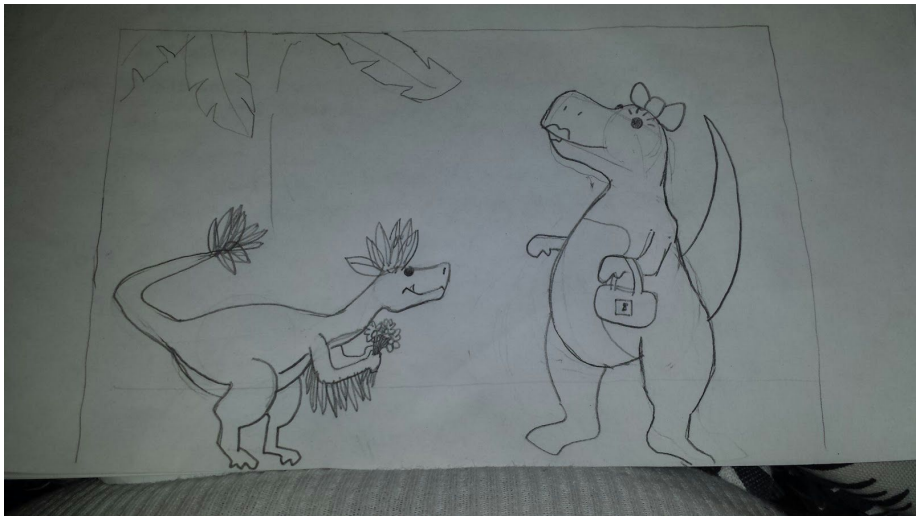
Title Page: Contains: –
Picture (screenshot / box art) (Meghan and Belol)
Title & optionally tag line (Everyone)
Name of the developer(s) – Date and revision number

Paramourus Rex

“Roses are red, violets are blue...our species survival depends upon you!”

Developed by: Will Hollingsworth, Bina Kakusa, Belol Nessar, and Meghan Tinkler



1 page • Describes the entire game in three sentences 1. Basic setting 2. What makes the game interesting 3. A sentence to convinces to publisher to approve or fund the game • Typically focus on novelty or complete lack of novelty • Often sentences copy/pasted from other sections

Executive Summary (Everyone on Saturday)

- In post-apocalyptic dinosaur era, Phillip Osoraptor must win the heart of childhood crush Diana Tyrana from other suitors by crafting her flowers that remind her of a time before a meteor struck the earth.
- After receiving “hints” from Diana, the player must collect flowers from one of five levels, after which they must attempt to craft the flowers together into one Diana would like, or else risk losing her to another suitor; we expect these elements will appeal to college students and casual gamers.
- In levels, players have a limited number of vases with which to hold flowers, and these are used up when collecting flowers or when interacting with obstacles and enemies.

About one page per related game • Superset of those in overview • Some related games are competitor – Describe why your game is better

1. Title: Publisher or Developer: Genre/Platform: Year:

Related Game 1 (Will)

App icon courtesy tapgamers.com

DoodleGod (JoyBits, 2010, Android/iOS/Web) places the player in the role of God, tasking them with building the world from the ground up, starting with the four basic elements: water, earth, fire, and air. These basic items combine to form new elements. 249 combinations are possible, from 26 different groups. The player is given an unlimited number of the elements they create, so creating new elements is always simply a matter of picking two existing ones that can combine. The player can also choose to view a "reaction history" that displays the combinations they have discovered so far, and has the option to disable combining the same two items a second time.

Main interface of the game. Courtesy the FriskyMongoose review of the iOS version.

The game offers several types of hints to the player. In one type, the player is presented with an element that they could make from the resources they currently have. The player is tasked with coming up the correct combination of elements to produce that result. Another type of hint detects an element the player has not created, and shows all the elements from the groups needed to created that element. Finally, the game also offers "hints" that simply create a new item for the player. DoodleGod is a freemium game; these hints cost either time or money, and the more useful hints are fewer in number.

Our game is different in a few key respects. Firstly, we intend to have the player physically collect any items which they combine. This also implies that the player will not have unlimited resources, although our intention is to provide a recipe book of some sort, so it is not anticipated that this will be a problem. Our items, flowers, will be classified according to different tiers, rather than groups. We also aim to have a heavier focus on the story and characters.

This is a primary inspiration for the sort of "crafting/combing" we use for our crafting table.

About one page per related game • Superset of those in overview • Some related games are competitor – Describe why your game is better

1. Title: Hatoful Boyfriend Publisher or Developer: Genre/Platform: Year:

Hatoful Boyfriend (Meghan)

Hatoful Boyfriend: A School of Hope and White Wings (PigeoNation Inc., 2011, Windows/OS X/Linux/PlayStation 4/PlayStation Vita) is an interactive Japanese visual novel released as a dating simulator in 2011. The player takes on the role of a teenage girl who is attending St. PigeoNation's elite school for birds, in which she is the only human. Over the course of the game you interact with several different characters through a series of dialogues in which you can choose your own dialogue response to each character in order to affect the relationship that you have with them.

Hatoful Boyfriend is set in an alternate version of Earth where birds have replaced humans as the main civilization of the planet and have developed anthropomorphic abilities. The setting is a post-apocalyptic future in which the H1N1 flu has wiped out most of humanity, and when a counter-virus was released in an attempt to save humanity, it actually infected all birds and gave them human-like intelligence. Our game will be similar in that all of the characters will be anthropomorphic dinosaurs, set in the "post-apocalypse" world where a meteor has struck earth.

The goal of Hatoful Boyfriend is to, through a series of dialogue options, convince the other characters in the game to fall in love with your main character over the course of the game's plot. Our game will be similar to this game mechanic in that we plan to have our main character interacting with another anthropomorphic NPC (a female tyrannosaurus rex) through dialogue cutscenes, such as the one to the right.

Through these interactions, the player is expected to learn the type of flowers or objects that the love-interest NPC likes best in order to eventually craft them with items collected in-game. After crafting these items, the player will present the NPC with these items. If they've corrrectly discovered the items that fit the personality she presents through dialogue, they will gain points with her, similar to the set up of the dating sim. After the player has explored all of the possible worlds and finished collecting the items within those worlds, if the player has crafted enough items that the NPC enjoys, the NPC declares her love for him and the game is won.

About one page per related game • Superset of those in overview • Some related games are compeitor – Describe why your game is better

1. Title: Publisher or Developer: Genre/Platform: Year:

Related Game 3 (Belol)

Game is: **Legend of Zelda: A Link to the Past** (Nintendo, SNES, 1991)

There are a few similarities between this *Legend of Zelda* game and the Dinosaur game. The top-down aesthetic of our game will be similar. Notice, especially, the illusion of heights onscreen. The stairs and the vertical boundary divide the stage into two levels of height. Also, the HUD is similar in both games. The LIFE meter and RUPEE counter correspond to the player's current health (measured in vases) and current inventory (measured in flowers), respectively.

In *Zelda*, the main character, Link, runs around and slashes baddies, picks up items, and maneuvers past obstacles. This style of game is what the collection part of *Dinosaurs* will be like. There might not be any combat; we'll add that if we have time, but otherwise they match up pretty well.

Lastly, I picked this image because the color scheme is drab, which I think is the right palette for this game (given the post-apocalyptic nature of the setting). I would expect that, for example, the *Dinosaurs* level, Wildfire Plains, would look a lot like this. Except there's less grass, fewer trees, and more fire.

About one page per related game • Superset of those in overview • Some related games are competitor – Describe why your game is better

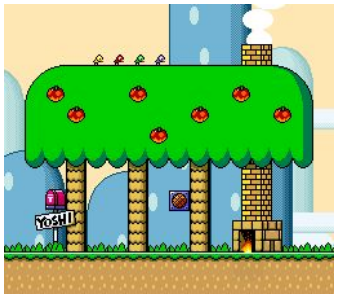
1. Title: Publisher or Developer: Genre/Platform: Year:

Super Mario World (Bina)

Super Mario World (Nintendo, 1990, platforming, SNES/Game Boy Advance/Wii/Wii U) is the 4th installment of the Super Mario Franchise that allows players to take on the role of Mario and Luigi in order to save Dinosaur Land from the evil King Bowser. Mario and Luigi gain a new companion, Yoshi, who grants players new abilities and moves. Players navigate the game through two views: the well-known Mario-style platformer view where most of the game play takes place, and an over-the-top world view where the player selects a level to play. Players travel through the world to rescue entrapped dinosaurs and of course, rescue the princess. In addition to Bowser, there are 7 other bosses at the end of each of the 7 worlds.

In the game, players arrive at Yoshi's House on Yoshi's Island. Unlike, the other location on the maps, Yoshi's house is not a platform level. Instead, it is used as a "homebase" where players are notified of the evil that has befallen Dinosaur Land and clues to who is responsible. From there they use the world view to select a level and certain levels only become available after completing certain challenges. In each level, items and obstacles are populated in a fixed manner. The player must complete the level before the time runs out.

We plan to implement a form of the map-view in our game. The map-view will show all available levels which a player can travel to in order to collect items. In our implementation, players make decisions on selecting a level based on a risk/benefit decision. Each time the world map is open, players will be notified of the number and type of flowers that can be collected in the level. The larger this number, the greater the difficulty of the level, in that there is a greater possibility that the player might lose items already collected. Our levels will not be platform style, but instead be a top-down view. We will also have a "homebase" where our player interacts with the female dinosaur. In the "homebase" our player will be notified of what to collect in a dynamic manner with options to select responses when communicating with the female dragon. These options will allow the player to learn more about the female dragon, and hopefully show her how much he care!



Marketing model of who will play/buy game • Guides on design decision • Job description of playtesters • Create player profiles: example: “John Brooke, 27, accountant. Single. Plays games alone about once a week, and with male friends in the weekend on a console on a HDTV. Focusses on competitive action games like “Gears of War”. Drives an Audi A4 and drinks imported beer.” Answer following questions: – When and where does the person game? – Who buys the game for this person? – What platform? – How much time per session, and how frequent? – Who does he/she play with? – What does the player like about games? – What non-game brands appeal? – How much disposable income? – What type of content would appeal? – What competes with gaming time?

Player Composition (Everyone)

Player Composition 1 (Will):

John Doe, 17, high school student. In a relationship. Plays games with his girlfriend after dates, and as a way to kill time. Doesn’t have a job, so any game he plays is free or must be cheap enough to be bought with a $10/week allowance. Mostly enjoys short, casual games with puzzle elements that can be played on a smartphone or tablet. He and his girlfriend both secretly still enjoy watching *The Land Before Time*.

Player Composition 2 (Meghan):

Jeremy Smith, 19, college freshman. Mostly plays games on his laptop in GER classes that aren’t in his major. Mostly enjoys flash games that he sees his friends playing online to fill time, like Dolphin Olympics or Pokemon Tower Defense. He’s single and a little awkward in a group setting but blossoms when you talk to him one on one. He went to go see “Jurassic World” with his parents and older brother, but his ideal date would have been to see it with that special someone.

Player Composition 3 (Belol):

Joan Flanders, 26, takes the Metro to work every day. She plays games on her phone while she waits to get into the city, and she likes a game that she can start and finish in one sitting. Sometimes she thinks about her work proposals when she gets off the train, so she prefers games that stimulate her creativity. She thinks it’s good for her to wake up her reflexes and brain by playing some nifty games before work.

Player Composition 4 (Bina):

Sophie Anderson, 32, is a primary school teach. She is married with two pre-teen kids and typically ends up playing games that her kids download to her phone and tablet. She tried to restrict them to games that stimulate them intellectually. Therefore, many of the games also attend to the adult demographic and stimulate her intellect as well. Similar to how many adults also enjoy children’s disney movies because they contain humor and other elements that only they catch. Loves to watch romantic comedies.

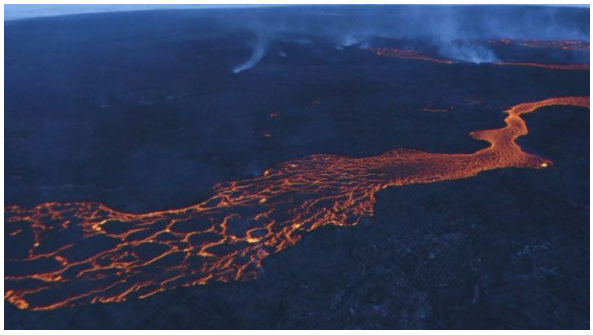
Setting and narrative contribute to mental model • Describes background – Can be history of entire civilization – Or just condition around main character • Record information to keep everything consistent between team members • Amount of detail depends on game

World (Meghan)

It's the Cretaceous era, and dinosaurs are ruling and roaming the land. Everything is going great for the little valley that our main civilization live in. The community is fairly well balanced, and everyone mostly sticks to themselves -- the herbivores hang out with the herbivores, the carnivores chill with the carnivores, and casualties between the two remain at a civil and survival-only basis. There is occasional mixing between the two groups, despite their dietary differences for shared interest like socializing in the hot springs by the valleys more mountainous areas and sharing the lakes and playing in the open fields scattered throughout the valley. Our player character (velociraptor) and main female NPC (tyrannosaurus rex) were of different social groups, but they had seen each other across the watering hole from time to time, but never really had a reason to come together. Otherwise, life is peaceful and good.

Well, until a giant meteor strikes earth, at least.

In the wake of the incident, a lot of the dinosaurs in the valley didn't survive. The once lush and beautiful valley has since turned dry and arid, devoid of most of the flowering wildlife that it was once filled with. Natural disasters that were triggered after the meteor impacted with the planet have caused the once peaceful lakes and watering holes into overflowing rivers and fractured canyons. Lava now floods sections of the canyon, causing the valley to be difficult to traverse and dividing it. The land as well as the people have become suddenly divided.



Unfortunately, in the midst of the tragedy, much of the female population of dinosaurs was also lost. As a result, many of the surviving male dinosaurs have begun to fight for the affections of the main female NPC, hoping to woo her in order to continue the survival of their own species. The player is now forced to take the role of a dinosaur that had a crush on the female NPC long before the meteor ever struck, who is trying to show her that he has loved her long before the entire incident by finding flowers in the now-barren valley to give her and win her heart.

Describe each character's background and motivation • Both PC and NPC • List aspects such as: – Motivation – Physical description – Likes & dislikes – Family – Friends & enemies – Vital Statistics – Education / Occupation – Transportation – Weapons / tools – Clothing

Characters (Meghan)

Protagonist Phillip Osoraptor:

Phil is a velociraptor in the Cretaceous period. He is somewhat smaller than the average velociraptor, and has bright feathers lining his head, tail, and arms.

The protagonist is several years younger than Diana Tyrana, the game's main love interest. He lived in the valley as a child with Diana, where they were childhood friends, but his herd migrated away at a young age. He has only recently returned to the valley with the rest of his herd. He is also a single child, and has always been a bit sheltered by his parents worklife. His father, a VelociReporter, was a freelance journalist constantly traveling to catch the latest scoop. As a result, he had difficulty forming connections in all of his new homes, and his childhood friendship with Diana remains one of his only.

In the valley in which the game is set, Phil has few friends. This is in part due to the fact that there are very few other dinosaurs in the new valley of his own species, his constant travelling, and his own shyness. Much of his shyness derives from the fact that he is rather small in size for his species, being the "runt" of his herd back home which he's rather insecure about.

When Phil first moves into the valley, he finds himself almost immediately attracted to his old friend Diana Tyrana, who has a boyfriend at the time. While they would never outright hang out and had different friend groups, they still saw each other from afar, and would sometimes have small conversations in the watering hole where they would talk about everyday things like the weather or the results of the most recent round of Raptor Races or Brontosaurus Ball.

Phil found himself helplessly infatuated with Diana even from these brief interactions. He convinced himself that he was unable to say anything because she was taken, but even in the time periods where she wasn't dating any other T-Rex he still couldn't bring himself to make a move and confess his feelings to her out of a fear of rejection.

After the meteor strike, Phil was relieved to find that his immediate family survived the event and the natural disasters that followed thereafter. For a small time, all of the herds were divided into the individual species in order to regroup after the disaster. When the valley came back together, his relief turned to horror when he found that within Diana's pack, many of the males were suddenly enthusiastically pursuing her because she was one of the last of her species. He began to realize that if he was ever going to have a chance with her, it was now or never.

At first, when they begin to interact, there's a degree of familiarity because they're vaguely familiar with each other, but it's distant and somewhat awkward. Phil becomes determined to try his hardest to prove to her that he knows her better than all the other potential suitors and is willing to go the full mile to show her that he's cared about her all along for her personality, and not just because she's the last female dinosaur in their valley.

Diana Tyrana (NPC):

Diana is a medium sized Tyrannosaurus rex, and a single child. She has all of the same physical characteristics as a standard male Tyrannosaurus rex, with the addition of a red bow that she wears, along with a very small amount of bright red lipstick.

Diana is somewhat older than the main character, and has lived in the valley for all of her life. She's dated a few T-Rex in the past, but most of her relationships didn't work out: they didn't to be very territorial, and didn't recognize her as an independant dinosaur that wasn't in need of a mate to take care of her. When the main character's herd first migrated into the valley, she noticed his shy glances across the watering hole, and felt some affection towards his more quiet and gentle nature comparably to the other suitors she interacted with in her own species. Because of the difference in their species and friend circles, however, she chose to never make any sort of move, uncertain if he was genuinely interested in her.

As she grew older (and with some pressure from her parents) she was encouraged to finally take a mate. No sooner had she reluctantly agreed to take one did the meteor impact with Earth, changing the dynamic of the entire valley, leaving her to suddenly be desired by almost every male suitor trying to convince her to be their mate now that she is single again. With so many suitors suddenly approaching her, when the male protagonist first approaches her as well, she's unsure whether or not his affection is genuine since everyone else's interest in her also came all at once.

Diana is rather independent, and not at all shy. She prefers to forge her own route in life, even when it comes to going against standards of her species' society (maybe she's a vegetarian?). Incredibly gentle-spirited, she used to very much enjoy nature, and misses the fields of flowers that used to be scattered throughout the valley that she once would go lay down and nap in in order to soak up the sun. The game begins as she longingly mentions this to the player.

Because Diana was originally interested in the player character before the game begins, if the player character can successfully convince Diana by giving her the flowers that she talks about and enjoys that he genuinely cares about her, she will boldly take the initiative at the end of the game to ask the player on a date herself.

Standard NPC:

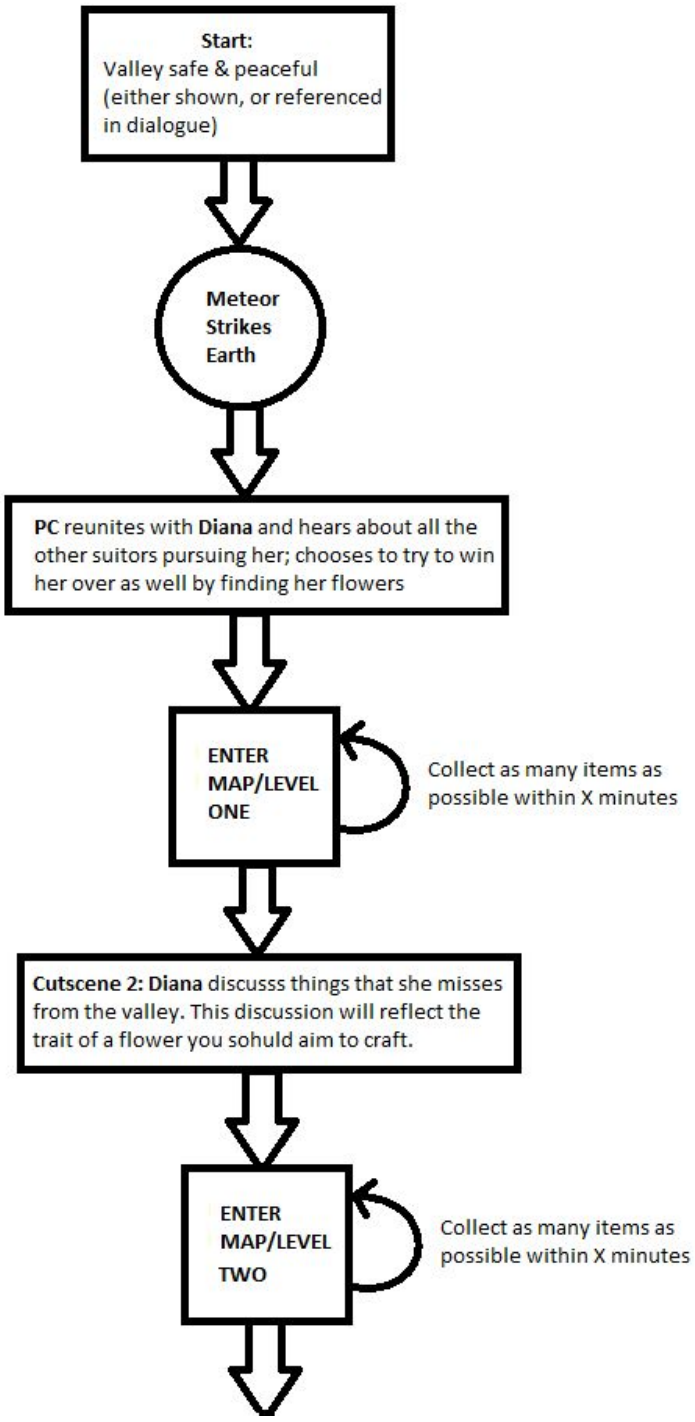
Typically a variety of T-Rex, but we may add triceratopses or other dinosaurs in the future. These NPCs will be reproducible with the same sprite. They are brown and striped, without any of the lipstick or ribbons of Diana. They are also larger than Diana, the other local T-Rex.

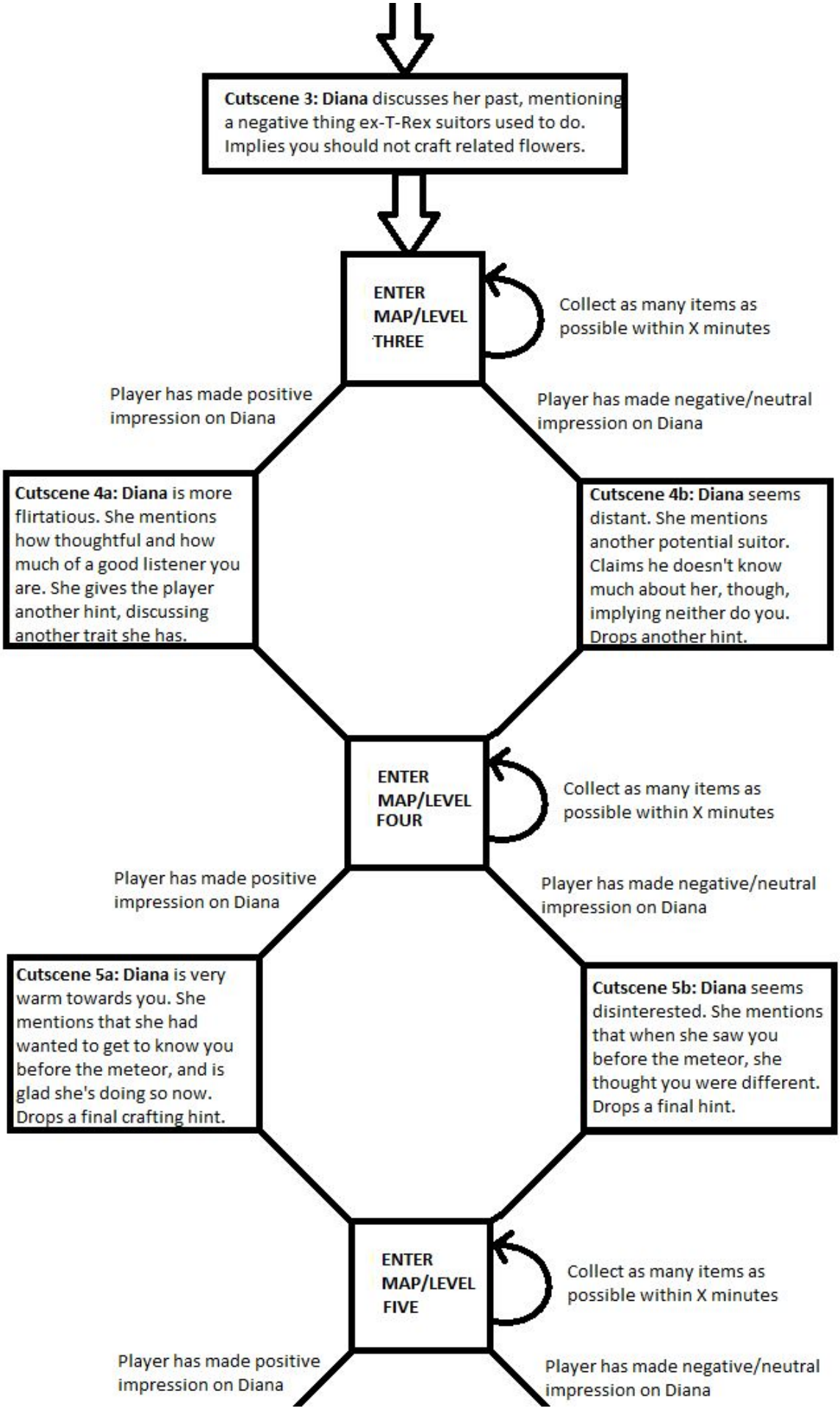
While the various T-Rex felt no pressure to hurry up and settle down before the meteor changed the valley, they're now very concerned about finding a mate. They don't bother to take time to actually get to know Diana, but almost desperately begin to try to collect the flowers throughout the valley to give to her after they find out that is what the player character is doing, hoping to win her over first instead. Their weapons include their claws and bite, as they are

large carnivores -- whether or not they will be able to use these tools to fight in game will be determined by how much time we have to develop additional features in the game.

Flow chart of player progression • Annotate to show different arcs/regions • Progressive game: plot == non-linear map of narrative • Emergent game: plot == major stages of gameplay • Storyboards for cut scenes.

Plot Graphs (Meghan)



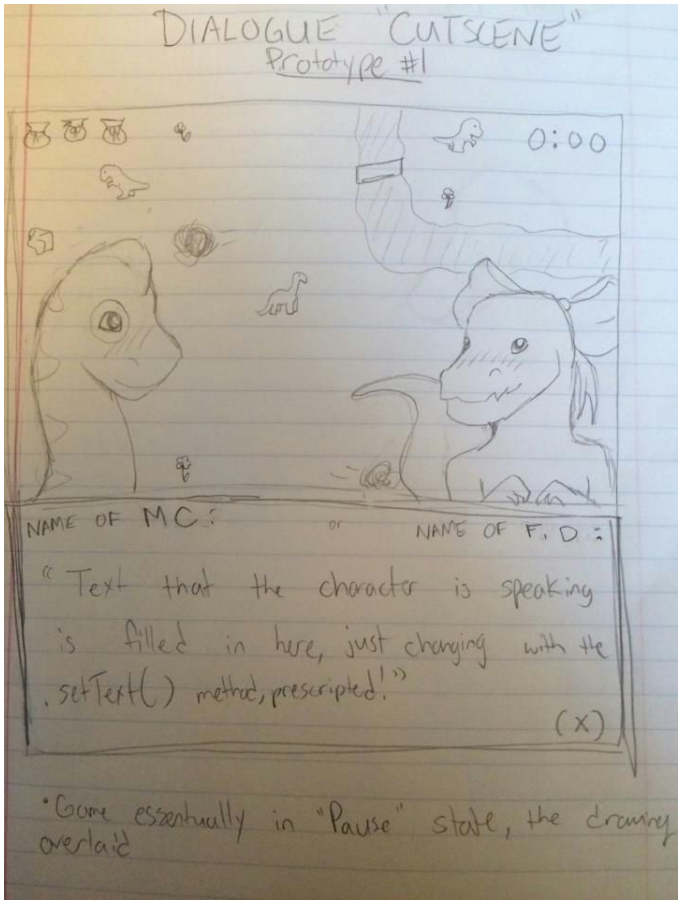

Cutscene 3: Diana discusses her past, mentioning a negative thing ex-T-Rex suitors used to do. Implies you should not craft related flowers.
ENTER MAP/LEVEL THREE
Collect as many items as possible within X minutes
Player has made positive impression on Diana
Player has made negative/neutral impression on Diana
Cutscene 4a: Diana is more flirtatious. She mentions how thoughtful and how much of a good listener you are. She gives the player another hint, discussing another trait she has.
Cutscene 4b: Diana seems distant. She mentions another potential suitor. Claims he doesn't know much about her, though, implying neither do you. Drops another hint.
ENTER MAP/LEVEL FOUR
Collect as many items as possible within X minutes
Player has made positive impression on Diana
Player has made negative/neutral impression on Diana
Cutscene 5a: Diana is very warm towards you. She mentions that she had wanted to get to know you before the meteor, and is glad she's doing so now. Drops a final crafting hint.
Cutscene 5b: Diana seems disinterested. She mentions that when she saw you before the meteor, she thought you were different. Drops a final hint.
ENTER MAP/LEVEL FIVE
Collect as many items as possible within X minutes
Player has made positive impression on Diana
Player has made negative/neutral impression on Diana

Final scene: Diana admits that she's had a crush on you all along, but didn't know you felt the same until now. She asks you if you'd like to go on a date sometime!

The player has won! Victory screen!

Final scene (loss): Diana is disappointed. Admits she once had a crush on you, and is sorry it didn't work out. Mentions that she is going to leave the valley.

The player has lost. Offer hint to listen to Diana.



Art Direction (Belol)

Art Direction:

- The game is set during the period of time called the *Cretaceous-Paleogene Extinction*, approximately 65.5 million years ago. This is when the meteor struck. The aesthetics of the game are based on the real post-meteor climate on Earth. The air is full of dust and debris; this debris is blocking out the sun, so the local temperature has decreased significantly and the world is dimly-lit and drab. Also, there are wildfires that have stripped the landscape of its plant life. This makes flowers rare and valuable.

Level Designs:

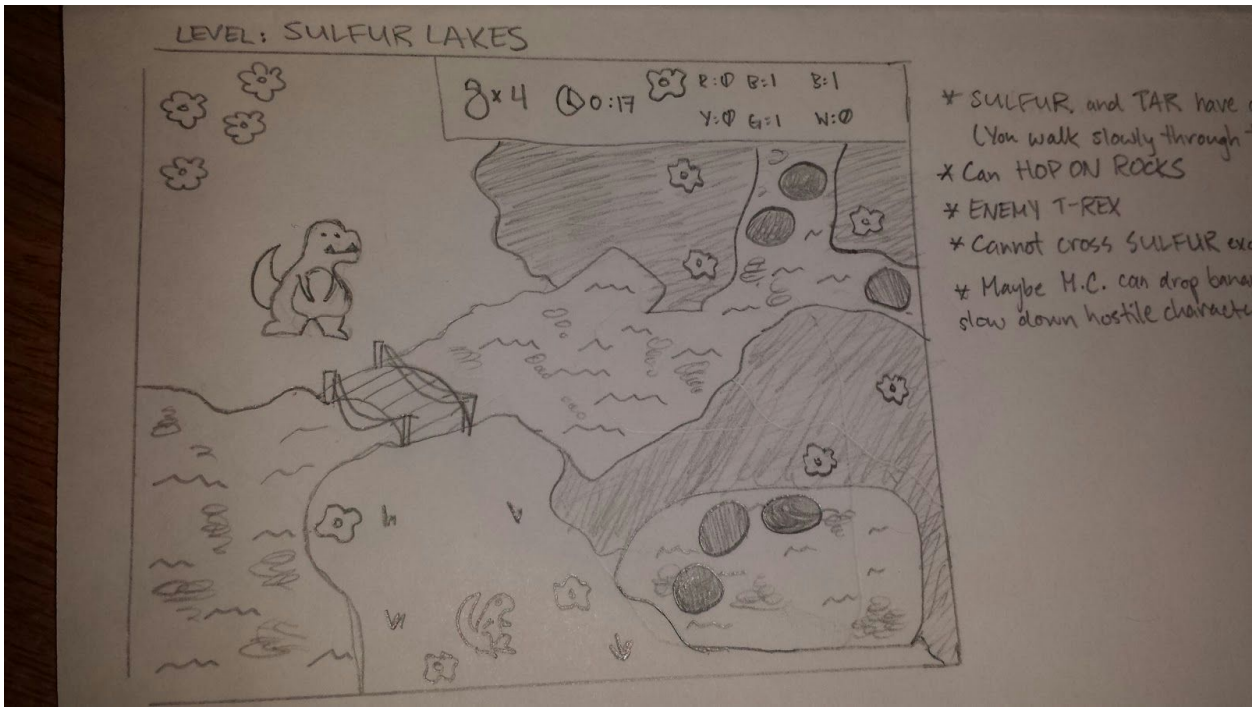


Figure: Level design (tentative): **Sulfur Lakes**. Level contains stretches of tar that can be walked on (but the tar slows you down). It also has lakes of sulfur which harm you if you touch them; you can, however, hop on rocks to cross the lakes. Also, see the HUD in the top-right corner of the screen. From left to right, it displays the remaining number of vases, the remaining time, and your current stash of flowers.

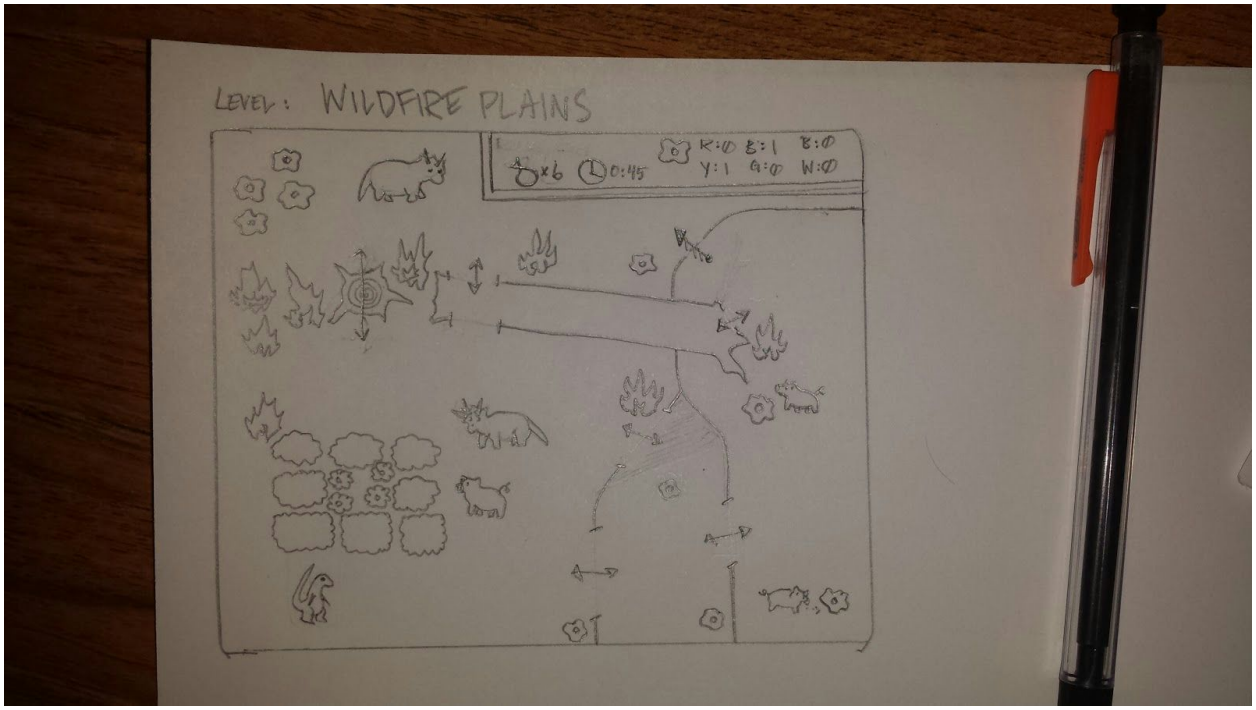


Figure: Level design (tentative): **Wildfire Plains**: Level has varying heights, despite being a 2D-topdown game; this will give it the illusion of depth. See different kinds of non-player objects: triceratops, pigs, bushes, fallen tree, flowers, and fires. Fire can duplicate itself (at random intervals), blocking off certain paths as time progresses. Sometimes animals will eat the flowers; they can be hostile or docile.

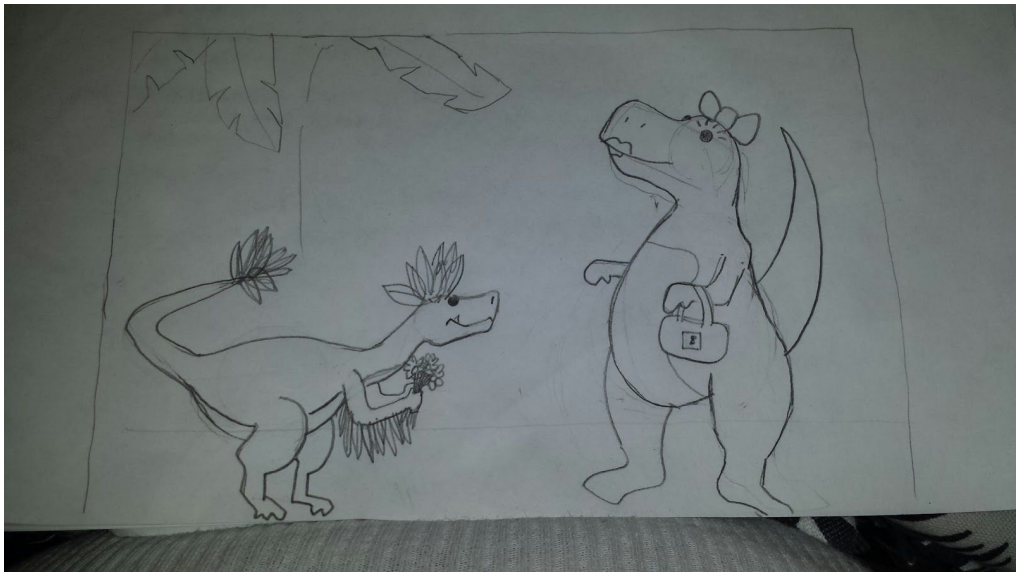


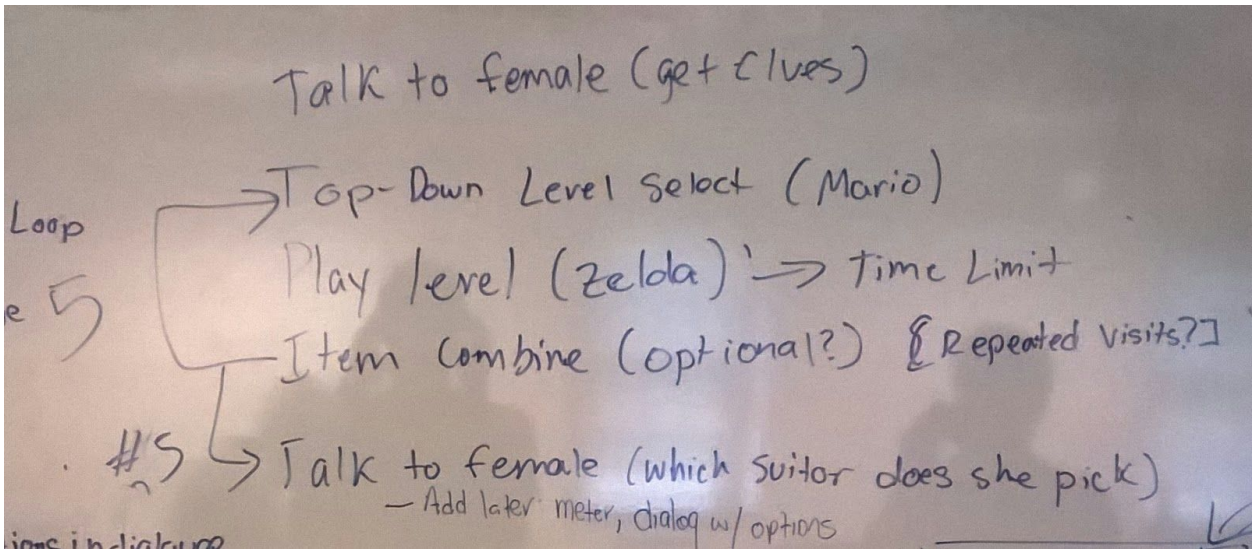
Figure: The two dinosaur characters, potentially. Main character (as yet unnamed) is (probably) going to be a feathered velociraptor. Character's love interest is Diana Tyrana, a Tyrannosaurus.

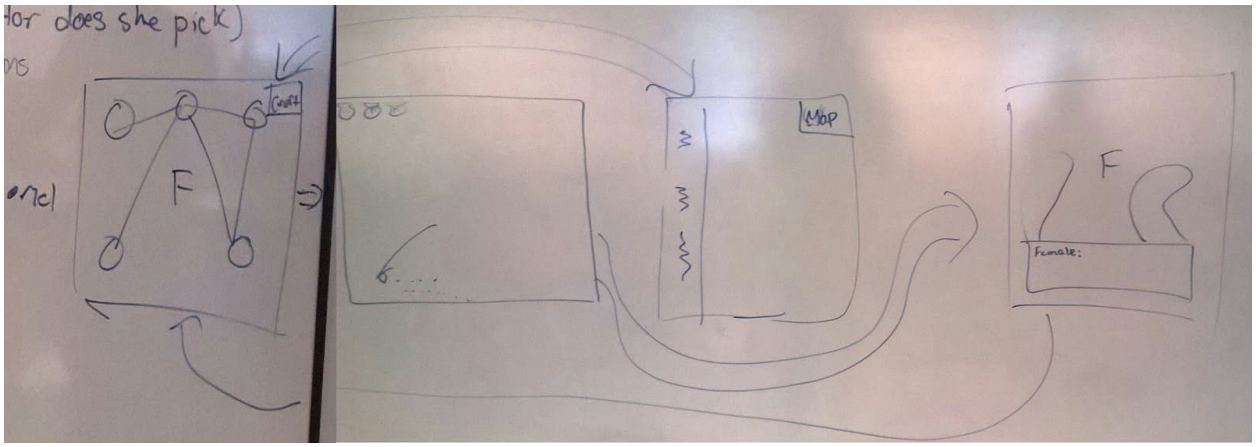
Sources of information about the late Cretaceous Period and dinosaurs:

- http://www.livescience.com/20015-dinosaurs-decline-extinction.html
- http://www.livescience.com/23868-tyrannosaurus-rex-facts.html?li_source=LI&li_medium=most-popular
- http://www.livescience.com/19388-fiery-dinosaur-landscape.html
- http://www.livescience.com/10298-dino-demise-led-evolutionary-explosion-huge-mammals.html
- http://www.livescience.com/29231-cretaceous-period.html

Simple sketches of GUI elements & screen (belol)
Needed for: – Installer – Title screen – Menus – Dialogs – In-game HUD – Information displays – Etc…

UI Storyboards (Belol)





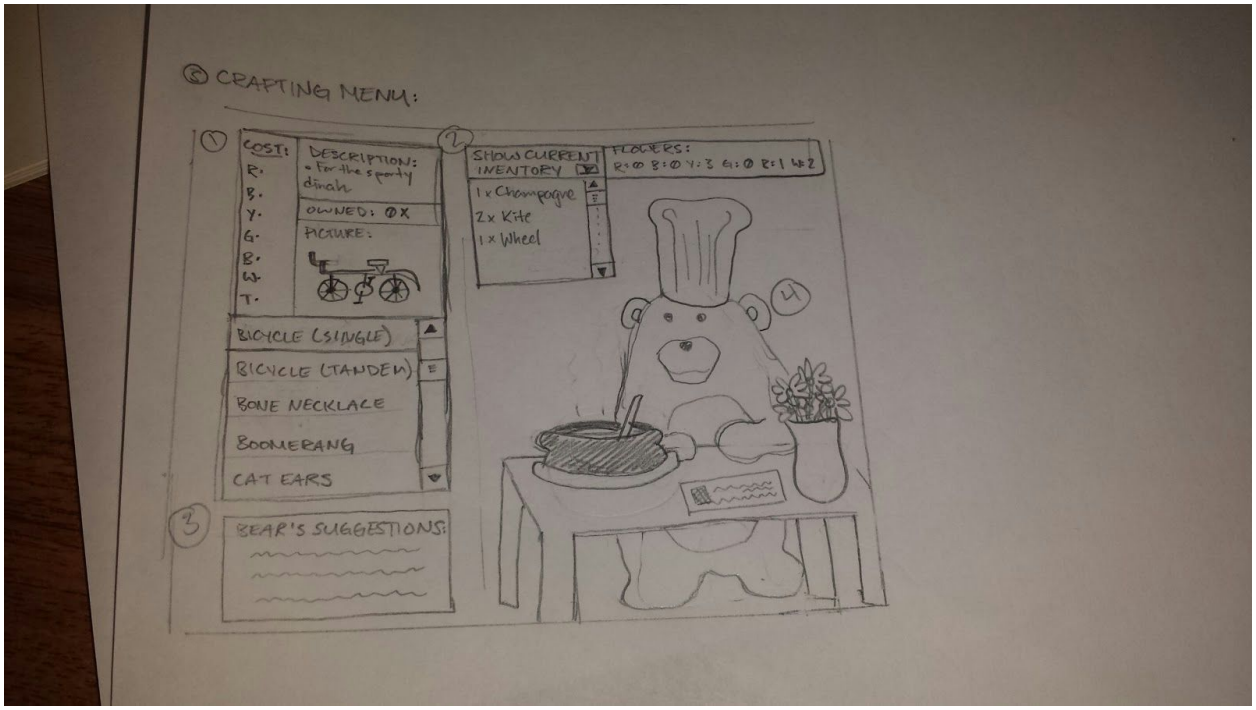


Figure: Crafting Table (Menu): Features of crafting menu include (Section 1) Crafting Cost, Description, Owned(?), Picture of Item, List of All Flowers. (Section 2) Player's current inventory (your actual flowers owned/crafted, and your current collection of flowers). I thought it would be good if the crafting is taken care of by some mammal; he doesn't have to be a bear, but I like bears so that's what I drew here. (Section 3) Bear's Suggestions: we don't have to have this or call it by that name, but the purpose is for the game to explain to the player why some item might be more worthwhile than another.

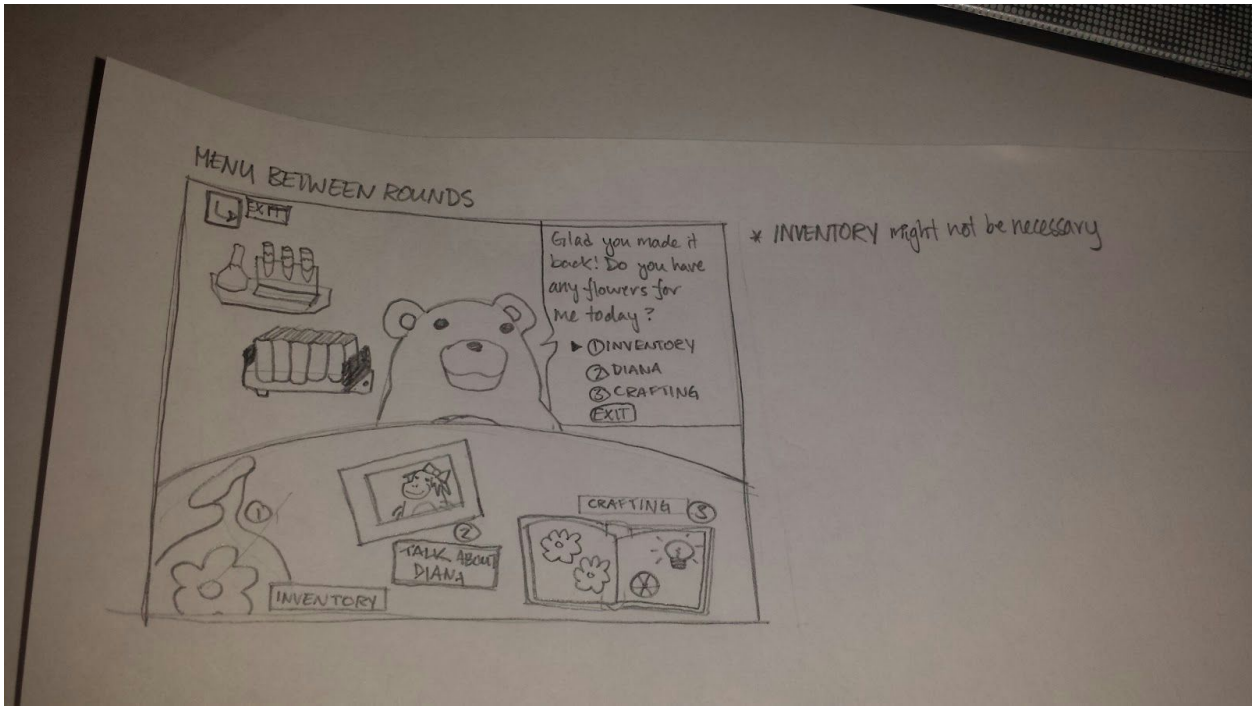


Figure: Between Rounds Menu: Again, doesn't have to be a bear, but this is the menu that appears between rounds. flowers on the table are labelled as follows: Inventory, Talk About Diana, and Crafting. Actually, Inventory could just fall under Crafting. If you select Talk About Diana, you can learn a new thing about Diana from your mutual mammal friend, or look at the list of things you know about her. Selecting "Crafting" takes you to the Crafting Menu. Selecting the Exit option simply moves you to the next playable level. Should use a better word than "Exit", I guess. Bear is saying "Glad you made it back! Do you have any flowers for me today? INVENTORY. DIANA. CRAFTING. EXIT."

• List of tags & dialogs – E.g., ATTACK = “Launch Attack” • Can also map to speech

Tags & Dialogs (Meghan and Belol)

MENU:
(Assuming we keep the mammal friend in the between-rounds menu, he is the narrator here.)
MENU_WELCOME_BACK= “Glad to see you back! Do you have any flowers for me today?”
MENU_WELCOME_YOU_LOST_THOUGH= “Yeah, it sure was rough out there today. You should take a rest and we can try again another time.”
MENU_SELECT_CRAFTING= “Great! Let’s get to work.”

- CRAFTING_ERROR_INSUFFICIENT_MATERIALS= “Sorry man, we don’t have the right flowers for that.”
- CRAFTING_CONFIRMATION= “So you want <ITEM>?”
- CRAFTING_SUCCESS= “Here it is! Congratulations on your new <ITEM>.”

MENU_SELECT_DIANA= “You goofy lovebird. Let me see what I remember…”

- [Various lines indicating Diana’s interests, conveyed secondhand through your mammal friend]

IN-GAME:
GAME_ROUND_OVER= “Time’s up! Let’s get back to the lodge and recoup.”
GAME_ROUND_LOST= “You’re out of vases, man! Come back to the lodge, let’s call it a day.”
BEGIN_LEVEL_ONE= “Looks like there’s a lot of other dinos on the hunt for flowers today. Better move fast to get them!”
BEGIN_SULFUR_LAKES= “Good luck, pal! Watch out for that T-Rex and the sulfur lakes. Those things will hurt you. The tar won’t hurt you, but it will slow you down pretty bad.”
BEGIN_WILDFIRE_PLAINS= “This is a scary place. The animals will probably leave you alone, but the fire is going to mess you up. And it spreads, too, so watch out for that.”

DIANA DIALOGUE:
CONT = “(space)” [for continuing on through dialogue text boxes that are too long]
INTRO = “Oh, hey Phillip. It’s good to see you still around in the valley. A lot of people left after… y’know.”

Inheritance diagrams • Memory depictions • Key data structures • File format data structures • System module diagram (categorization of Application, Logic, View classes and subclasses) • Data Flow (& event flow)

Software Architecture (Will and Bina)

Using a data-oriented design using XML to hold configurations with a base class **Actor** that can take on different roles using an entity/component pattern.

Actor	**Function**
public: ● Actor(); ● void init(); ● ~Actor() ● void update(int time); ● void render(sf::Window w); ● <”Getters and Setters”> private: ● sf::Vector2f position; ● sf::Vector2f size; ● sf::Texture texture; ● std::string sprite_filename; ● map<ActorComponentId, ActorComponent> components; ● ActorId id;	public: ● constructor ● Initializer ● Destructor ● calls each of its component’s update ● renders self onto screen ● Mutator and Accessor functions private: ● X, Y location ● Width, Height dimension ● texture to use ● location of sprite to load ● list of ActorComponents of this actor
ActorComponent	**Function**
public: ● ActorComponent(); ● virtual void init() = 0;; ● ~ActorComponent()virtual void update(int time); ● virtual void update() = 0; ● <”Getters and Setters”> private: ● ComponentId id; ● std::shared_ptr<Actor> owner;	public: ● constructor ● initializer ● destructor ● update responsibilities ● Mutator and Accessor functions private: ● component id ● pointer to actor that owns the component

InputComponent	Handles movement of actor
public: ● InputComponent() : ActorComponent(); ● void init() override; ● ~InputComponent(): ~ActorComponent(); ● void update(int time) override; ● <”Getters and Setters”> override; private: ● std::string input_type;	public: ● constructor ● initializer ● destructor ● updates it’s actor’s position ● Mutator and Accessor functions private: ● Type of input {Keyboard, Artificial}
CollectableComponent	Allows item to be collectable
public: ● CollectableComponent() : ActorComponent();; ● void init() override;	public: ● constructor ● initializer

• ~CollectableComponent(): ~CollectableComponent(); • <"Getters and Setters"> override; private: • int value;	• destructor • Mutator and Accessor functions private: • value of the flower
PhysicsComponent	Makes actors aware of each other
public: • InputComponent() : ActorComponent(); • void init() override; • ~InputComponent() : ~ActorComponent(); • void update(int time) override; • <"Getters and Setters"> override;	public: • constructor • initializer • destructor • checks to see if contacting any other actor • Mutator and Accessor function
CollectorComponent	Allows actor to collect collectables

public:
• CollectorComponent() : ActorComponent();
• void init() override;
• ~CollectorComponent() : ~ActorComponent();
• void update(int time) override;
• <"Getters and Setters"> override;
private:
• int vases_total; // static const?
• Actor *flowers[vases_total]; // std::array?
• int vases_left;
	public:
	• constructor
	• initializer
	• destructor
	• updates something or not
	• Mutator and Accessor functions
	private:
	• number of total vases
	• list of flowers
	• number of vases left to fill

CraftableComponent	Allows actor to be crafted; determines interactions
public: • CraftableComponent() : ActorComponent(); • void init() override; • ~CraftableComponent() : ~ActorComponent(); • void update(int time) override; • std:string getType(); • <"Getters and Setters"> override; private: • std::string[] combinations;	public: • constructor • initializer • destructor • update something or not • returns type based on list in combinations • Mutator and Accessor functions private: • list of {"Fire", "Water", "Air", "Earth"}

	ActorComponents (some with XML values)				
Actor Roles	**Input**	**Physics**	**Collector**	**Craftable**	**Collectable**
Player	Type: Keyboard	X	X		
NPC	Type: Artificial	X	X		
Obstacle					
WaterFlower				Type: Water	X
FireFlower				Type: Fire	X
AirFlower				Type: Air	X
EarthFlower				Type: Earth	

	Fire	Air	Earth	Water	Tulip	Rose	Violet	Sunflower
Fire	Sunflower	Rose		Violet				
Air	Rose			Tulip		Magnolia		
Earth							Orchid	
Water	Violet	Tulip						Lily
Tulip								
Rose		Magnolia						
Violet			Orchid					
Sunflower				Lily				

Other potential flower types include Life flowers, Death flowers, and Speed flowers, but there are no current plans for implementation.

CraftingTableInventory	**Function**
public: ● CraftingTableIInventory(); ● ~CraftingTableInventory(); ● void init(); ● Actor *getFlowers() const; ● void addFlowers(const Actor *flowers); private: ● Actor *flowers; //std::array? or vector.	public: ● constructor ● destructor ● initialization ● accessor function ● mutator, append to flowers list private: ● player inventory saved between levels

View Classes	

CraftingView
public:
● CraftingTableView();
● ~CraftingTableVeiw();
● void init();
● <"Setters and Getters">
private:
● Actor *flowers; // player inventory
● std::map<std::string, std::string> combos;
● Actor *slected_flowers; // to show in main panel
	● Upper-left side panel
	○ list of possible combinations
	● Lower-left side panel
	○ inventory
	● Main panel to right
	○ Area displaying selected flowers, "button" to craft
	● Top right corner
	○ "button" to enter map view

MapView	● Top right corner ○ "button" to enter craft view ● Main panel ○ level sections ○ female dinosaur home selection ○ at the top of each level, there is text informing the player of the type/probability of flower to be found

LevelView public: ● LevelView(); ● ~LevelView(); ● void init(); ● void addActor(Actor *actor); ● void removeActor(Actor *actor); private: ● Actor *actors;	● Top left corner ○ display for number of vases ● Main panel ○ level layout
DialogueView public: ● DialogueView(); ● ~DialogueView(); ● void init(); ● void setSpeaker(const [std::string??] speaker); ● void setText(const [std::string??] tag); private: ● sf::Font speaker_name_font; ● sf::Font dialogue_font; ● sf::Text speaker_name; ● sf::Text dialouge_text; ● sf::Texture character_drawings;	● Upper panel ○ Static image with two dinosaurs facing each other ● Lower panel ○ text updates for dialog

Create maps per level • Show interconnectivity • Major encounters • Key item locations • Level goals • Choke/focus points • For random generated levels: describe mechanism that ensure correct distributions

Level Design (Bina and Will)

The Levels

Level	**Description**
Hello, Dinosaur World!	Features the main character, a single randomly placed flower, a single randomly placed obstacle. Whenever the flower is collected, a new (potentially different flower) will spawn in a random location. This process repeats until a set time limit has elapsed. No suitors are featured in this level; suitors will show up in later levels after they learn of the player's tactics to woo Diana.
Sulfur Lakes	Level contains stretches of tar that can be walked on (but the tar slows you down). It also has lakes of sulfur which harm you if you touch them; you can, however, hop on rocks to cross the lakes. Also, see the HUD in the top-right corner of the screen. From left to right, it displays the remaining number of vases, the remaining time, and your current stash of flowers.
Wildfire Plains	Level has varying heights, despite being a 2D-topdown game; this will give it the illusion of depth. See different kinds of non-player objects: triceratops, pigs, bushes, fallen tree, flowers, and fires. Fire can duplicate itself (at random intervals), blocking off certain paths as time progresses. Sometimes animals will eat the flowers; they can be hostile or docile.
Ice Age County	
River Madness	

Level Interconnectivity

Our levels are relatively independent of each other. They are bound together by the map view that shows them all. The player is able to choose whichever level (s)he wishes.

At the start and end of the game, and between levels, Phil will interact with his love interest, giving the player the opportunity to learn more about her and what sort of flower she might like crafted for her. If we are able to implement dialogue choices, this also presents Phil a different way to show his love interest his affection for her.

Major Encounters

Type	**Description**
Player-Obstacle	Player cannot move in that direction Player drops a vase; it cannot be recovered
Player-NPC	Player cannot move in that direction Player's vase is "stolen"; it cannot be recovered
Player-Flower	Player collects flower; this fills a vase The number of vases remaining decreases by one
NPC-Flower	NPC collects flower (player can potentially steal)

Key Item Locations

Flowers will be randomly populated throughout the map such that they do not occupy the same space as other Actors. They should be relatively easy for the player to get to, with the exception that NPCs will also be trying to obtain them. More difficult levels may feature puzzle like obstacles, increasing the difficulty of collecting special flowers.

Level Goals

All levels in our game share a single goal: collect as many flowers as allowed by the number of vases the player currently holds. The player is also under a time constraint, thus implying that the level ends either when time runs out, or when the player has no vases remaining.

Choke/Focus Points

The player has a limited number of vases with which to hold flowers. Once a player collects a flower, the number of available vases decreases by one. This is further complicated by the fact that, when encountering an obstacle, the player loses a vase in some fashion.

Additionally, non-player characters will also move towards these flowers, and will also collect them in some fashion. Thus, the player needs to determine if (s)he can safely obtain the flower without encountering the NPC.

We also hope to implement actions within dialogue scenes with Phil and Diana. Ideally, the selected responses would play some role in her final decision of deciding to go out with you.

Description of the mechanics (see next lecture) – Similar to D&D handbook • Small groups of rules – Outline strategic conflict – Inspire emotion – Move game forward • Typically shared between genres • Example: Racing: Get to finish line before opponents. Racing puts time-pressure on player, creating stress and motivation. Inherently fair and balanced. (Racing != cars)

Mechanical Analysis (Will and Bina)

Within each level, the player is given a set amount of vases with which to collect flowers. There may be more flowers than vases and the player must decide which flowers to go for and which to possibly sacrifice in order craft the needed item. The player can lose a vase (and any flowers held in that vase) if he contacts an NPC (it's stolen), or contacts a special obstacle (ie cactus or tumbleweed, and it is “lost”).

Additionally, flowers on the map can be taken by NPC and either placed in their vase (with possibility of player getting it back, not sure how we’d do this yet?) or the NPC has some factor where if its vases are filled, it eats the next flower it encounters. This puts a time-pressure on the player, while also adding a strategic element in selecting the needed flowers. In the map view, probabilities of flowers appearing are shown so player comes in with an idea of what he should try to target.

Between levels, Phil will interact with his love interest, with the intention that the player learn more about her and what sort of flower she might like crafted for her. Since the player must deliver a flower between levels, this creates additional pressure, as if the player does not give enough “correct” flowers, Diana may not decide that Phil’s feelings are genuine Additionally, one feature we would like to implement is to add choices to dialog. Player responses may also have an effect on the love interest’s final decision.

• Schedule: – Plan for producing the game on time – Broken down in prototype releases and milestones • Milestone := describes feature/experience that will be available at a distinct time. Need to occur regularly. – Further divided in tasks assigned to developers • Issue Tracking – Sophisticated To-Do list – Keeps track of bugs/features – Keeps track of requests features (from other developers & playtesters) – Key: not yet approved or scheduled – Will move to schedule (features) or changelog (bug fixes) -- or will get dropped • Status – A 1 to 2 paragraph summary of the current status/schedule. Should point out milestones that are at risk of slipping and major successes. – Keep up to date!

Scheduling (& related elements) (Bina)

Date	Goal	Individual Tasks
09/17 - Prep Week 1	Proposal and Design Meeting	
09/23 - Prep Week 2	Proposal and Design Meeting	
09/26 - End of Preparation	Proposal and Design Document Compilation	Everyone should have their assigned sections completed
09/29 - Start of Week 1	Design Presentation and Report Due with Demo (optional)	Meghan: Presentation
10/6 - End of Week 1	Top-down view, main game loop and moving player HelloWorld level drawn, actor sprites for player, female, NPCs, flowers, obstacles Some initial dialogue for opening segments of the game and maybe description of what needs to be done	Mechanics Player moving Main game loop dialogue controls Art: Sprites that will be viewed in top-down Helloworld level layout Dialogue Initial dialogue mappings Plot Initial plot mappings The hook? idea of how the middle part proceeds, the climax, and the end main character mappings
10/13 - End of Week 2	Item Collection and physics components between different actors More extensive dialogue, and full plot expanding on helloworld level and implementing how actors populate on the map	Mechanics item collection actor interaction actor population in helloworld Art extend on helloworld level Dialogue complete dialogue mappings for first level Plot have plot written for the looping part of the game continue character mapping
10/20 - End of Week 3	Intermediate Presentation I and Report Due with Demo	Bina: Presentation

	Testing at the start of this week	**Deliverable Demo:** We should at least be seeing some initial dialogue with Diana, the main level, and an “ending” (delivering flowers to Diana).
10/27 - End of Week 4	Have 5 levels completed and the simplified map view (drawings and mechanics) have the plot graph complete	Mechanics level randomization mechanics map view Art draw out all levels and layouts map view Dialogue finalize dialog mappings plot implement the climax part of the game and the end finish character mapping
11/03 - End of Week 5	Have the simplified crafting table and crafting mechanic done (drawing and mechanics) have other artistic elements implemented (music, other art?)	Mechanics crafting mechanics Art craft view music and other elements? Dialogue text elements to crafting Plot
11/10 - End of Week 6	Intermediate Presentation II and Report Due with Demo Testing at the start of the week	Belol: Presentation **Deliverable Demo**: Similar to the first version, except with crafting available, and that we play through a few levels before reaching the “ending”.
11/17 - End of Week 7	Implement the interactive dialog with the female dinosaur (dialog, mechanics, drawing)	Mechanics interactive component Art shouldn’t have to change the art since static Dialogue add new interactive options for dialogue Plot
11/24 - End of Week 8	Make more advanced versions: enhanced crafting table enhanced world map player getting back flowers additional craftable flowers special flower powers NPC eating flowers?	Mechanics Art Dialogue Plot
11/27 - End of Week 9	TESTING	

12/1 - End of Week 10	Final Presentation Due with Demo MORE TESTING	Will: Presentation **Deliverable Demo:** Dialogue choices with Diana between levels should affect the final outcome. Perhaps some of the optional features have been implemented.
12/5	Final Report	Will: Submission

Changelog (Will)

Document evolves => record changes • Not needed for trivial changes • Complex changes require an entry in changelog (e.g., dropping of mechanic) • Include summary what happened and why • Include/revision number if really important • also record revision number when important milestone is reached.

09.27.2015: Initial “commit”.