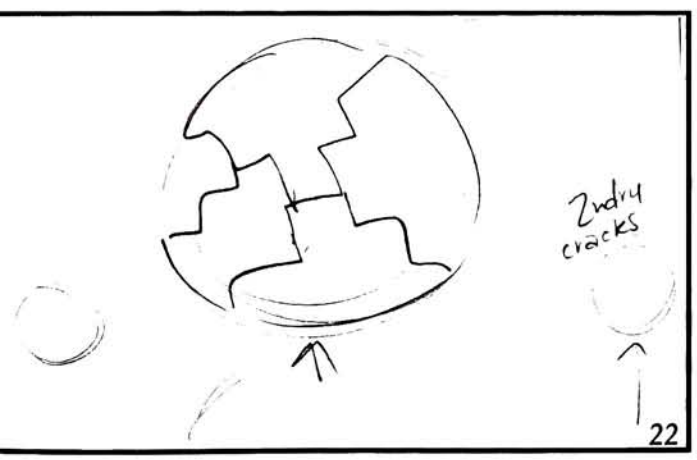
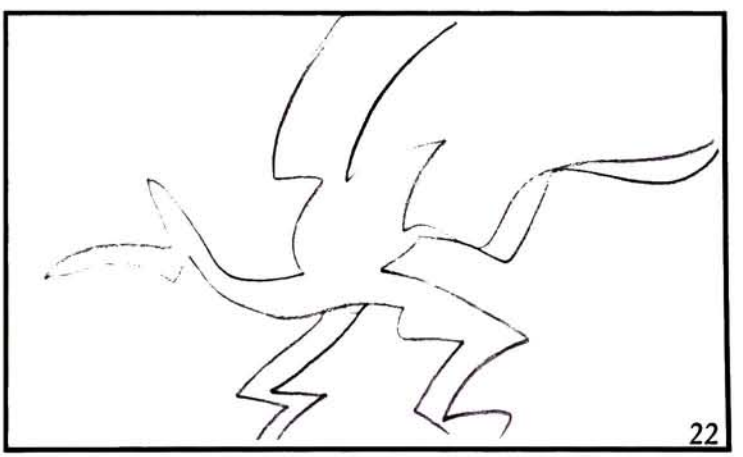












Fade to Black

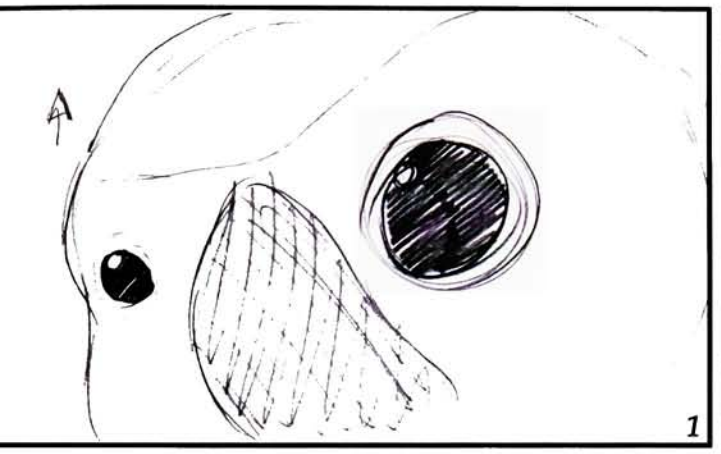
end of Act Two

BRIGHT WHITE!!!

Sound FX
brass bell
footfall, & ca-ching

1

1



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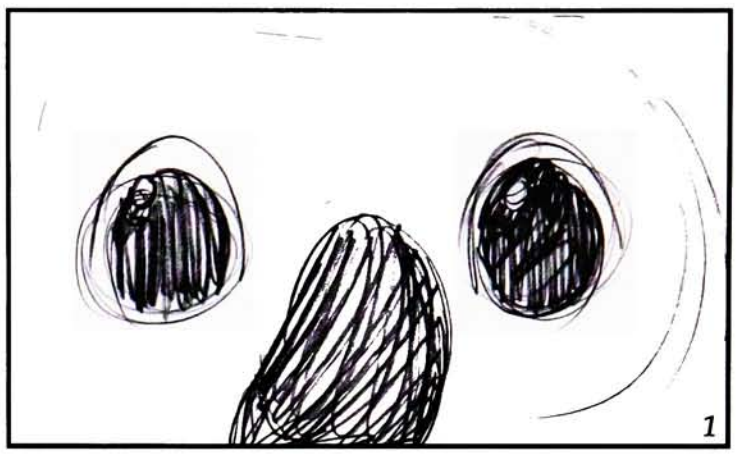

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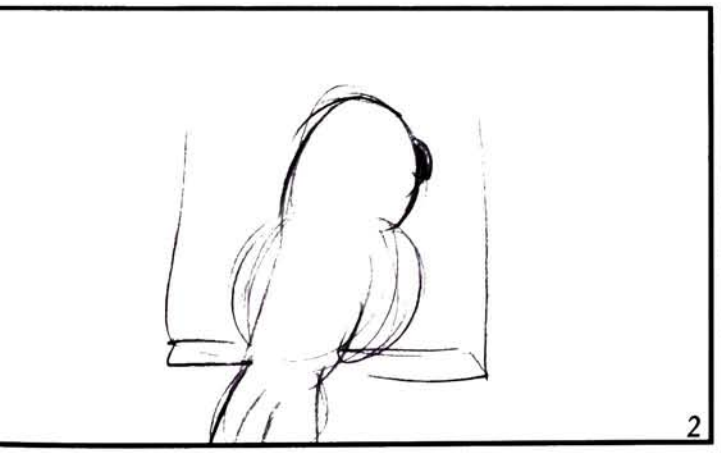

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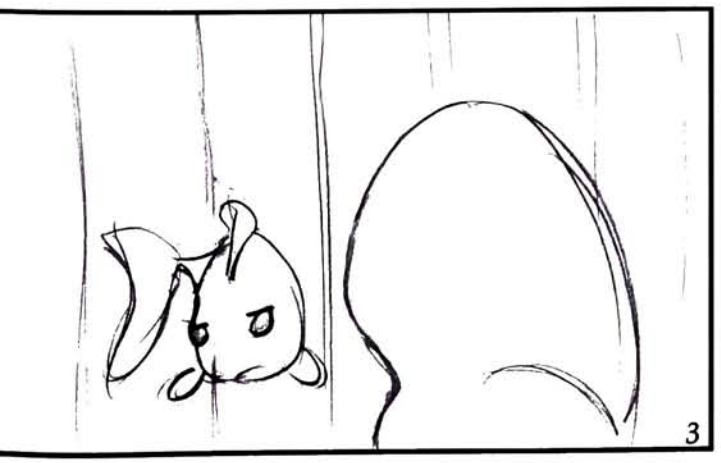

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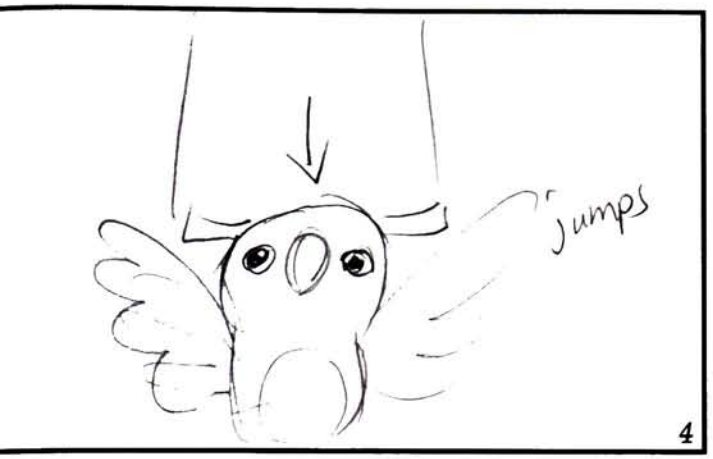
jumps
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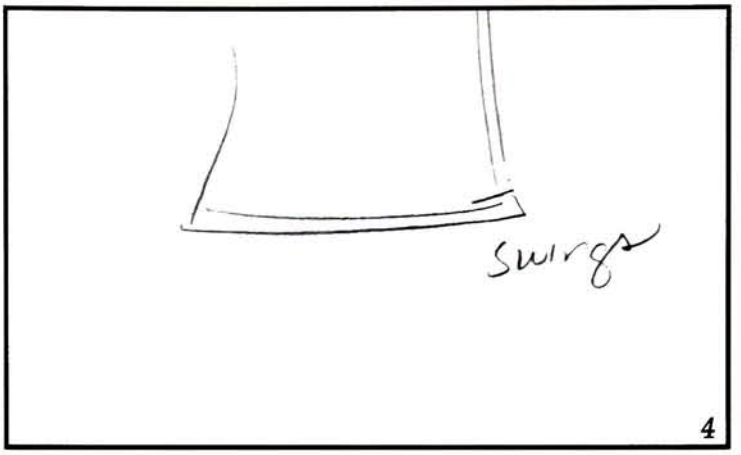
swings
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5


C
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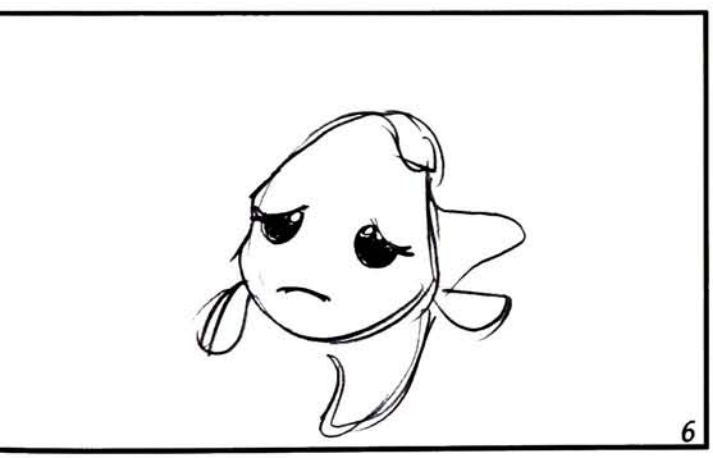
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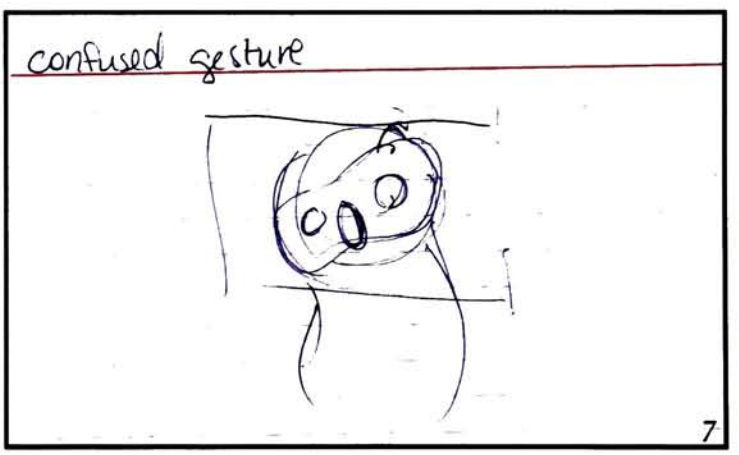
confused gesture
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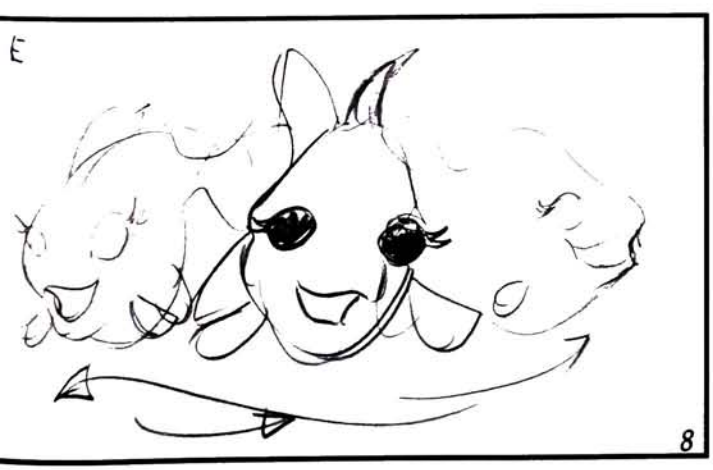
E
8


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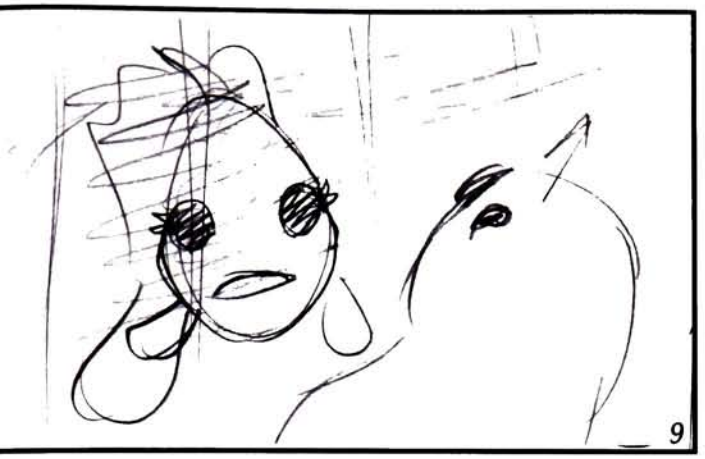
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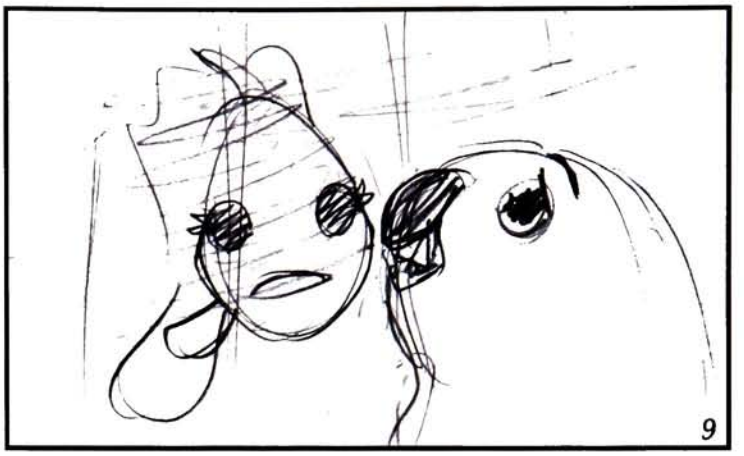
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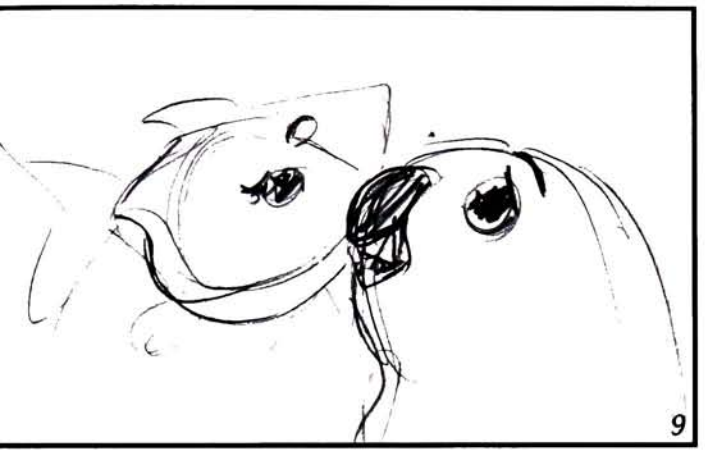
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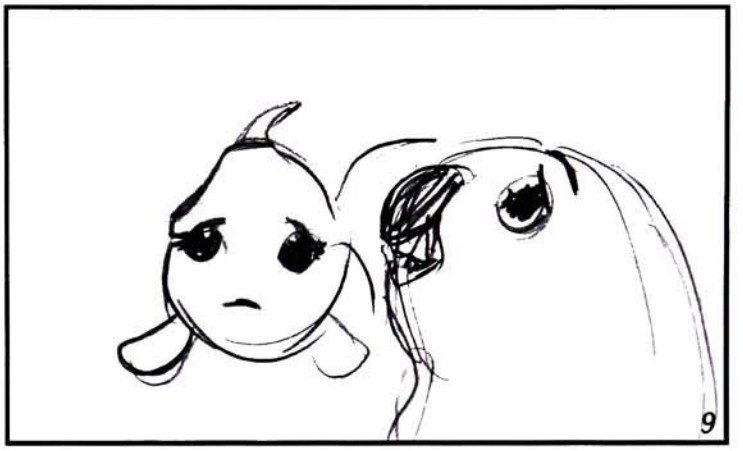
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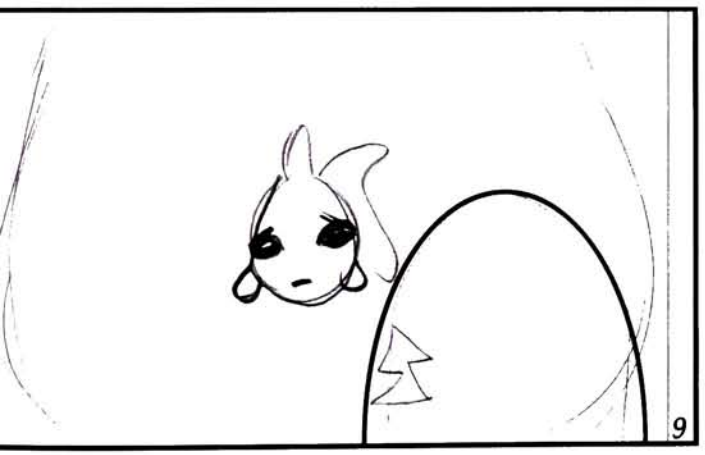
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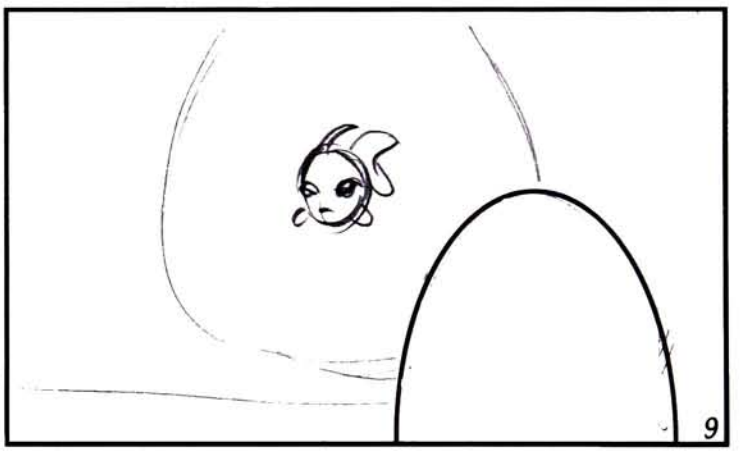
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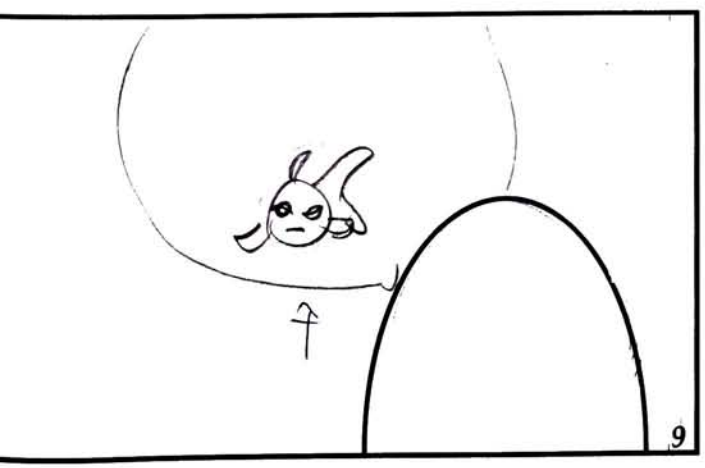
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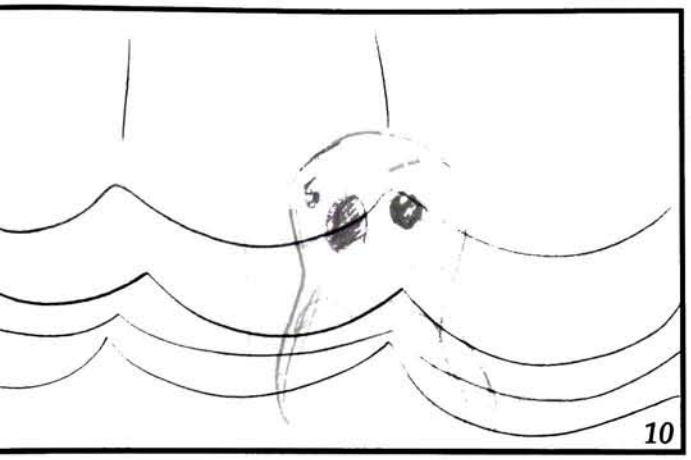
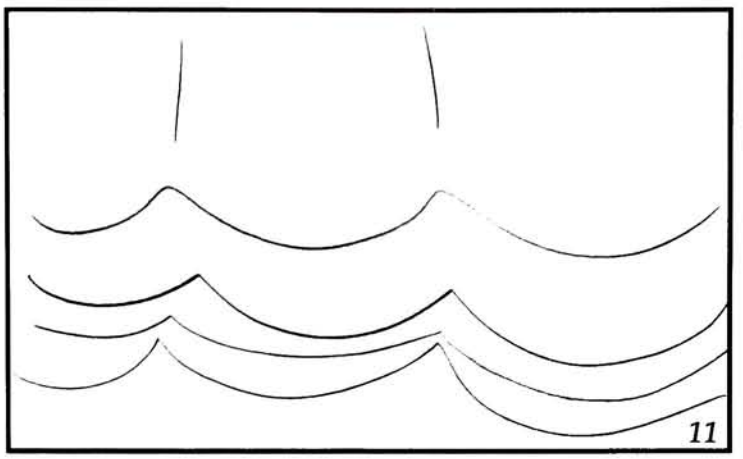
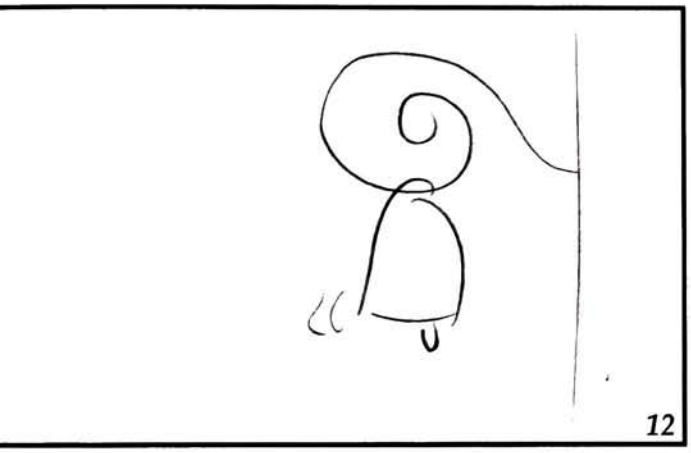




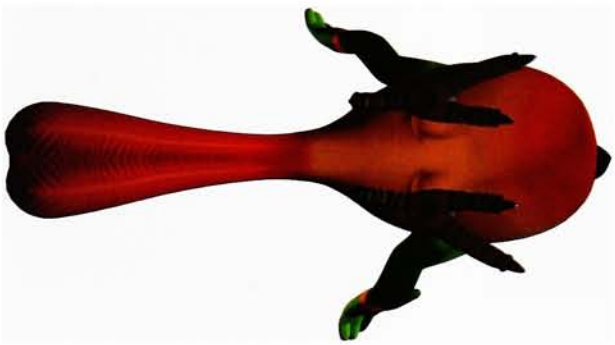


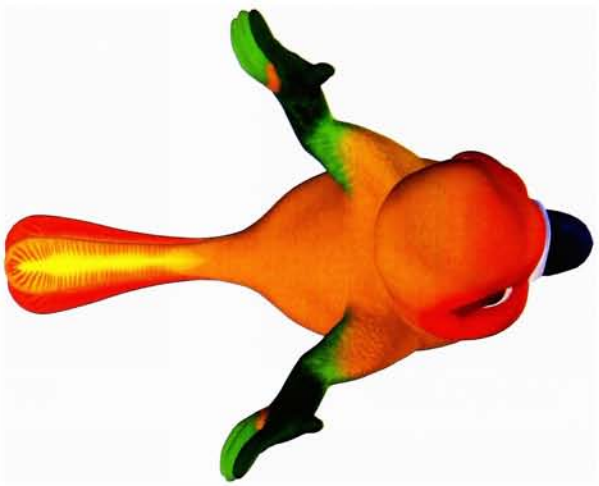
Fade to Black

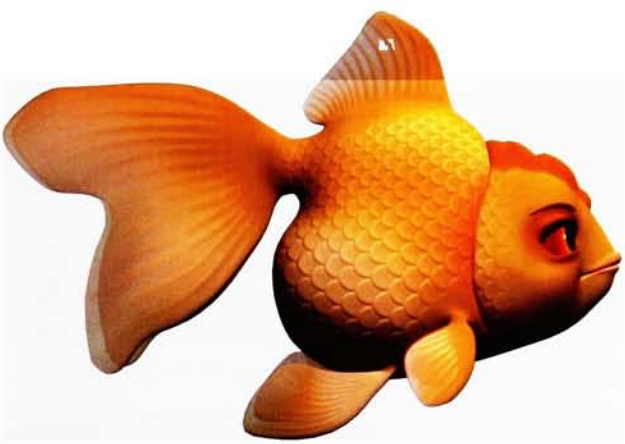
end of Act Three

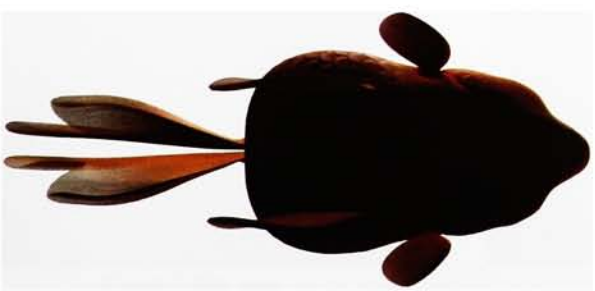
Fin to Feather

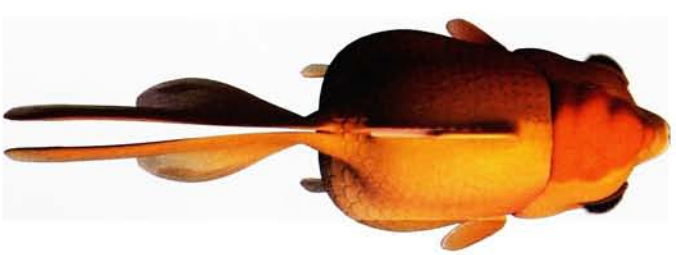
Appendix D ~ Models and Texture Maps





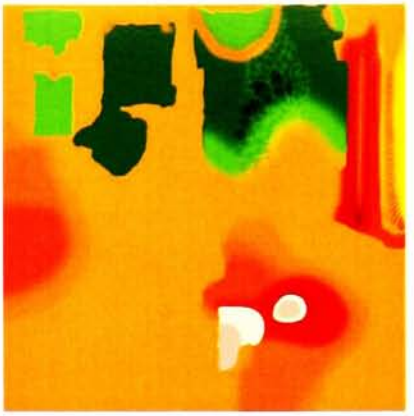




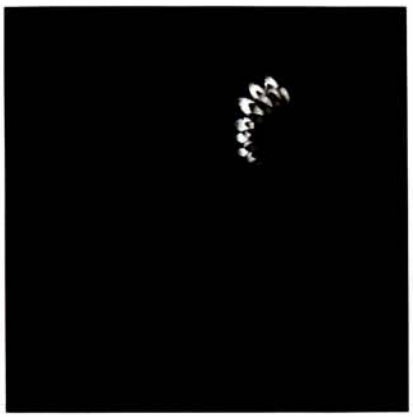


Bird_UVs.jpg

a_3Dpaint_map.jpg

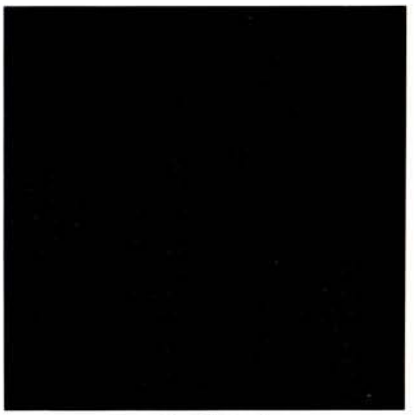


Bird_CLR.jpg

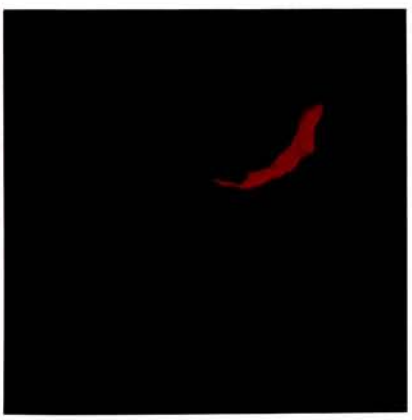


Bird_DIF.jpg

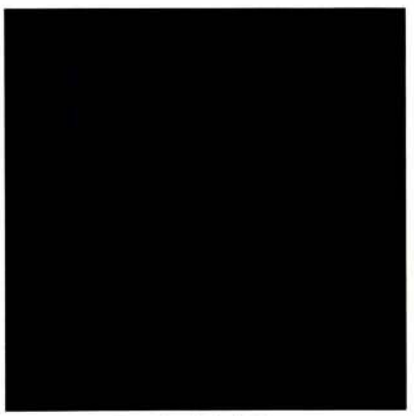
Bird_BMP.jpg



Beak_UVs.jpg



Beak_CLR.jpg



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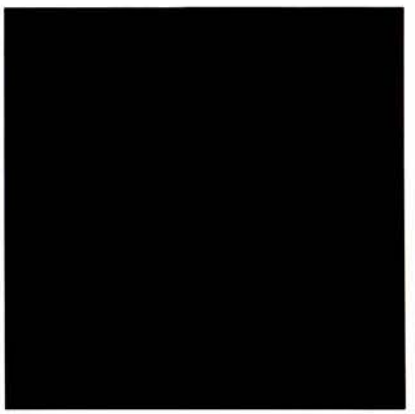
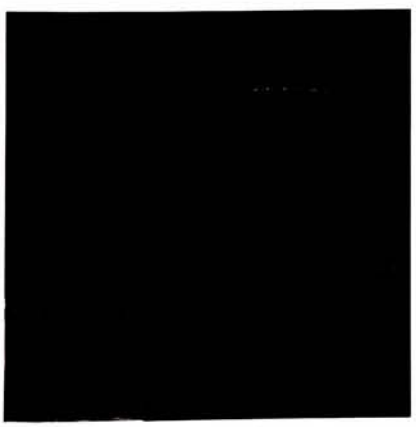
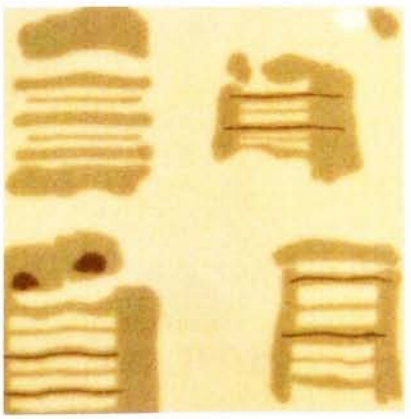


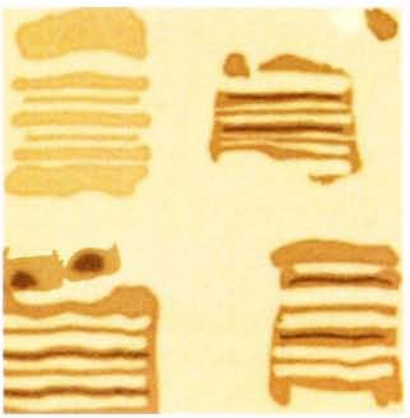
Beak_SPC.jpg



Foot_UVs.jpg

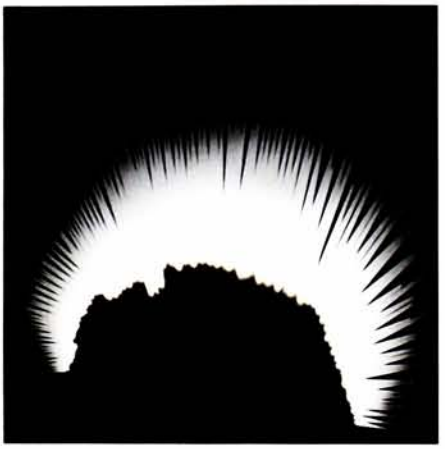


Foot_CLR.jpg



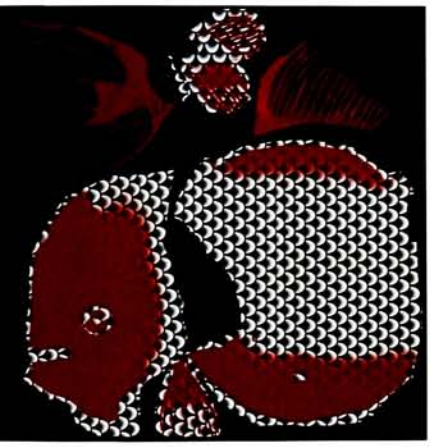
Foot_BMP.jpg

Eyelashes_CLR.jpg



Eyelashes_TPC.jpg

Fish_BMP_final.jpg



Fish_BMP_painted.jpg

Fish_CLR_final.jpg

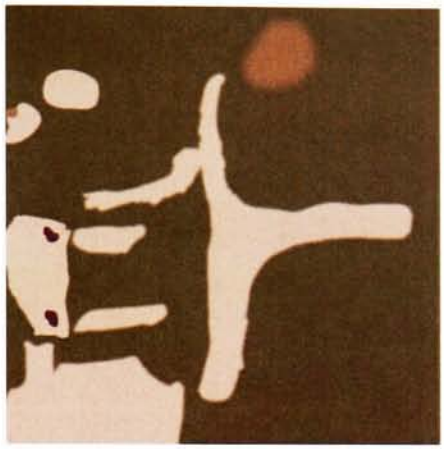
fish_CLR_original.jpg

Fish_SPC.jpg

Fish_TPC.jpg

Fish_UVs.jpg

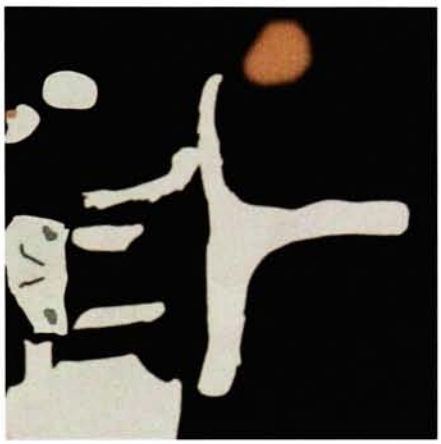
hamster_CLR.jpg



mouse01_CLR.jpg

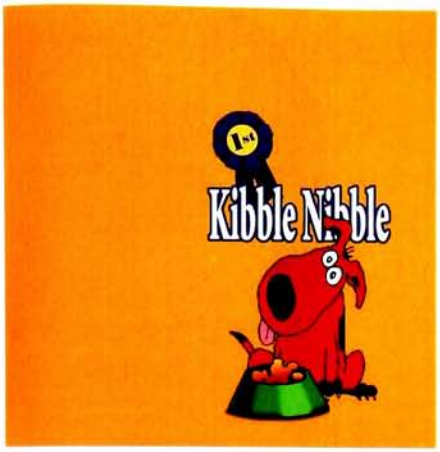
mouse02_CLR.jpg

mouse03_CLR.jpg



mouse04_CLR.jpg

mouse05_CLR.jpg

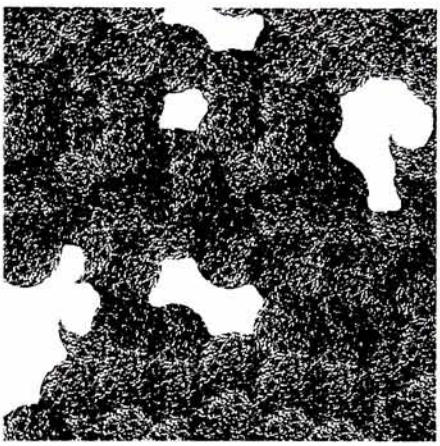


bag_A.jpg

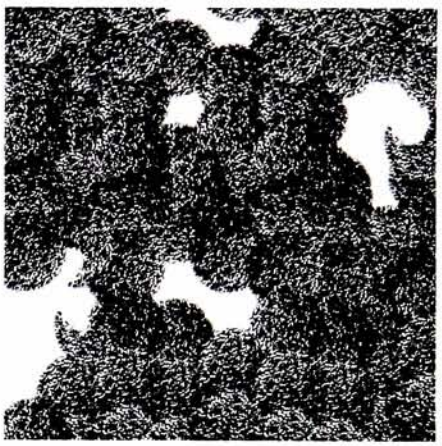
bag_B.jpg

bag_C.jpg

birdcage_seeds.tif

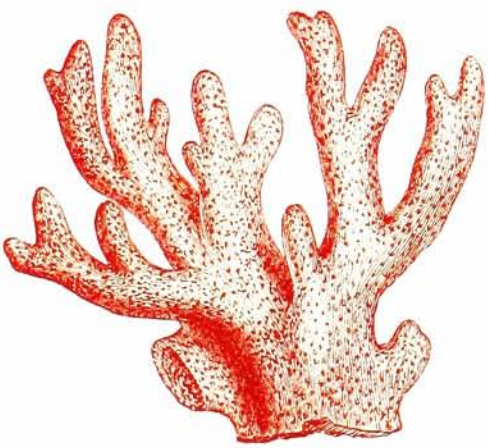


birdcage_seeds_BMP.jpg

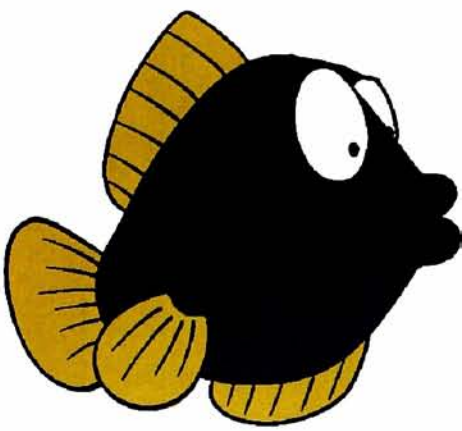


birdcage_seeds_BMP.tif

board_cat.tif

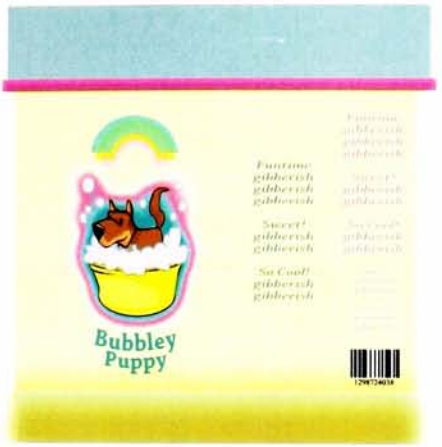


board_coral.tif

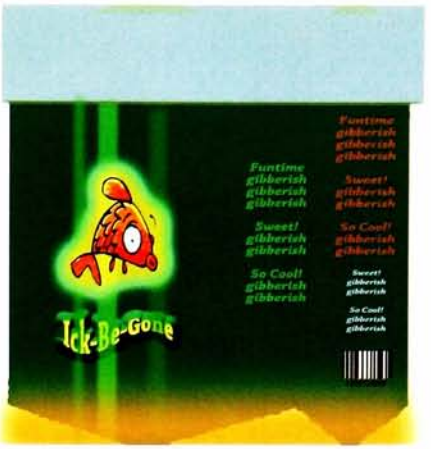


board_fish.tif

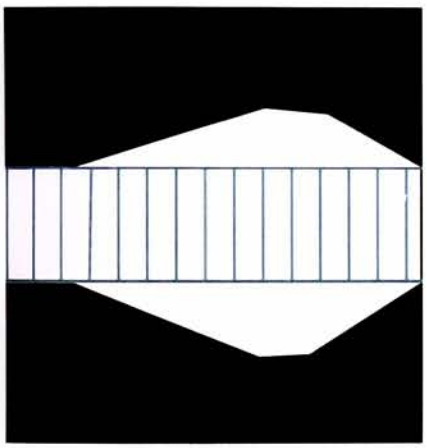
board_parrot.tif



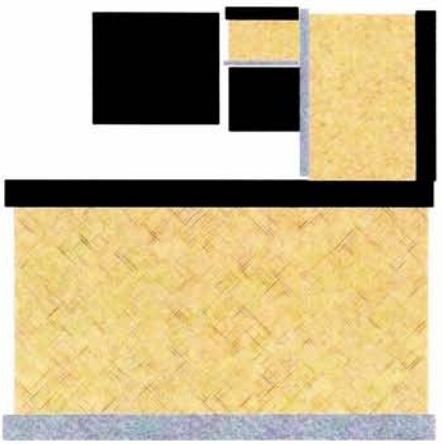
Bot_A.tif



Bot_B.tif



Bottlecap.jpg



bulding copy.jpg

can_A.jpg

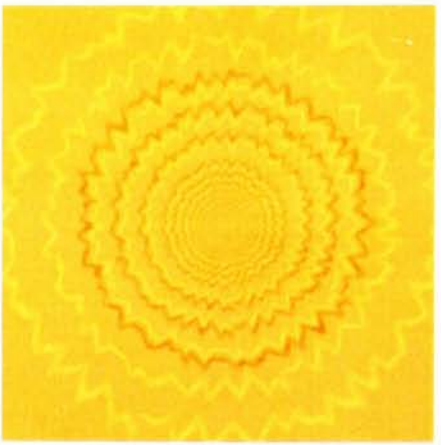
can_B.jpg

can_C.jpg

can_D.jpg

litterbox_B.jpg

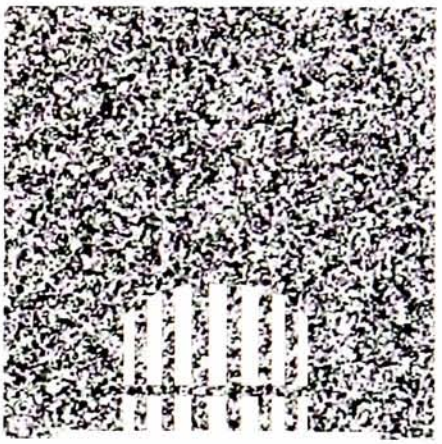
perchstump_BMP.jpg



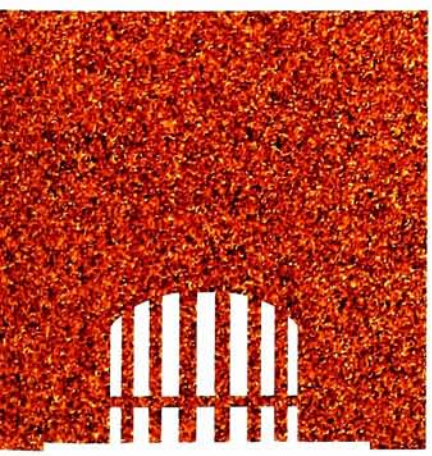
perchstump_CLR.jpg

puppy_chow_A.jpg

puppy_chow_B.jpg

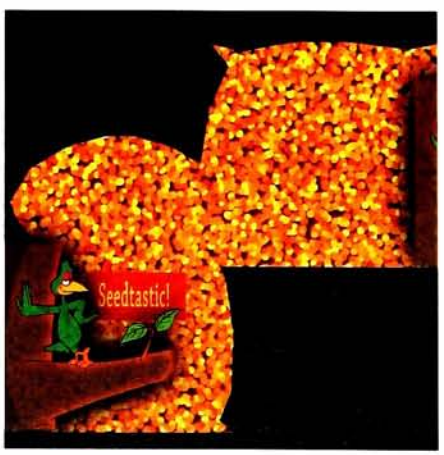


scoop_1.tif



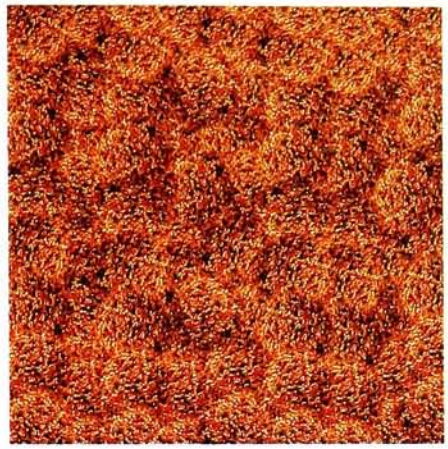
scoop_2.tif

seed_A.jpg

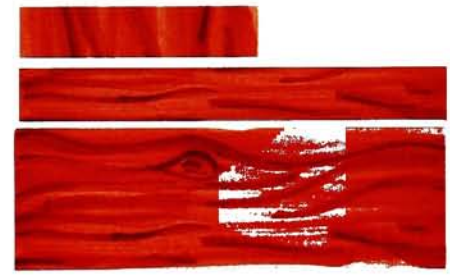


seed_B.jpg

seed_C.jpg

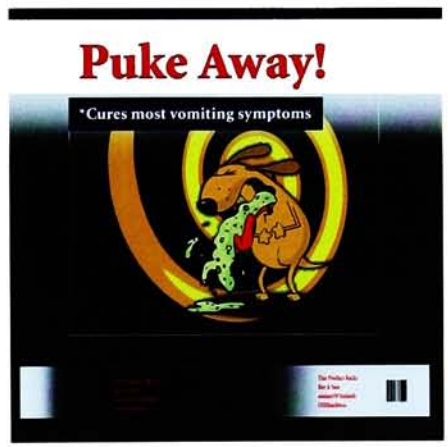


seeds.jpg

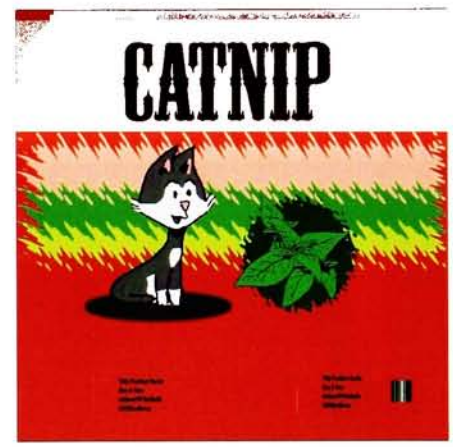


shelf_TX.jpg

sign_wood_CLR.jpg



Tablet_A.jpg



Tablet_B.jpg

text_TX.jpg

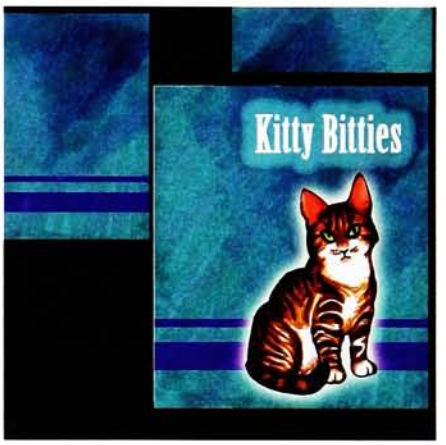
Flor_box.jpg

hamster_food_A.jpg

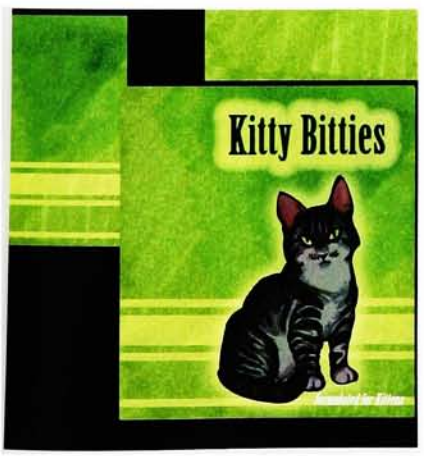
hamster_food_B.jpg

island_bottom.jpg

island_shelf_TXb.jpg



kitty_chow_A.jpg



kitty_chow_B.jpg

kitty_chow_C.jpg

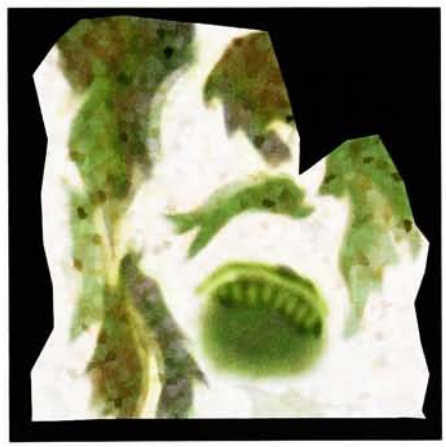
litterbox_A.jpg

can_E.jpg

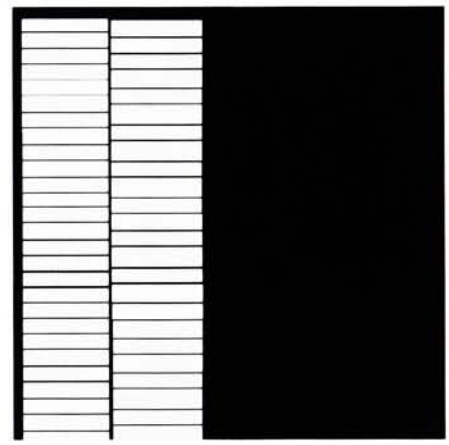
can_F.jpg

can_G.jpg

can_H.jpg



castle.jpg



counter_BP.jpg

counter_TX.jpg

fishfood_A.jpg

fishfood_B.jpg

bird03.jpg

bird03_colored.jpg

cat01_bib.jpg

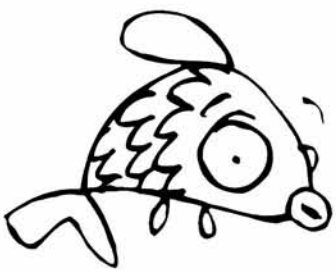
cat01_bib_colored...

cat02.jpg

cat02_colored.jpg

cat03.jpg

cat03_colored.jpg



fish02.jpg

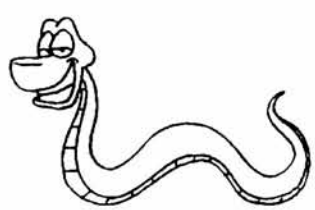
fish02_colored.jpg

hamster03.jpg

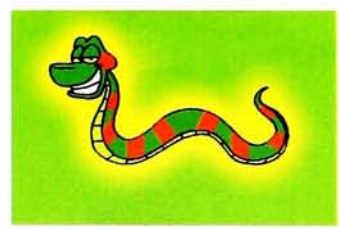
hamster03_colore...

puppy.jpg

puppy_colored.jpg



snake.jpg



snake_colored.jpg

abstract1.tif

abstract2.tif

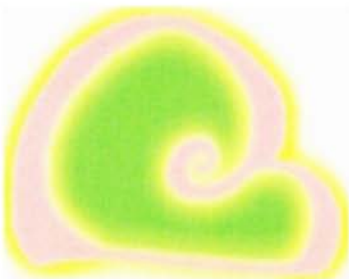
bubble.tif

cloud_01.tif

cloud_02.tif

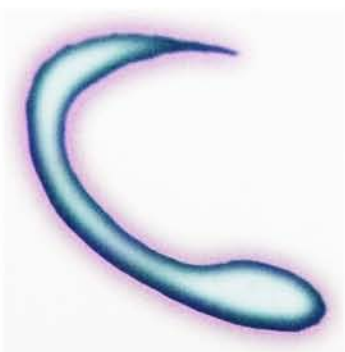
cloud_03.tif

cloud_04.tif



cloud_05.tif

cloud_06.tif

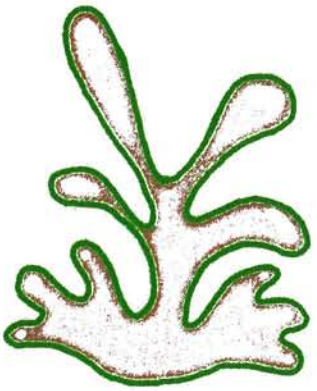


End_Swirl_blue.tif

End_Swirl_pink.tif

lightning.tif

moon.tif



Seaweed.tif

Seaweed2.tif

sun.tif

wind.tif

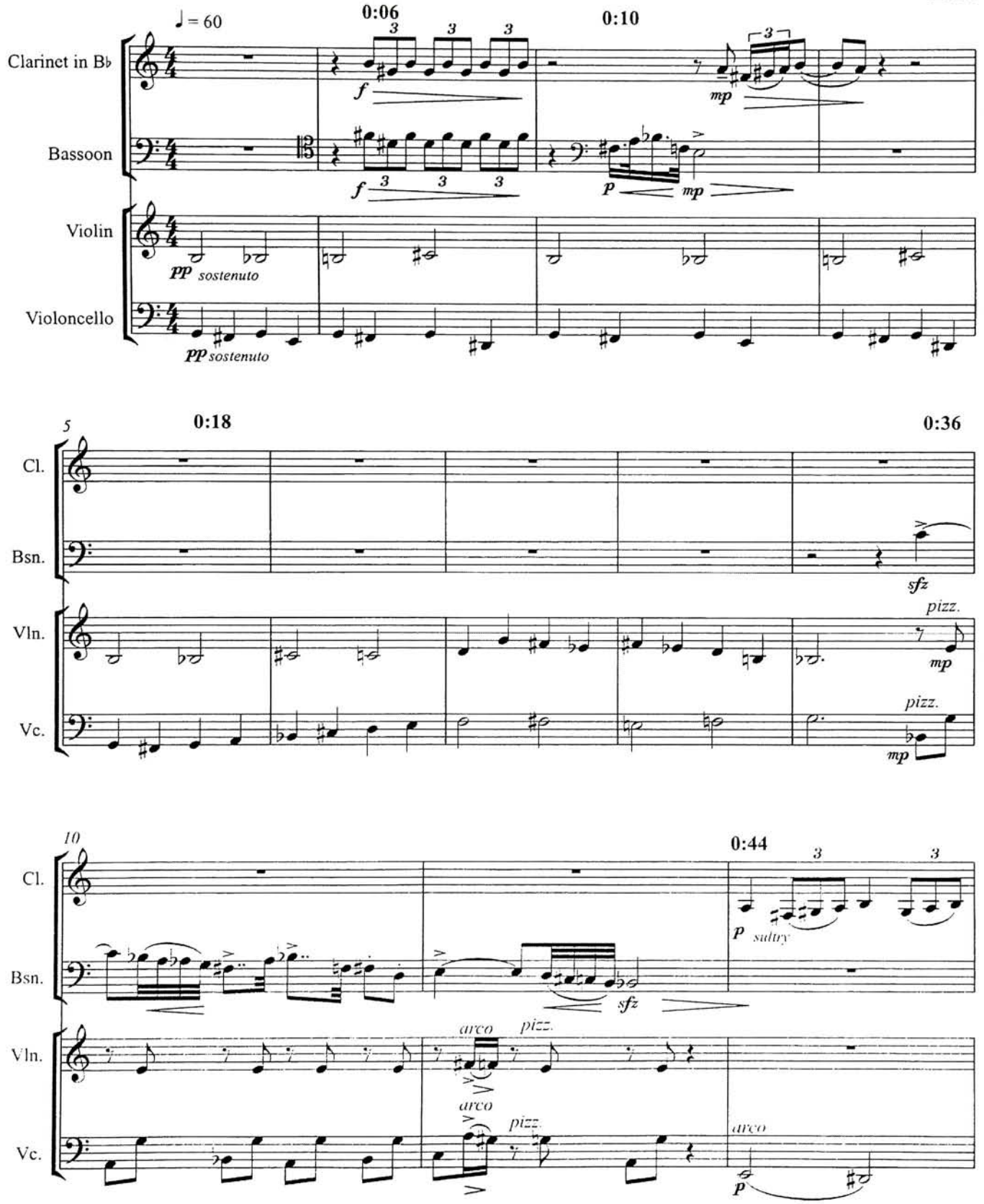
Fin to Feather

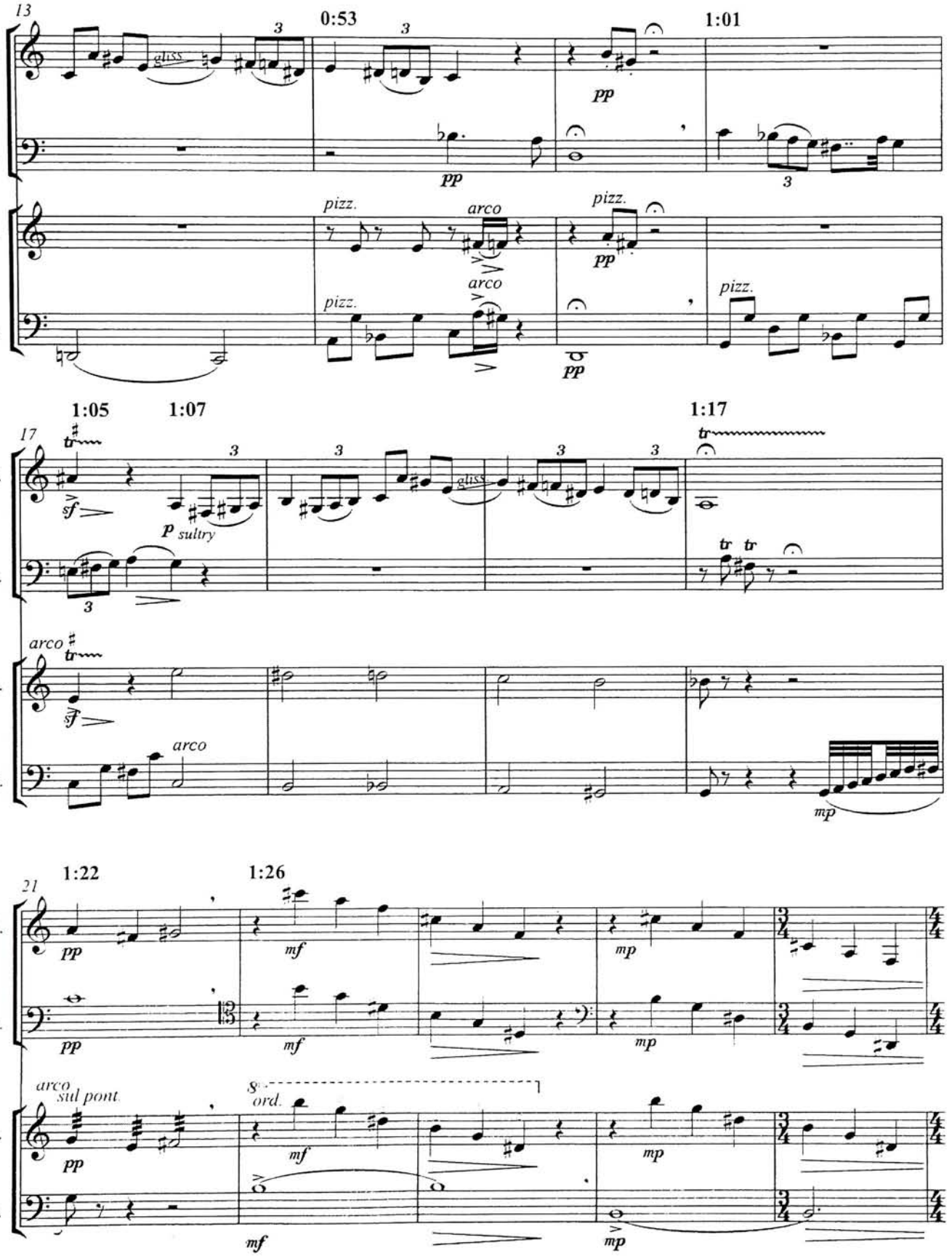
Appendix E ~ Sheet Music and Composer's Notes

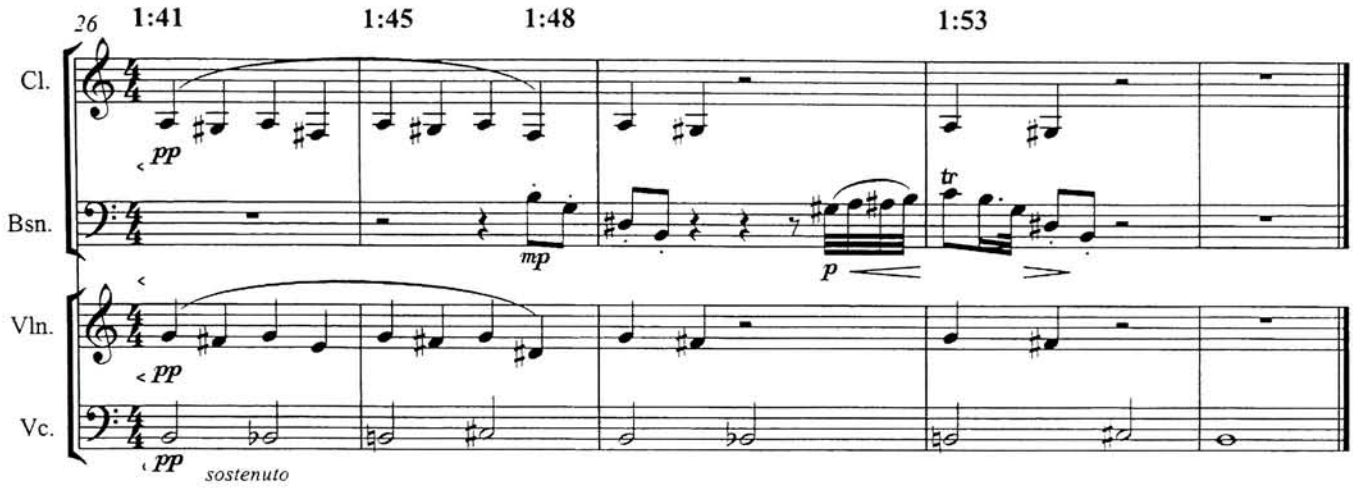
Fin to Feather

Soundtrack, Sequence 1

Daniel Black
5/2006



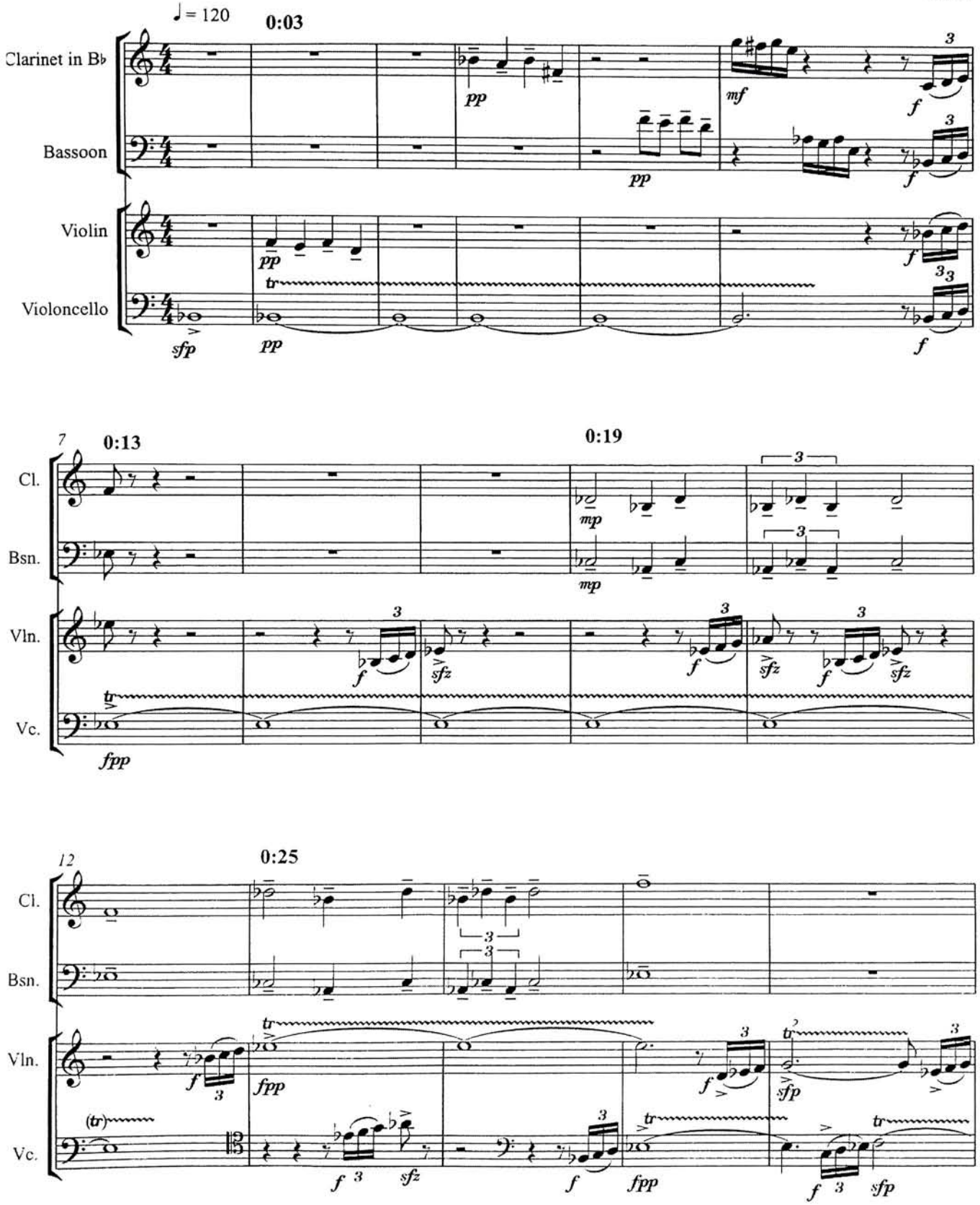

13
0:53
1:01
Cl.
Bsn.
Vln.
Vc.
gliss
pizz.
arco
pp
1:05
1:07
1:17
17
sf
p sultry
tr
mp
1:22
1:26
21
mf
arco
sul pont.
ord.

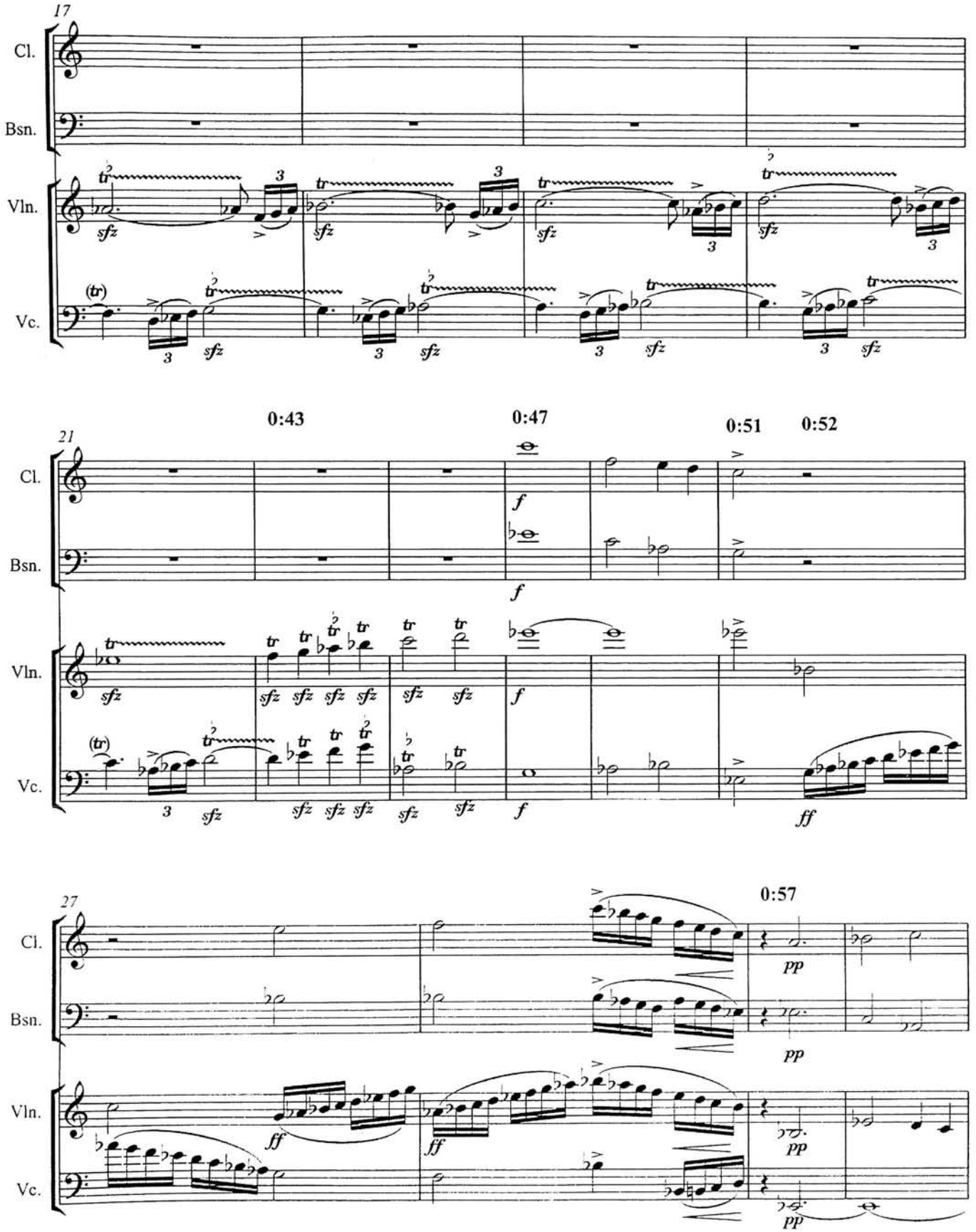

26
1:41
1:45
1:48
1:53
Cl.
Bsn.
Vln.
Vc.
pp
mp
p
tr
pp
pp
sostenuto

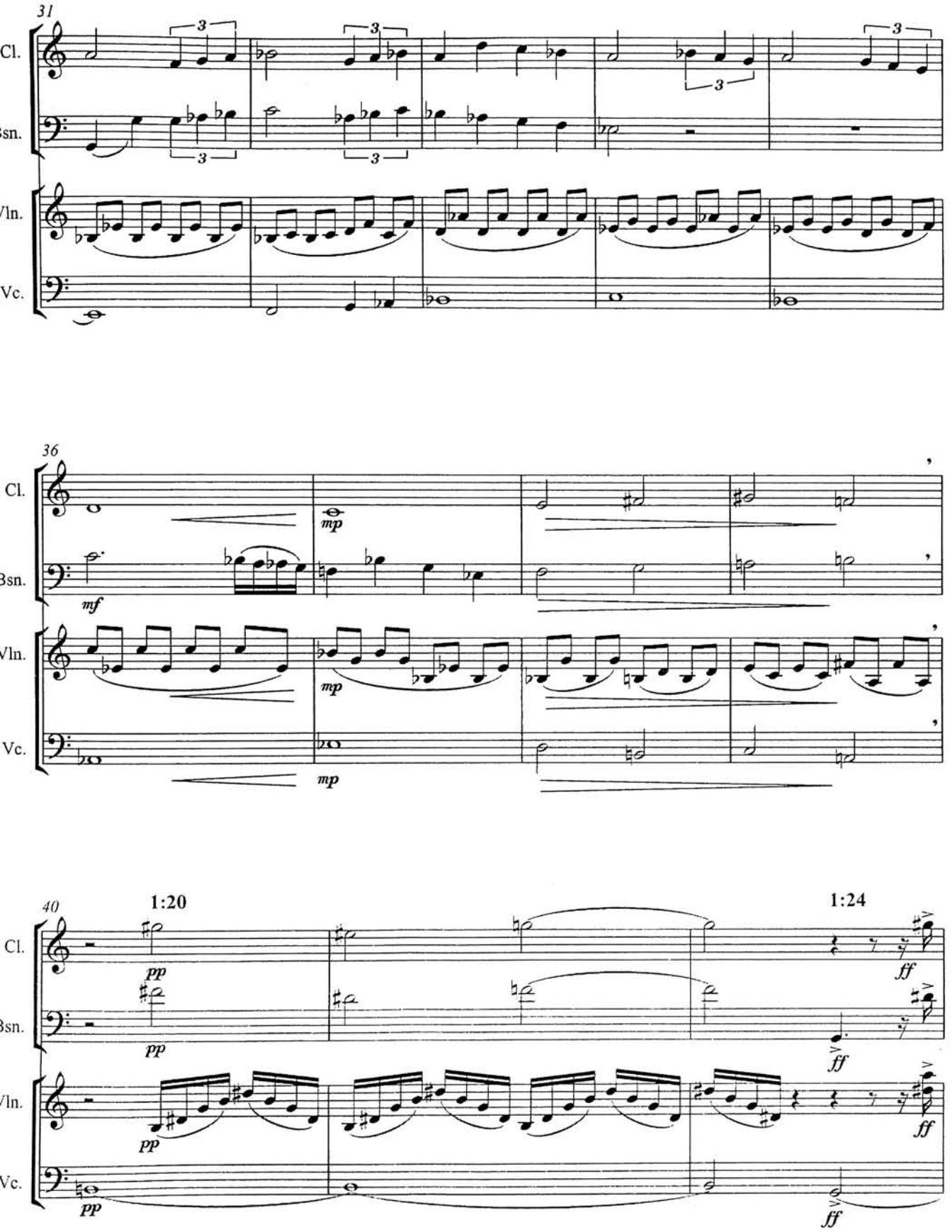
Fin to Feather

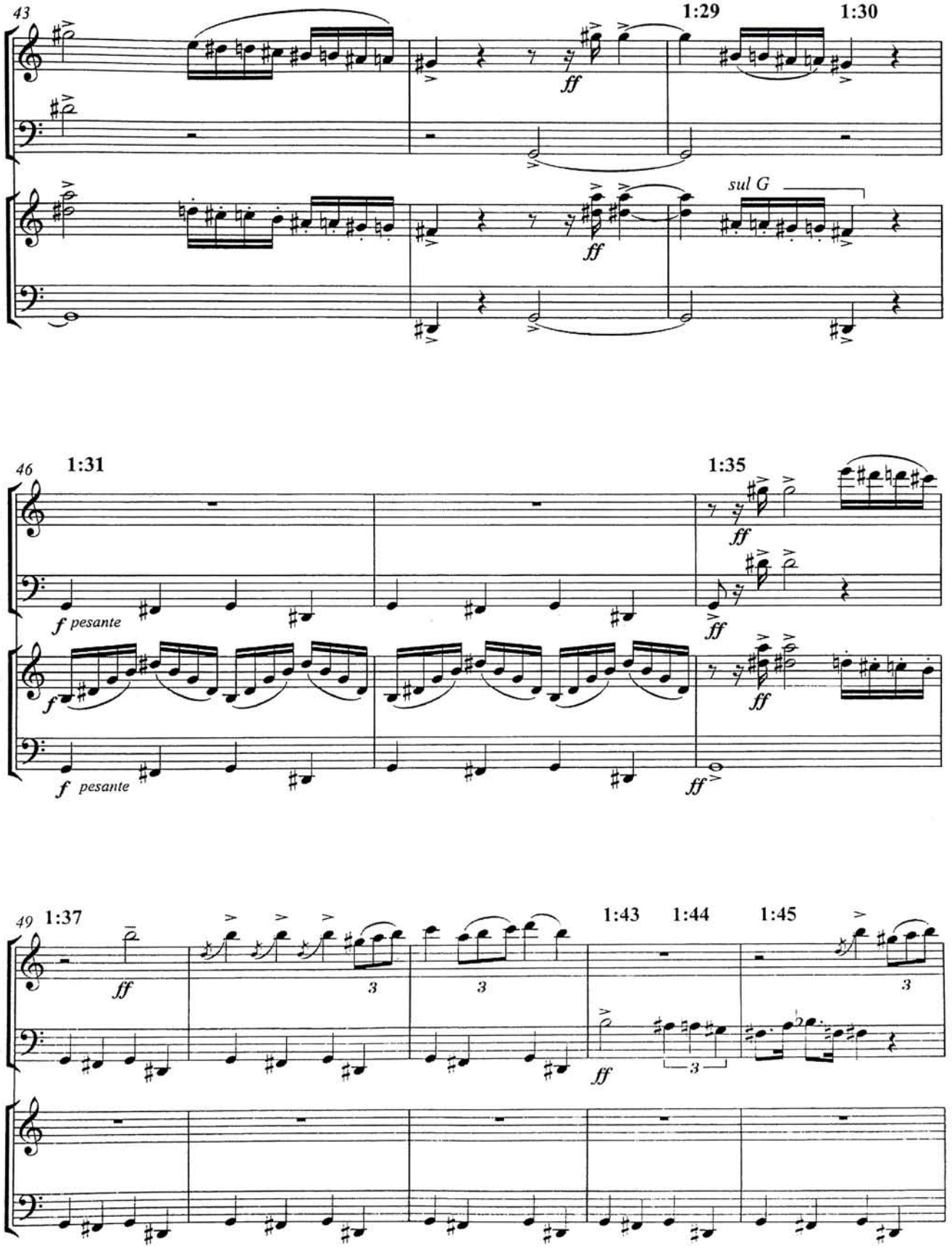
Soundtrack, Sequence 2

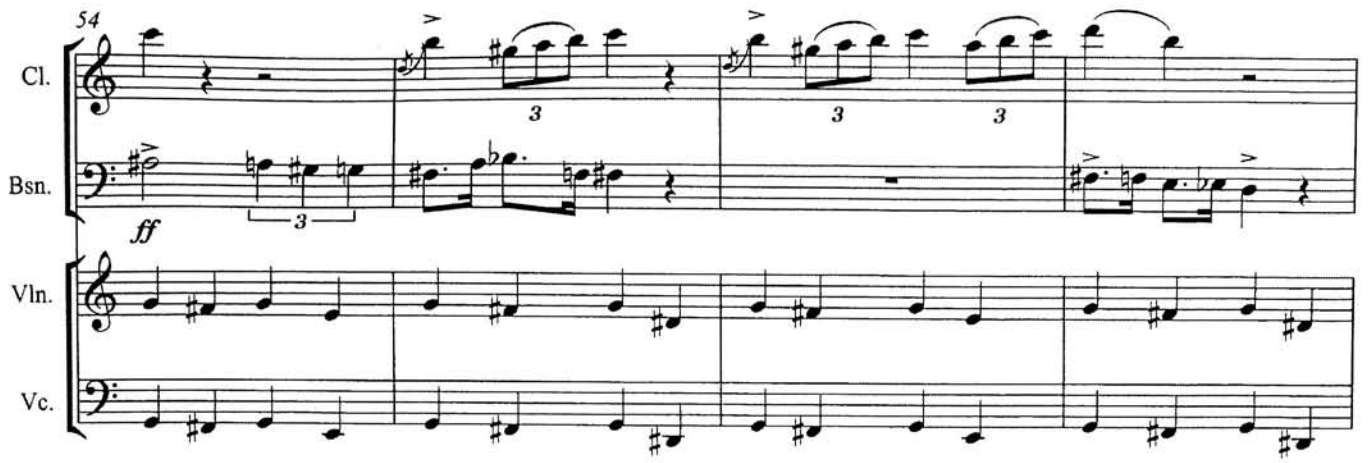
Daniel Black
5/2006

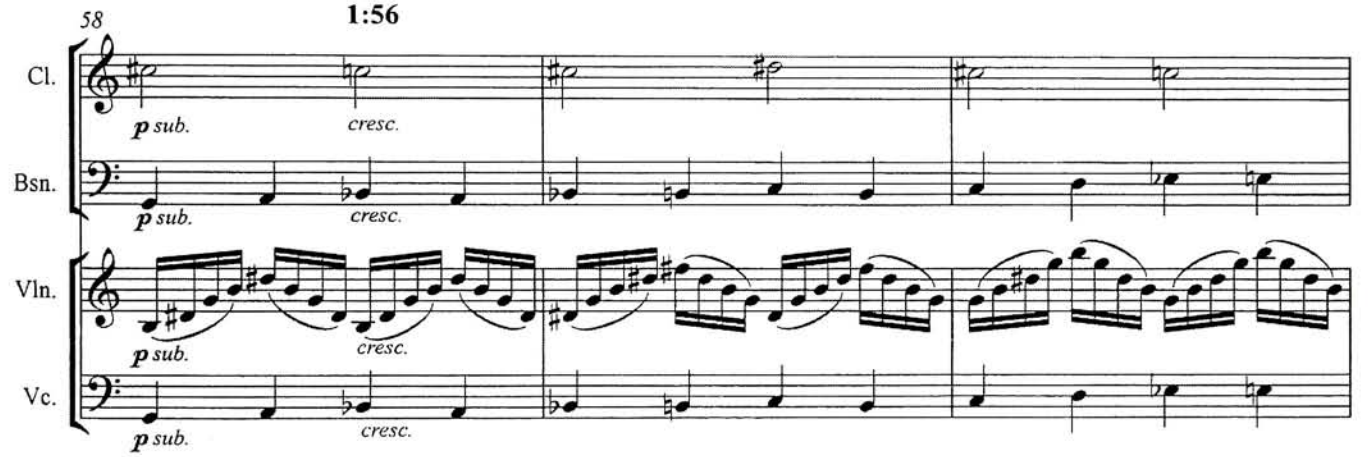


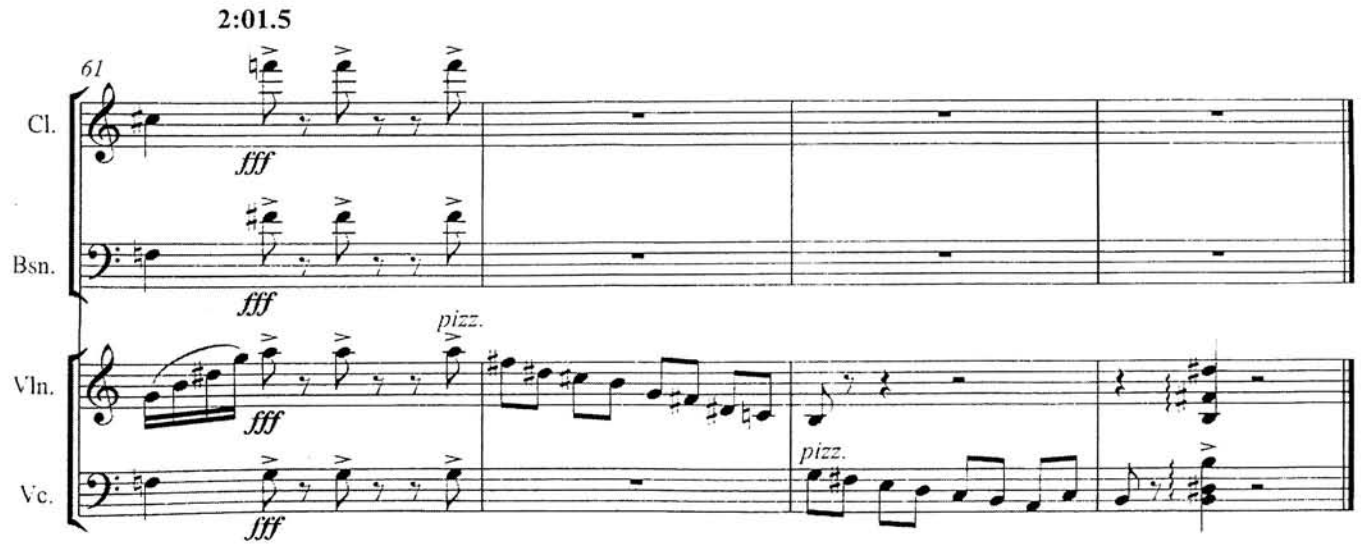

17
Cl.
Bsn.
Vln.
Vc.
sfz
(tr)
21
0:43
0:47
0:51
0:52
f
ff
27
0:57
pp


31
Cl.
Bsn.
Vln.
Vc.
3
36
mf
mp
40
1:20
1:24
pp
ff


43
1:29
1:30
Cl.
Bsn.
Vln.
Vc.
ff
sul G
46
1:31
1:35
f pesante
49
1:37
1:43
1:44
1:45
3


54
Cl.
Bsn.
Vln.
Vc.
ff
3
3
3
3

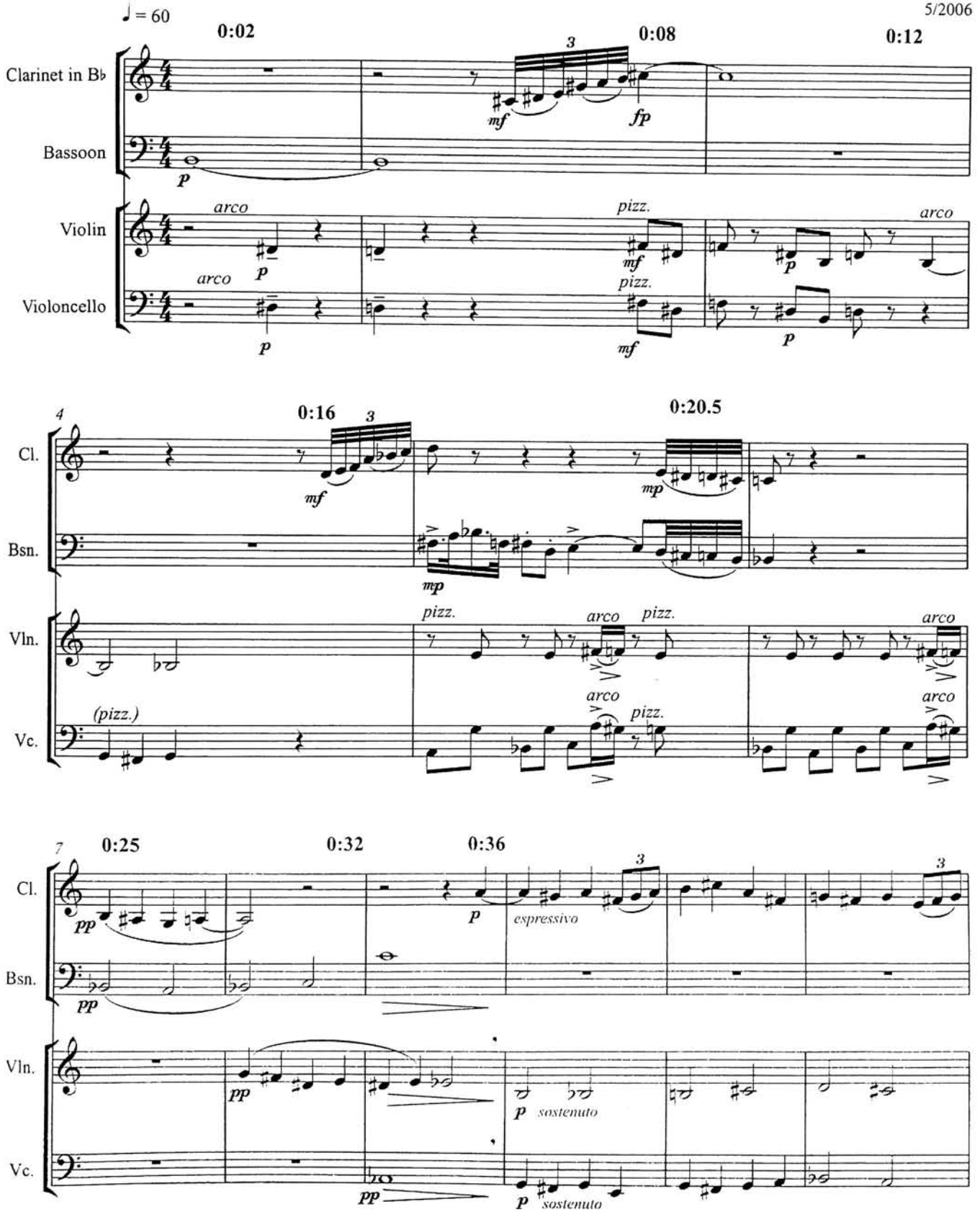

1:56
58
Cl.
Bsn.
Vln.
Vc.
p sub.
cresc.

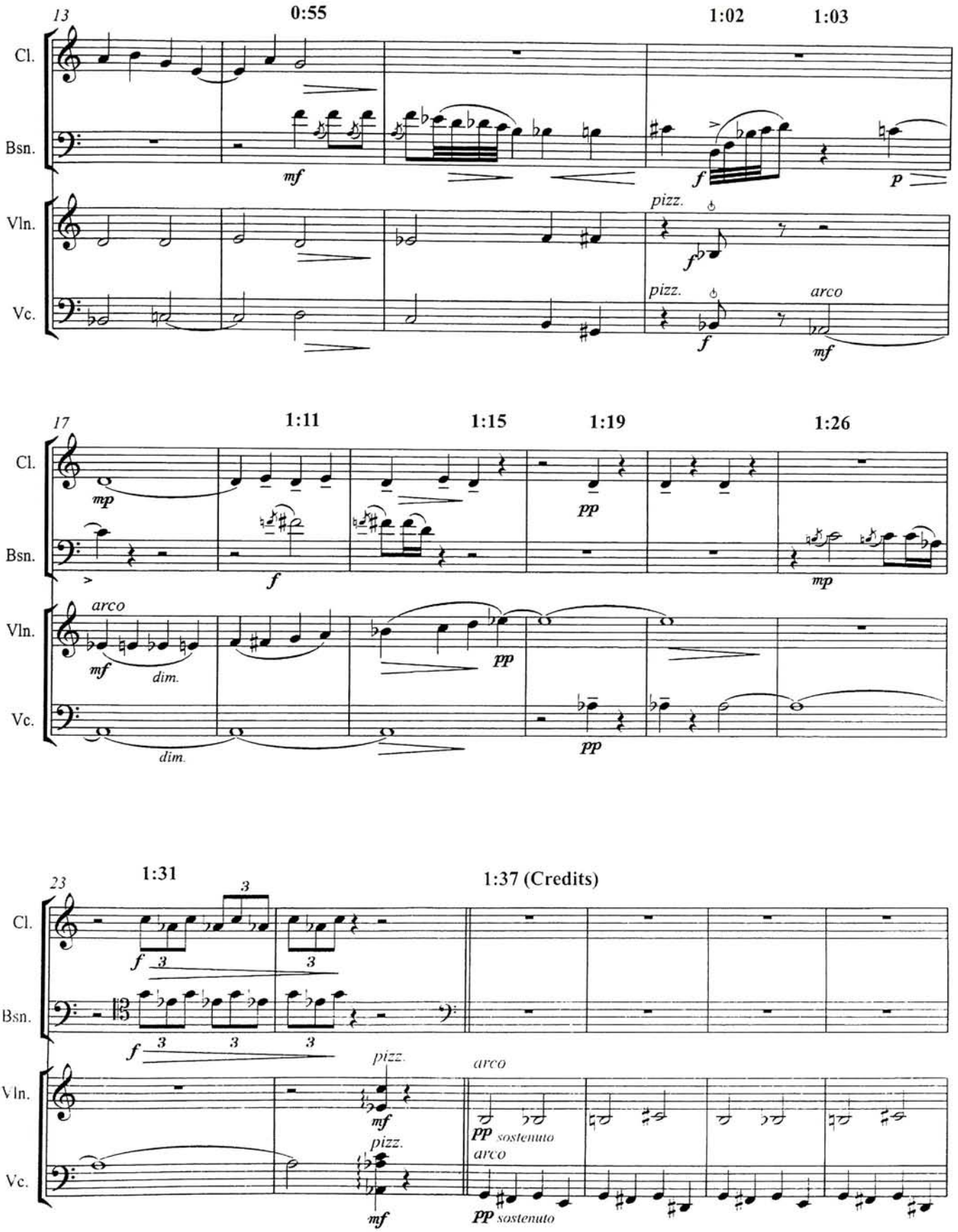

2:01.5
61
Cl.
Bsn.
Vln.
Vc.
fff
pizz.

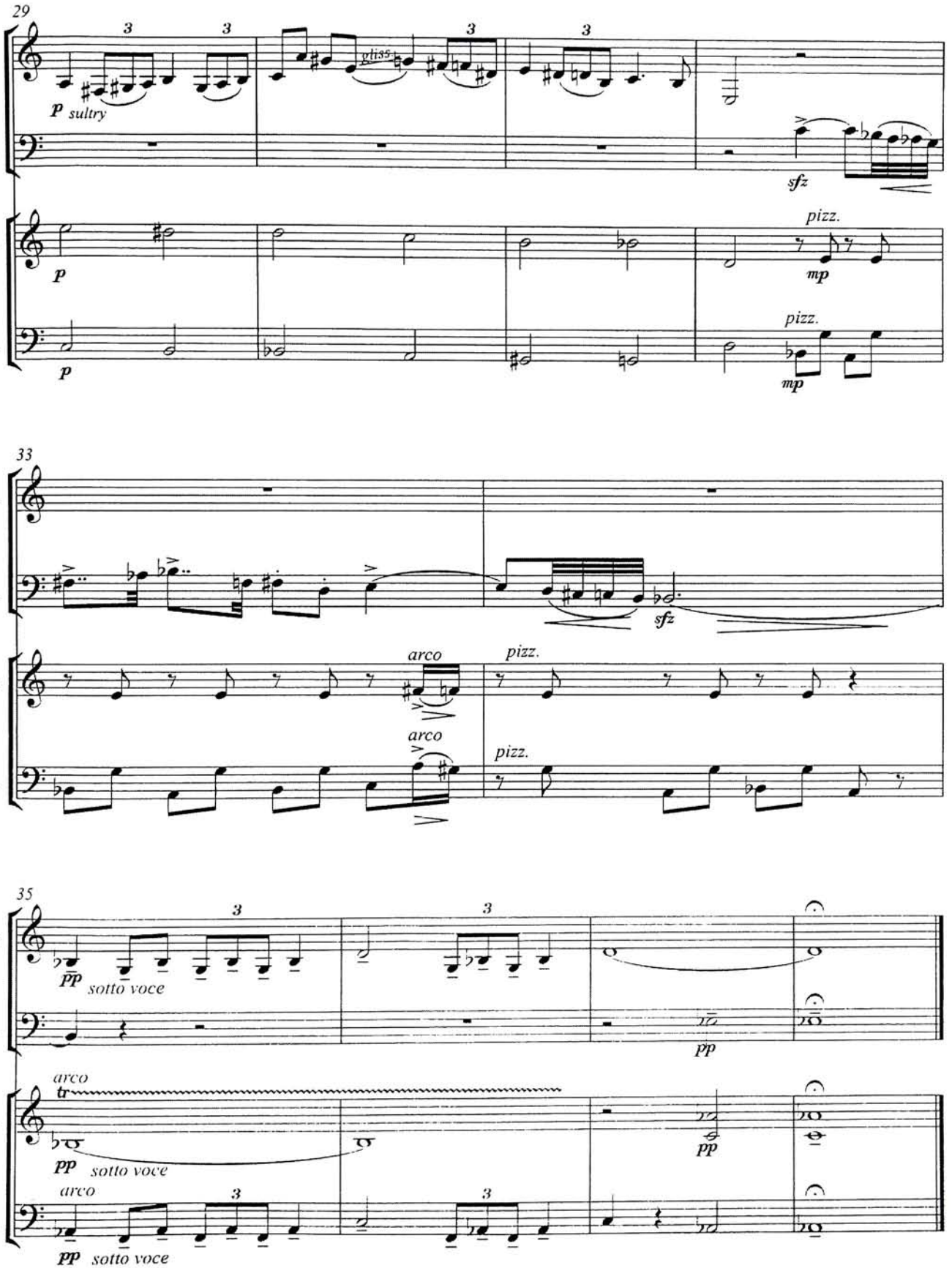
Fin to Feather

Soundtrack, Sequence 3

Daniel Black
5/2006




13
0:55
1:02
1:03
Cl.
Bsn.
Vln.
Vc.
mf
f
p
pizz.
arco
17
1:11
1:15
1:19
1:26
mp
pp
dim.
23
1:31
1:37 (Credits)
3
sostenuto


29
Cl.
Bsn.
Vln.
Vc.
3
3
gliss.
3
3
p sultry
sfz
p
pizz.
mp
p
pizz.
mp
33
Cl.
Bsn.
Vln.
Vc.
sfz
arco
pizz.
arco
pizz.
35
Cl.
Bsn.
Vln.
Vc.
3
3
pp sotto voce
pp
arco
tr
pp sotto voce
pp
arco
3
3
pp sotto voce

Fin to Feather Soundtrack
(Rough Cut)

5/16/2006

General Notes:

1) The full-sequence takes of Sequence 1 & 3 seem to be basically good (as far as I'm able to judge the coordination). The track numbers for these takes are 04, and 11. There may be a tiny bit of minor adjusting necessary, especially to get the bell to ring exactly in time with the music.

2) Sequence 2 is a bit of a problem. I made an edited track (08) that has the whole sequence, and it wound up about 3 sec too long. I think the first section up to the kiss is fine as far as coordination, and if we can line up the first thunderclap with the music it will be alright, but there is just a little bit of extra music during the snuggle/kiss scene that I couldn't edit out without putting big holes in it. You might not like the rather rough job I did splicing these tracks together, so the 3 separate tracks I used are also included (05-07).

3) Each track has a bit of lead time (approx. 1 sec) at the start, and also some time at the end, usually 4-5 sec. This can be trimmed off, I just didn't want to risk deleting any of the music with my clumsy software. Also, this should provide material for white noise bridges, if necessary.

4) All the tracks are in AIFF format, I believe. I hope that is ok, as I don't know how to burn a disk in a specific format. (I haven't done much sound editing with this computer, as I'm sure you could tell)

Trk#	Sequence (film timings)	Trk Length	Comments
01	Sequence 1, all	2:11	The timings of this cut are workable, except, I believe, the very end is not quite in sync. However, musically there are some errors, and this wouldn't be the best one to use.
02	Sequence 1, 1:01 to end	1:08	This covers the Parrot showing off wings to the end. Everything is OK, but there is an error at the end that's pretty noticeable
03	Sequence 1, 1:26 to end	:50	This starts at the light going out in the fishes tank, and goes to the end. Useable, but I'm not sure about the coordination.
04	**Sequence 1, all**	**2:12**	**This is definitely the best take of Sequence 1, and should work without any major edits necessary.**
05	Sequence 2, beg- 1:18	1:28	This is good, but one major error in the music which is corrected by 06. Time the entrance of the parrot at :13 with the loud triplet in the whole group, and this whole clip should be synchronized. (I spliced 05, 06, and 07 together to fix the problem and make 08, but the splice might be noticeable)
06	Sequence 2, :47 to 1:18	:42	This music begins with the parrot swooping around the fish, and ends just before the kiss. Fixes the wrong note in 05.
07	Sequence 2, 1:19 – end	:59	This track is good, but doesn't seem to coordinate well at first. If the loud low note can be coordinated with the lightening scene that begins at 1:24, the rest should line up. I think the music for the kiss took too long because we all wanted to play too musically.

08	**Sequence 2, all**	**2:19**	**I spliced 06-07 to make this track. The first half works well, it's just the area around the kiss that causes problems. I think the musical dialogue between "parrot" and "fish" doesn't have to be precisely coordinated, but the thunder and the bubble bursting do.**
09	Sequence 3 (all except credits)	1:47	Useable, but a little rough all around (especially the ending with the bell)
10	Sequence 3 (all except credits)	1:46	Same as 09, but quality is a little better.
11	**Sequence 3, (all except credits)**	**1:46**	**This is definitely the best take of Sequence 3. The key for coordinating this take is to get the flourish in the clarinet to match the parrot's startled hop at :08.**
12	**Credits**	**1:03**	**It's fine, might run a bit long, but I assume you can just freeze the last frame of the credits or something.**

Fin to Feather
(description of soundtrack)
Sequence 1

Approx. time	Visual Event	Musical Event
0:05	bell rings	clarinet, bassoon, piano play triplets
0:10	camera sweeps through shop, see parrot and fish	tiny snippet of parrot theme followed by fish theme
0:36	parrot in cage	bassoon plays full parrot theme
0:44	fish in tank	clarinet plays fish theme
0:53	Close-up of parrot	strings play pizzicato while clarinet finishes fish theme
0:56	Close-up of fish	Sustained note in cello, short notes in clar.
1:01	Parrot shows off wings and raises eyebrows	Parrot theme in bassoon, trill in cl. And violin to go with eyebrows
1:07	Fish smiles and dances	Fish theme in clarinet
1:17	Parrot sighs lovingly	clarinet sustains trill, bassoon has short trills
1:22	Fish sighs & smiles	clar. & vln play "kiss" theme (cello leads into this scene
1:26	lights go out, fish reacts	sustained note in cello, decending notes in others
1:41	fish closes eyes, sleeps	Clar. & vln play "petshop" theme
1:48	Lights go out in birdcage, parrot reacts	Bassoon plays descending short notes over cl and vln.
1:53	Parrots flies up to his bar	bassoon has upward flourish

Sequence 2

Approx. Time	Visual Event	Musical Event
0:03	Curtain rises	violin plays modified "petshop" theme
0:13	Parrot enters	Everyone plays triplet in unison
0:19	Close-up of Parrot, searching for the fish	Bassoon and Clarinet have slow melody
0:25	Fish swimming in air, searching for Parrot	Bsn and Clar. Repeat slow melody in higher range
0:47	Parrot sweeps around the fish	Big major chords in the whole group (following trills in vln and cello)
0:52	The circle each other (seen from above)	Rising scales in cello, violin, then descending scales in everyone's part
0:57	Fish charges parrot, they embrace and snuggle	Soft melody (modified fish theme) in bsn and clar.
1:20	They kiss!	The kiss theme is announced by a low note in the cello, and is accompanied by fast notes in the vln
1:24	Lightening, thunder, fish tumbles through the air	Lightening theme starts with loud note in bsn, cel.
1:31	Parrot flies after fish	Petshop theme in bsn, cel, fast notes in vln
1:35	Lightening strikes a cloud	Lightening theme again (shorter)
1:37	Fish trapped in clouds, searching for parrot, looks panicked	Clar plays mournful solo very high in register
1:43	Fish sees parrot	Bsn plays parrot theme
1:44	Alternating close-ups	Bsn and clar have musical dialogue (coordination not essential)
1:56	Fish blows a kiss	Fast notes return in vln, group crescendos (this should happen about 1 sec. before the bubble leaves the fishes mouth)
2:01	Bubble bursts	3 chords in unison (pizzicato strings as screen fades to white)

Sequence 3

Approx. time	Visual Event	Musical Event
0:02	Parrot wakes	sustained note in bssn, short notes in strings
0:08	parrot is startled by fish	Clar. Has short scale upwards
0:12	fish is sad	Vln has petshop theme
0:16	parrot doesn't notice	Clar. Scale leads to parrot theme
0: 20	parrot jumps down	End of parrot theme (downward scale) is doubled in the clar.
0:25	Fish is still sad	Clar & bsn have slow duet
0:36	Fish explains everything, says goodbye	Clarinet has melancholy version of fish theme
0:55	Parrot is sad	Bsn plays new theme for parrot
1:02	Parrot cries out	Strings pizzicato forcefully as bsn plays an upward scale
1:03	Fish starts to fly away	Violin plays lilting line
1:11	Close-up of parrot	Bsn plays "distressed" theme again
1:19	Curtain falls	Clar, cel, play chords together
1:26	Close-up of parrot, in front of curtains	Bsn plays "distressed" theme again
1:31	Bell rings	Bell theme again in clar, bsn, piano
1:37	Credits	Credit sequence

Fin to Feather

Appendix F ~ Production Stills

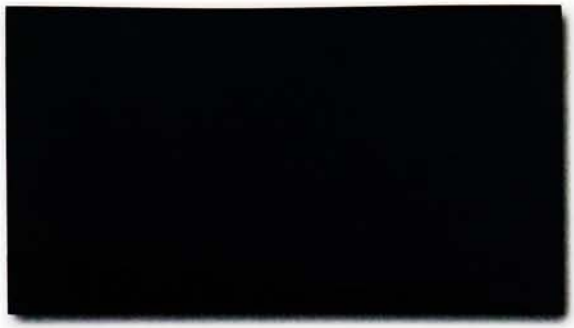
Individual Layers

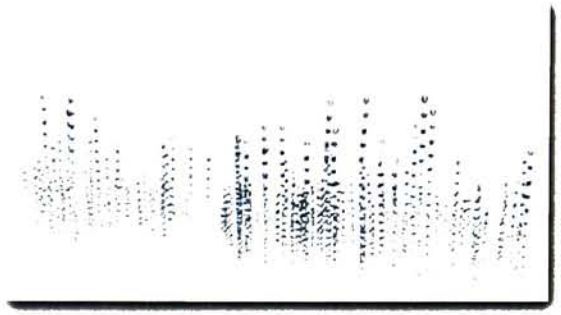
Final Composed Shot

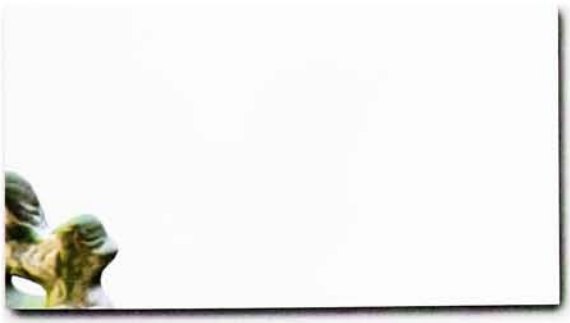
Individual Layers

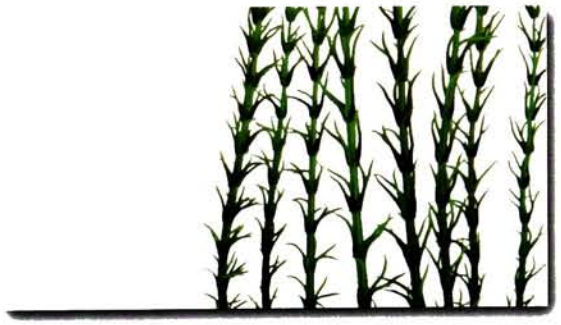
Final Composed Shot

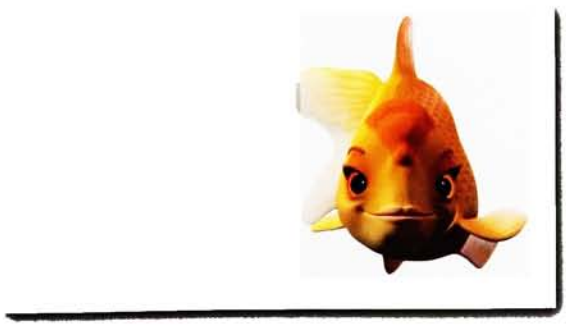
Individual Layers

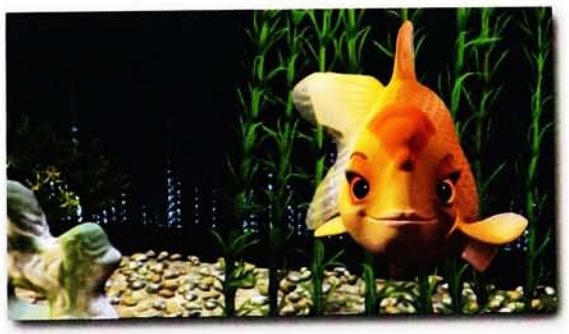






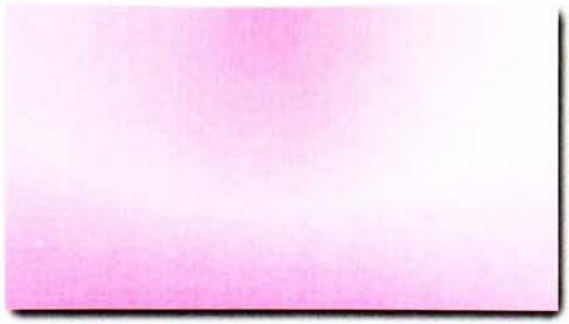


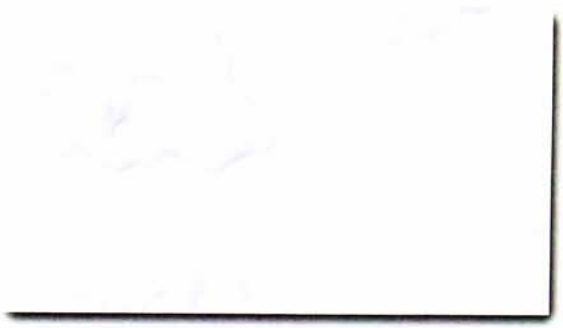




Final Composed Shot

Individual Layers





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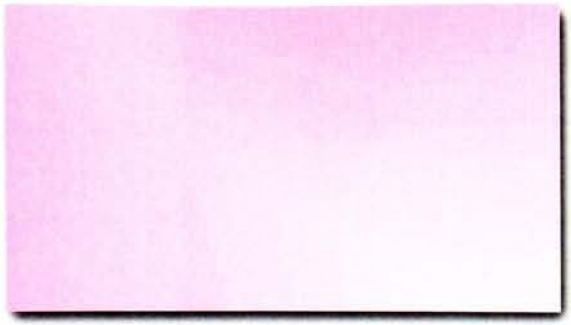

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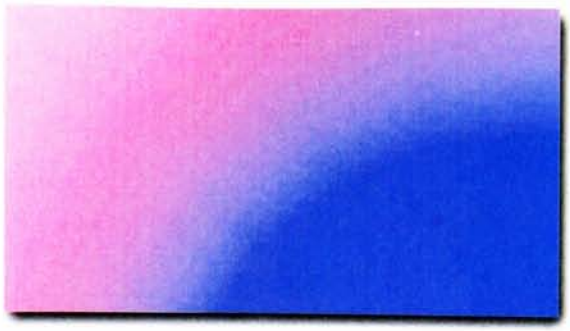

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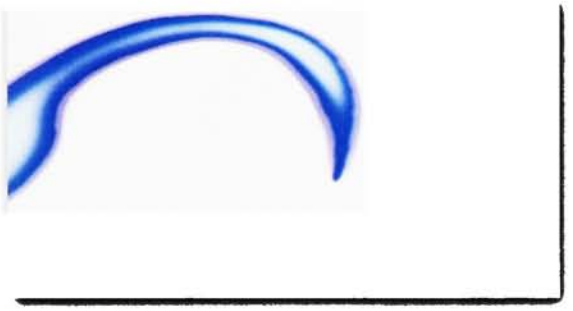

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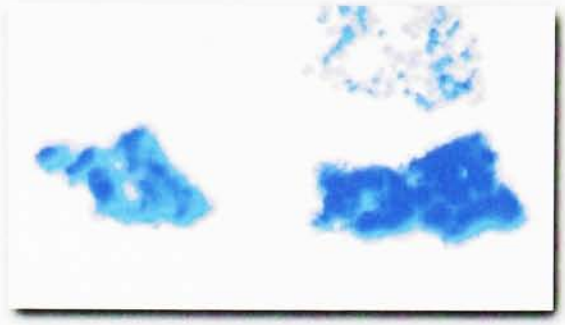

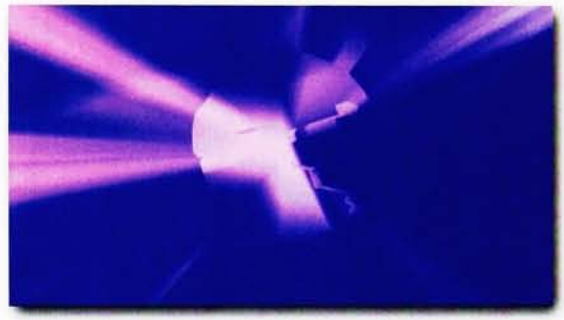

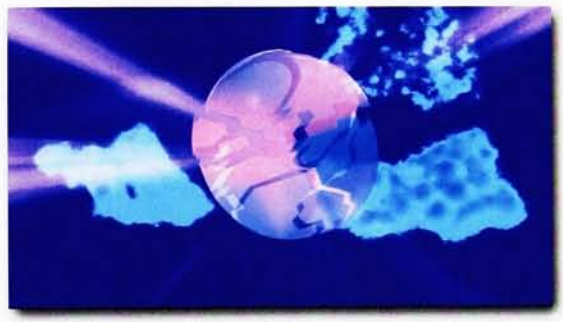

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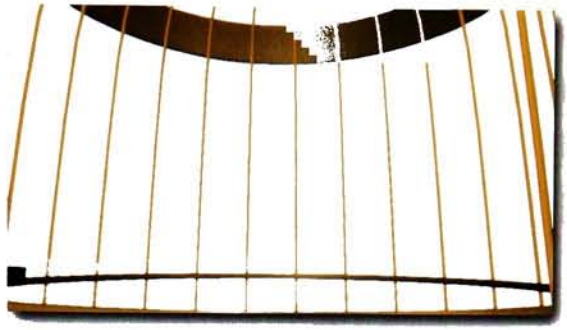

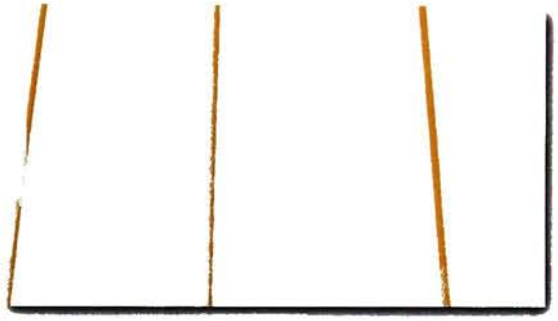

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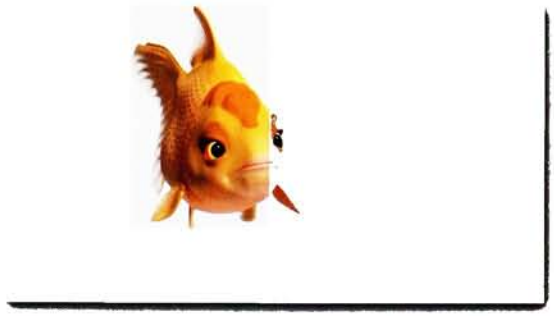

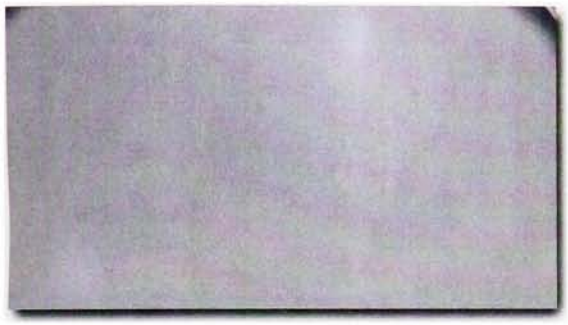

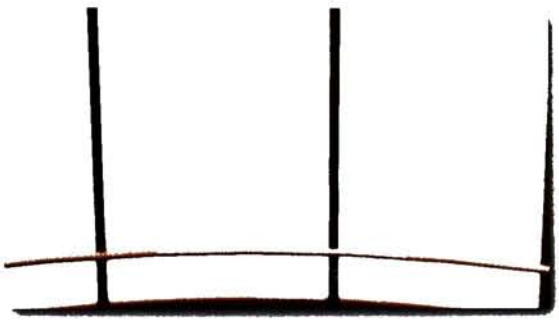

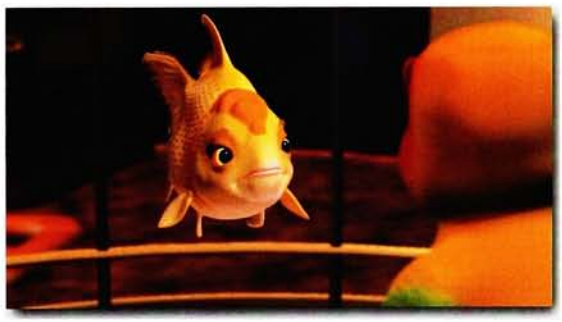

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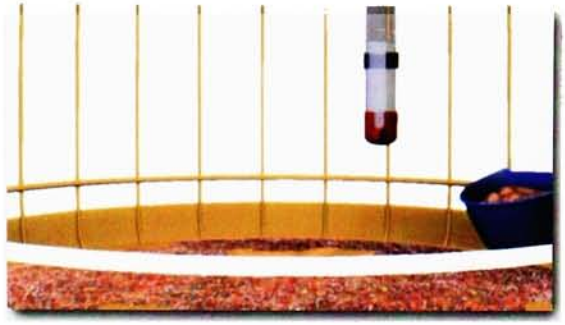

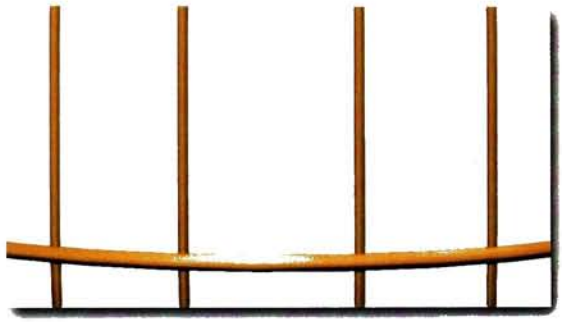

Final Composed Shot

Individual Layers

Final Composed Shot

Fin to Feather

Appendix G ~ Credits

~ Created By ~

Rebecca Leigh Rogers

~ Music ~

Composer ~ Daniel Black

Bassoon ~ Amelia Fannin

Cello ~ Carrie Bean

Clarinet ~ Celeste Lovas

Violin ~ John Vaida