

Shades and Tones

Visualising Music through Animation

Animation Project III
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2008-2010

Project Guide:

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Approval Sheet

This Animation project entitled "SHADES AND TONES" under the theme 'Visualizing Music', by Hannah Christopher (08634003) is approved in partial fulfillment of the Masters of Design Degree in Animation and Film Design.

Signature

Date

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Declaration sheet

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/ source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

Signature

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02.06.2010 Date

Acknowledgement

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I express my gratitude to my parents who introduced me to the world of music, and my sister and dear friends who helped me with the music compositions. Thanks to all my family and friends for their continual prayer support and valuable suggestions that helped me to fulfill the requirement for my project .

My greatest thanks to my Lord and my all time friend to whom I would like to dedicate this small effort of mine.

Index

1. Introduction	6
2. Research	9
Inspirations	14
Concept	19
Explorations	20
3. Animation	34
Style	35
Background	37
Character Design	38
4. Conclusion	41
5. References	42

1. Introduction

Prologue:

There's music in the sighing of a reed;
There's music in the gushing of a rill;
There's music in all things, if men had ears:
Their earth is but an echo of the spheres.
~Lord Byron

Music is the freedom that relentlessly exists. The Freedom of speech, thought, creativity and imagination. Music is bombardment of ongoing expression of feelings. Music is emotionally captivating, Music is positively distracting. Music is a form of beautiful art, passed on as a message on the public stage.

~ Sylvia Chidi

Music is an art form whose medium is sound. The common elements of music are pitch (which governs melody and harmony), rhythm (and its associated concepts tempo, meter, and articulation), dynamics, and the sonic qualities of timbre and texture.

Music has been around since the dawn of time. From the first tribal dances to the newest and strangest methods being used, the origins of rhythm can also be traced back to the dawn of time.

Music can be divided into genres and subgenres, although the dividing lines and relationships between music genres are often subtle. To many people, in many cultures music is an important part of their way of life.

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Music is alive as long as there is heart beat.

What is Music to me:

A disturbed string can make soothing music,. Passage of air thru a hole sculpts melody, The leather that vibrates, add rhythm. Even the stick that drums follow the beat. Isn't that the sounds make audible music?

Music is the language that God scripted.

A personal signature, language and expression.

The language of music created for me,

Six senses to understand, express and enjoy,

Can't I feel the music that nature sings?

Melody from deep within, never goes wrong, Paint it with expressions that reflect joy, Think of the sound and make it unfold, And see the whole world blend with harmony. It's it a magic or a dream come true?

Music need not be just heard,
It is a feeling easy for the senses.
Open my senses with true spirit,
And let the songs of nature enter my heart.
Just smile and be a part of music?

Music hides my fear and wipes my tears; Music wishes me life and calms my strife Starts with Lullaby, through Happy birthday each year; Accompanies as wedding march, to death march that I don't get to hear;

Isn't music the alpha and omega? (Original writing)

Why I chose this topic?

Music defines as rhythm, melody and harmony. But I feel it is underestimated, more so than anyone actually realizes! Music is a learning, a therapy, a signature, a language and a teaching tool. Music has been a part of me.

I also aspire to teach children. I hence wanted to combine both the interests that I have and do my project in that.

Music has always been a vital part of films. Even more than most live action movies, successful animation depends as much on music and sound effects as the visuals on the screen.

If visuals depend on music and plays a vital part, for music to be complete, visuals must play a role, isn't it? I wanted to explore it and hence decided to work on the project titled "Visualizing music". Initially it started with more focus on western classical music notation's visual symbols as elements, to make an animation shot. Later explorations also focused on using animation as a tool to teach music and the science behind music. This project is an exploration and interpretation of what music means to me and my assumptions of the music I see, based on my experience and research readings.

I say a silent prayer in faith of it being heard by Him' I praise with loud sounds in the hope of it being seen by Him.

2. Research

There is in souls a sympathy with sounds:
And as the mind is pitch'd the ear is pleased
With melting airs, or martial, brisk or grave;
Some chord in unison with what we hear
Is touch'd within us, and the heart replies.
~William Cowper

Music is a motif with recurring series of tones. Using the concepts of rhythm and melody, we can say that the alternation between high and low drums is melodic, whereas only the timing of the notes, regardless of pitch, is rhythm. Music is fundamentally the projection of rhythm into sound, whether of voice, or of a musical instrument.

Greek philosophers and ancient Indian philosophers defined music as tones ordered horizontally as melodies and vertically as harmonies. Common sayings such as "the harmony of the spheres" and "it is music to my ears" point to the notion that music is often ordered and pleasant to listen to.

Music can bring us to tears or to our feet, drive us into battle or lull us to sleep. Music is indeed remarkable in its power over all humankind. Perhaps for that very reason, no human culture on earth has ever lived without it: people making music predates agriculture and perhaps even language.

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Music can soothe the savage breast, much better if played by musicians rather than clever computers - Study at University of Sussex-led, ScienceDaily (July 10, 2008) But music is not simply a matter of formal elements arrayed in attractive designs. Music, like all art, is expressive. It is a medium through which we create and share patterns of emotion and desire. Each time soulful music is played, we get inspiration and delight. In the twinkling of an eye, music can elevate our consciousness.

Music stands too high for any understanding to reach, and an all-mastering efficacy goes forth from it, of which, however, no man is able to give an account. It is one of the foremost means to work upon men with an effect of marvel" ~Otto

Shades of Indian Classical Music:

The seven suddha swars are Sadja, Rsabha, Gandhara, Madhyama, Panchama, Dhaivata, and Nisada. More commonly known as Sa, Re, Ga, Ma, Pa, Dha, and Ni. These sounds are from nature; Sa comes from the sound of the peacock, Re comes from the skylark, Ga from the goat, Ma from the heron, Pa from the nightingale, Dha from the horse, and Ni from the elephant. But nature is not limited to animal sounds. It is also in the form of colours too. These notes also represent colours. Sa is the lotus leaf, Re is red, Ga is golden, Ma in kundan powder, Pa is black, Dha is yellow, and Ni is all of them combined.

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The use of 12 tone intervals in the music of many human cultures, is rooted in the physics of how our vocal anatomy produces speech -Duke University Center for Cognitive Neuroscience.

Music is with expressive culture, though the object is not so much to discover thoughts as it is to discover feelings. We dance and sing, enact and tell stories, create images and statues, to make our feelings known to one another, and thereby to ourselves

~E. M. Forster

Culture and Music:

The mechanisms for getting music to the brain, and the experience of being moved by it, are completely different, however the latter involves both biology and culture. Music appreciation is definitely a culture-related phenomenon, but there are universals that

characterize it across the globe. All music are structured around the octave, all cultures sing, and all have songs they associate with certain meanings and emotions. All children love to be sung to. Perhaps, that's why people refer to music as 'the universal language". Culture and experience also play a major role in how we perceive music. Culture elaborates expressive forms by developing differentiated control over patterns in the expressive medium. In culture (preliterate) music evolves through control over rhythm. culture (literacy) gains control over melodic structure while culture (Renaissance and after) adds harmonic elaboration to rhythm and melody.

Musical chords sound good or bad, mostly depending on whether the notes being played produce frequencies that are harmonically related or not.
- University of Minnesota team, ScienceDaily (May 21, 2010)

How the brain listens to music:

The inner ear contains a spiral sheet that when plucked like a guitar string, sounds music. This plucking actually triggers the firing of brain cells that aid in hearning to generate conscious experience of music. Sound transmitted to the inner ear is broken down according to the spectrum of frequencies that make up sounds. This orderly arrangement of low to higher frequencies is mapped onto the brain Different patterns of firing excite other ensembles of cells and these associate the sound of music with feelings, thoughts and past experience. This is a short ditty to outline the complex symphony of activity that governs our perception of everything.

Performing music makes neural connections between various parts of the brain. Auditory and motor activities take place through playing an instrument. Rhythm and melody instruments require motor coordination. Reading music involves visual activity. Singing songs and recalling or reading lyrics activate language processing areas of the brain. Dancing or moving to the rhythm of music stimulates the brain's motor areas.

Music is the shorthand of emotion.

~Leo Tolstoy

Music, when soft voices die, Vibrates in the memory.

~Percy Bysshe Shelley

Music is a language which the brain alone translate, which the soul alone can understand.

The perception of the musical vibrations by the deaf is likely every bit as real as the equivalent sounds, since they are processed in the same part of the brain,"

- Dr. Dean Shibata, assistant professor, University of Washington

Mood board



Music is the art which is most nigh to tears and memory. ~Oscar Wilde

Inspirations

"High Note",
Animation by Chuck Jones







"Pipes Dreams"
By Animusic



"Resonant Chamber"
By Animusic



"One man band"By Pixar



"Vision Revealed"
Animation By Yasmin Mistry



If we can feel that It is not our voice nor our fingers stringing wires, but some reality deep inside our heart Which is expressing itself, then we will know that it is the Real music.

Music Theory Guitar Wheel

By Music Master Publishing | 55 Springstowne Center Suite 180 | Vallejo, CA 94591 USA



Don't play what's there, play what's not there.

~Miles Davis

"Favourite Song of All"

Words & Music by Dan Dean

God loves to hear the raindrops,
As they splash to the ground in a magic melody
He smiles in sweet approval,
As the waves crash to the rocks in harmony
Creation joins in unity, To sing to Him majestic symphonies;
But, it's not just melodies and harmonies,
That captures His attention
nor those clever lines and phrases,
That causes Him to stop and listen
But the song that I can sing, Surrendering self to Him,
That's his favourite song of all
There's nothing so pleasing to His ear,
Cause I'm His favourite song of all

"Deaf Girl Learns to play Violin"

Commercial video created by Grey Thailand for P&G's Pantene Chrysalis brand.







Music doesn't lie. If there is something to be changed in this world, then it can only happen through music ~limi Hendrix.

Song "Kaatrin Mozhi"

Music: Vidyasagar and Lyrics: Vairamuthu Film "Mozhi" by Director Radha Mohan

The language of wind – Sound or music?

Language of flowers – colour or smell?

Language of ocean – lather or waves

Language of love – lips or eyes?

The language of sky is revealed in a rain drop

Rainbows language is shown as colours

When truth is silent, tears speak

When the girl is silent, language she speaks is shyness

If the language of nature is understood

Man needs no other language

if the language of heart is understood

Man needs no other language





Music expresses that which cannot be put into words and that which cannot remain silent. ~Victor Hugo

Mind map

O RHYTHYM FROM NATURE	C EMOTIONS	OCTAVE (Scale)	A FEEL IT	W MELODY FROM NATURE	E SEE IT AS COLOURS
Horse Gallop	Quiet	Sa/do	Smile	Peacock	Lotus orange
Twinkling star	Pain	Re/re	Heart Beat	Skylark	Red
Growing Ripples	Energy	Ga/me	Nod	Goat	Golden
Dragging snake	Melancholy	Ma/fa	Clap	Heron	Kundan powder
Slow snail	Growth	Pa/so	Тар	Nightingale	Black
Fast cheetah	Satisfaction	Da /la	Snap	Horse	Yellow
Soaring eagle	Ecstasy	Ni/ti	Shake	Elephant	Combination of all

Cant you hear your echo? If you got your melody right, Nature fills in for the harmony.

Concepts:

The research and my explorations helped me learn about animation as well as music and much more about me.

TEACHING TOOL ←

1. Interactive tool, where animated gif and a music composition in wav format is created for every artwork designed using the tool. Can be used to understand basics of geometry or music theory.

EXPRESSION

Exploring the rhythm pattern and expression of music by creating character and have them interacting on the five lines of music.

EXPLORATION TOOL

3. To allow freedom of exploration to understand and figure out the theory of music and harmony of frequencies.

ABSTRACT COMPARISON ←

4. Comparison of evolution of musical concepts to the civilization of mankind.

SHORT STORY ←

5. Short story and exploration of 'music without sound'.

Music is in me, deep deep within; When I bring it out I can see the little laughter's, in all the happy ever after.

The pleasure we obtain from music comes from counting, but counting unconsciously. Music is nothing but unconscious arithmetic.

~Gottfried Wilhelm Leibniz

Music in Classrooms:

The best way to engage children from a variety of ages and developmental needs is to use music. When music is brought into the classroom, children pay attention, follow directions, and remember lessons.

The attempt was to explore animation as a tool to help learn music theory through visual elements and thus learning mathematical concepts of Geometry, proportion and time using patterns and colours.

This allows kids to create music wav file and an animated gif file, for the song that they composed on their own.

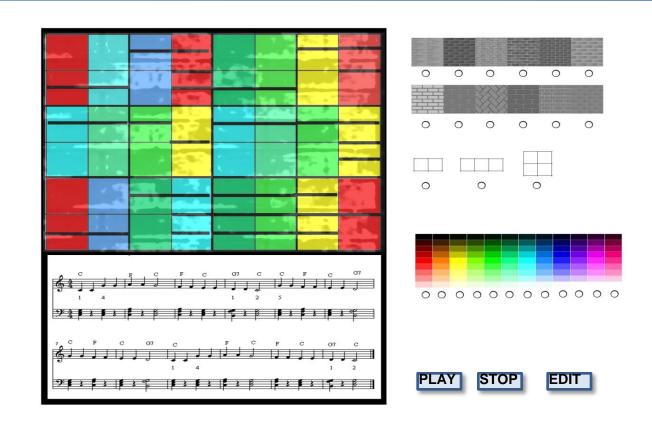
Using just the mouse, it is fun and easy way to give your birth to a song, also giving it a form. Select texture and pattern from the boxes provided, fill colour gradients and click 'play' to see your art work sound your geometrical art in rhythmic melodies.

Edit your artwork to make your song sound different. Find the syllable options allowed in the artwork created, by counting the polygon shapes and write a song for this grammar. This is an educative, entertainment and fun based program for children to spend their leisure time doing something worthwhile.

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Musical activities has the potential to scaffold and enhance all other learning and development, from timing and language to social skills.

ScienceDaily (July 21, 2009)



• Music is a birthright of all children. To be able to listen and appreciate, sing or participate in music-making are as essential to development as mathematical or linguistic learning," ~Molnar-Szakacs

Story on Lines:

Music theory is the scientific representation of our emotional expression or what we term as 'music'. Hence by using the structure that has been derived and well defined over years, we can easily teach or have kids enjoy discovering concepts of science.

This is an attempt to make stories that happen on the five lines of music. The musical signs and symbols are used as props used by the chief characters. These are simple fantasy or reality stories which can help in establishing simple statements of music, which can be starters for teaching concepts of science.

Story 1: THE PRINCE AND THE PRINCESS:

A story where the prince rides on a horse to meet the princess, waiting for him at the balcony. This can teach them the rhythm pattern called "Gallop" and lead to discussions on patterns and time signature in music.

Story 2: THE FATHER AND THE DAUGHTER

A story of how a king faces a war and tries to save his daughter and his land. This has an expression of how he is not able to reach his daughter but manages to save her but falls to death. This is to talk about highest note of male and female vocal range and can be a starter to lessons on frequency.

Figure Out Music:

As a student, when I learnt music, I just memorized the basics. My understanding came much later when I started to play musical pieces. So this exploration is to let the beginners explore and figure out which combinations work and which don't and thus enable better understanding at root level.

This was an effort to simplify or rather make musical notations which had to be memorized, easier to learn. Also the age old phenakiscope, the predecessor of animation tools was the style I was wanting to use so that the kids can actually experience animated motion and learn music even in the streets.

Scales

BG:

Old age -C scale Park - D scale School - E scale Hospital - F scale Home - G scale Zoo - A scale Circus - B scale

FG:

Sunshine, Rains Flower blooms Winds, Snow fall

Octave:

Glasses – 1st octave Shoes – 2nd octave Cap – 3rd octave Mask – 4th octave Prop – 5th octave

Accidentals

Natural - Plain texture Flat - Dotted texture Sharp - Checked texture

Tone and Semitone

Hair – centre/side line taken; And combed on 2 sides

Variations:

Male – Major Chords Female – Minor Chords

Colour Organ

Violet – Tonic

Indigo – Supertonic

Blue – Mediant

Green – Subdominant

Yellow – Dominant

Orange – SubMediant

Red - Leading Note

If a man does not keep pace with his companions, perhaps it is because he hears a different drummer.

Let him step to the music which he hears, however measured or far away.

~Henry David Thoreau

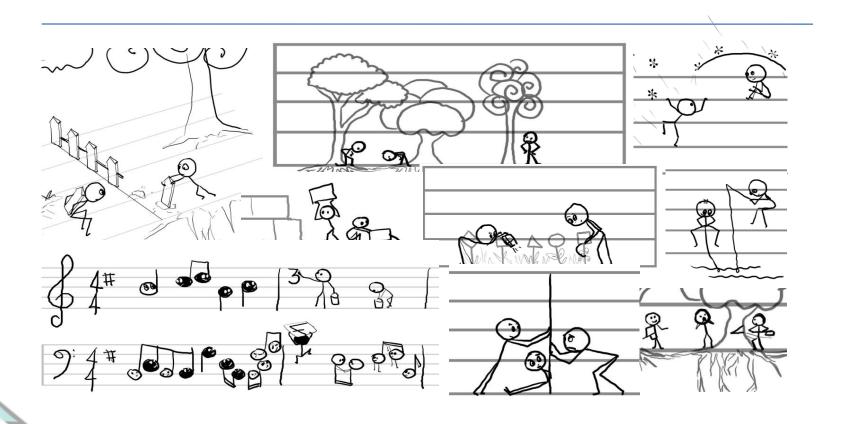
Music notation – Origin:

Music has been around since the dawn of time, but written or verbal music notation is a bit more recent. Tribal dances from even the earliest of civilizations evolved to use specific patterns and lengths of steps. These early rhythms can be visualized in the descriptive words "stomp", "step", and "hop." "Stomps," were the longest length of time, roughly being equivalent to our modern whole period (four beats of the drum). "Steps," are likewise related to our modern half period(two beats of the drum) and the "hop," would be a quarter Using combinations of these very basic rhythms and this verbal form of music notation ritual dances were created and passed down

from generation to generation. As these societies evolved a greater breadth of rhythmic diversity evolved as well. The simple "stomp-step-hop," subdivisions of the music were not enough to adequately reflect the more complex rhythm patterns that musicians began to use. As music notation transitioned into written form the various rhythms also took on new names and significance. The evolution of music notation and rhythm continues even today as do the many ways that we can notate this rhythmic information.

The tale of Music:

Abstractions are made relating Civilization of mankind to Evolution of music and musical terms and made into a story.



O music of love, from you I learn the secret of closeness.

O music of will, from you I learn the secret of future creation.

O music of silence, from you I learn the secret of universal oneness.

No one can ever sings alone, for stillness of the near accompanies; Surround sings calm,
To make you sound your music; If they care to join and raise their voice, what you sing would just be noise:
So if you think you cannot sing, may be that stillness is your part
Open your senses with spirits true,
Let the songs of nature enter your heart
(Original Lyrics)

Animation Shot on:

"Smile to start the music of heart;"
Hear the music, not the instrument;"



Curve your lips in smile Feel your heart then rhyme Nod your head along, Clap to this sweet song Tap your little feet Fingers snap to beat Shake shake and slowly dance No doubt you'll smile again Smile and start to climb down Shake shake and slowly dance Fingers snap to beat Tap your little feet Clap to this sweet song Nod your head along Feel your heart then rhyme Back to the smiling start Up down or jump across, These 8 notes make simple songs Do re me fa so la ti do (Original Lyrics)

Make music an expression, you can see it in everything

Story: It all starts with a big applause as the Master of ceremony announces the performance of Little Anna. Anna stares at his lips as he continues to talk. Her eyes further continue to gaze through the audience as they freeze on the sparkling ones of her dad. As the MC's speech draws to a close, her fathers eyes blends into hers and he smiles.

She immediately puts her mouth to the mouth piece and her fingers on the keys of her saxophone. Her eyes close as she begins to play her song, directed by her heart. She feels her music in colors and emotions. She opens her eyes to see her music being accompanied by vocalists.

Her gaze syncs with their lips and she observes the patterns of their mouth. Suddenly their lip sync

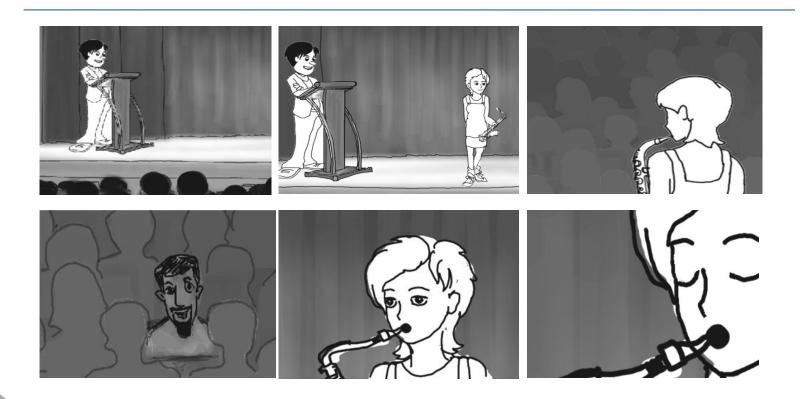
reminds her of her scorning neighbour and her friend, making faces at her during her initial days of learning the instrument. She remembers her father teaching her the notes of music as "Smile, feel the heart beat, nod your head, clap the hands, tap the feet, snap the fingers, shake and dance and smile again.

She jolts out of her flash back. She looks at her father again who gives her a broad smile. She knows it time for her to play her saxophone again.

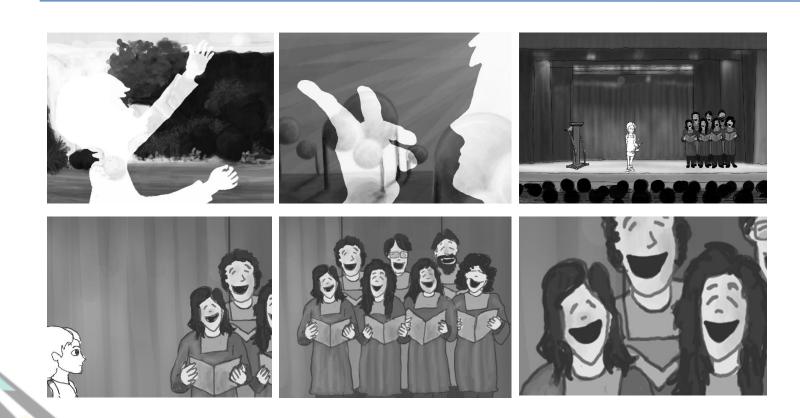
The camera zooms out to show the stage to reveal the back drop that reads *International Year of Music Celebrations*. *Inviting you to the Performance of Deaf Celebrity LITTLE ANNA*.

Smile to start a tune is all that you will need, Music's contained in sound is a worldly read.

Story Board



Music is the movement of sound to reach the soul for the education of its virtue. ~Plato



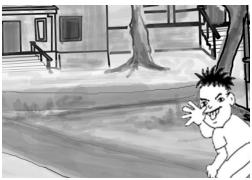
Beautiful music is the art of the prophets that can calm the agitations of the soul; it is one of the most magnificent and delightful presents God has given us.

~Martin Luther









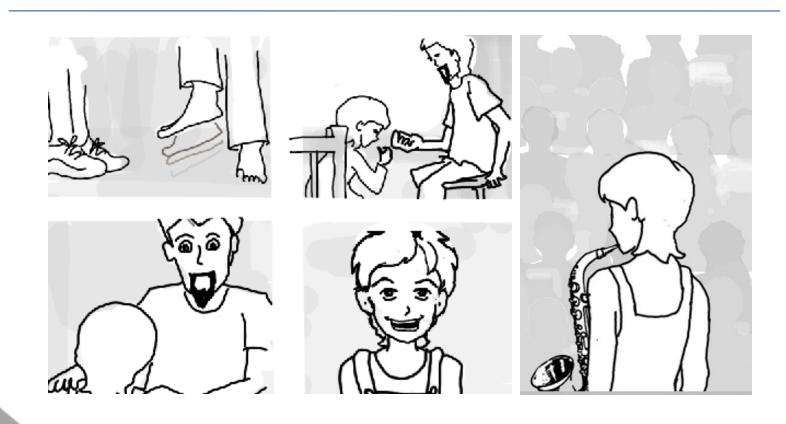




Music is singularly capable of exploring how the future arises out of the past



If you can hear silence and can see darkness, so can you see music and hear the light.



To hear my music might not be possible for your deaf ear but to make your music heard isn't impossible.

Lyrics of the Music Track

(Original Lyrics)

Stanza 1.

The voiceless wind whistles past
As rustling leaves echo in duet
Drizzle preludes the downpour's melody
As Lightning accompany thunder's vamp
Colour and fragrance duet a quiet blossom
Ripples rhythms growth and stars twinkle to beat
It takes all creation to join in unity
For a majestic symphony.
Rainbow smiles in colours many, that's its silent melody
Life and warmth of sun's energy,
that's its musical symphony
Music 's much bigger and for soul to feel
Music is simple; it starts with smile indeed

Stanza 2.

A heart rhythm the beats of life,
Sculpting melodies to reveal me
Dark walls of eyes that painteth melody
and shoulders gently sway in harmony
Music's a language scripted by our maker
In all of its richness, no wonder heavens rejoice
It takes all senses six to join in unity, For a melodic symphony
Sound when ordered play harmony, in a rhythmic melody
Stillness hush then accompany,
to make the musical symphony
Music's much bigger and for soul to feel
Music is simple; it starts with smile indeed

Bridge: purest emotions and ugly expressions prayer to begin, lullaby to end music is much bigger and its for souls to sing Music 's a treasure cause It's the life within

If sounds play melody, silence is harmony So If you sound silence nature does symphony

4. Animation

STYLE: We are indeed our bodies, that motivation and emotion are intimately implicated in bodily existence. Yet our bodies, and their inner states, are as external to the brain as the outer world of earth, air, water, and fire. Just as we must learn to sense and act in the outer world, so we must learn to read the messages of our bodies and to couple those meanings with effective action.

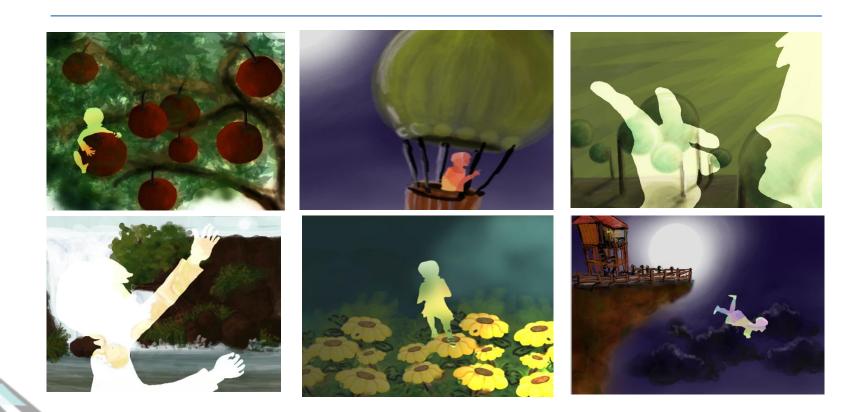
This was the concept behind having a transparent silhouette with the inner emotions shown in shades and external world as reality. Music bridges the world of reality and its interpretations in emotion, connecting it through the transparent character.

BG: The Backgrounds are simple monochrome shade drawings and the characters are in Black and white. Colours are avoided so that the impact of the colourful animation as opposed to this single colour style will give better understanding of music that enriches the reality.

CHARACTER DESIGN: The short film has two main characters, The father and Anna the little girl. There are other characters that were designed as a part of the project under different exploratory styles, each to suit its specific need. These includes the 7 characters each denoting each note, the 4 characters for the story on lines concept and 6 others for tales of music.

Bee buzzes around the quiet blossom that sings fragrance; Humming bird sings around the flower that sings colour.

Style Exploration:



Do you know the melody the nature sings And when you smiled at it you become a part of it











Music and silence combine strongly because music is done with silence and silence is full of music.

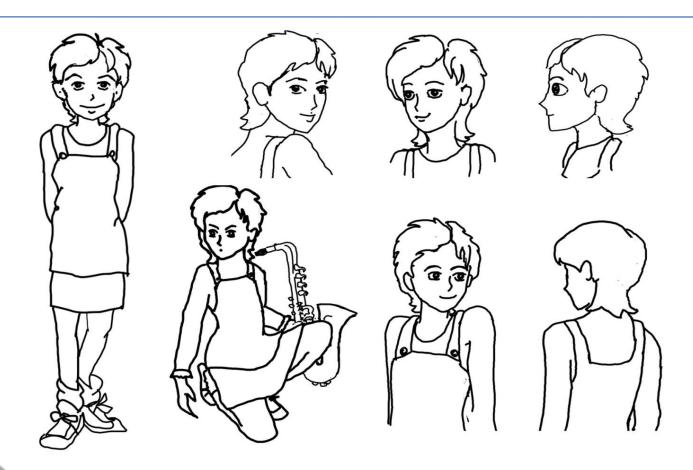
~Marcel Marceau

BG:



Its invisible chords that bind us together – music and us; We got the power to sing what we feel, so get connected and real

Character Design:



Music is the melody whose text is the world. ~Arthur Schopenhauer



A membrane hit, a dancing string or in a hole, Isn't it air that gets sculpted?

Air owns an invisible cloak, I know; Does music too?



Why search for music, all around you When its actually within you

5. Conclusion

This project changed my definition of music. It changed my perception of the world and the way I looked at myself. Music was a part of me, but the project made me realize music made me complete. It made me realize the power of the maker and his love to communicate with us.

It was a great learning experience from the very start. The project as a whole, gave me an opportunity to see all my dreams put on paper and helped me draw a line between my creativity and reality. I was able to explore and have a first hand learning experience of using music and animation in making meaningful statements.

It helped me bridge my interest in arts and music to my ambition of teaching kids. It was a great learning experience that revealed my flaws and opened doors to new possibilities. I hope to carry further these explorations and implement it as an useful curriculum that can be used as subjects in regular education.

If music heard is this great, how would music be to taste and smell? If music heard is this great, how would heaven be, where music is seen;

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MOVIES

North Texas.

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Directed by Robert Iscove

Mozhi, 2007 Produced by Prakash Raj Directed by Radha Mohan

*Mr. Holland's Opus, 1995*Directed by Stephen Herek

Sound of Music,1965
Directed by Robert Wise.

Music has no beginning neither an end.