

Elm City Stories

Design Document

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About This Document

This document serves as the Design Document for *Elm City Stories* (codename: IVY). This is a living document which will continue to be updated as production advances. This document is a full text version of the [Design Overview one-sheet](#). Comments are expected and desired. Please feel free to comment directly on this document.

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1. Definitions

Aspirational Avatar - A representation of the player's idealized current and future self. This Avatar not only includes a visual appearance but also attributes like desired future career, desired future house, etc.

Challenge Completion - A Challenge Stack is considered Complete when the player has changed each of its Decision Points and its Resolution Point.

Challenge Scene - An interactive visual scene that represents a moment in the storyline of a Challenge Stack. There are three types of Challenge Scenes- Decision Point Challenge Scenes, Dead End Challenge Scenes, and Resolution Challenge Scenes.

Challenge Stack - A sequence of interactive Challenge Scenes that tell a story about a situation from the player's Lifeline. Individual Challenge Stacks can be considered equivalent to a "quest" or "mission" in other games.

Consequence - A result of a Challenge Stack with effects incorporated into the player's Epilogue. **Ex:** The Consequence of a Challenge Stack where the end result is the player's character engaging in unprotected sex could be that the player's character is struggling with an STD like AIDS/HIV in their Epilogue.

Decision Point - Represents a pivot point in the storyline of a Challenge Stack. The player's goal in a Challenge Stack is to change each Decision Point for the better outcome. To change, Decision Points require Power Skill of a particular kind & level, as well as certain Key Points.

Decision Point Challenge Scene - A Challenge Scene with an associated Decision Point. This type of Challenge Scene represents a pivot moment in the storyline of the Challenge Stack.

Dead End Challenge Scene - A Challenge Scene with no associated Decision Point or Resolution Point. This type of Challenge Scene represents a possible ending of the Challenge Stack storyline, but not the final ending.

Elm City Stories - The working player-facing title of the overall game

Key Point - A collectible item gathered by the player by activating a Touchable Object in a Challenge Scene. Key Points are used to change a Decision Point.

Lifeline - A visual interface that allows the player to see the Challenge Stacks available, information about each Stack, and to enter the Stack (if it is unlocked)

Minigame Card - A collectible item gathered by the player by activating a Touchable Object in a Challenge Scene. A Minigame Card represents a new level for a particular Skill Minigame. Once found, that minigame level will be available when the player exits to the Lifeline and goes to that minigame.

Power Skill - A skill that can be used as the basis for changing a Decision Point. Power Skills include Refusal Power and Knowledge Power.

Resolution Challenge Scene - A Challenge Scene with an associated Resolution Point. This type of

Challenge Scene represents the final ending of the Challenge Stack storyline. Completing this completes the overall Challenge Stack.

Resolution Point - Represents completion and reflection on the final positive outcome of the storyline of a Challenge Stack. Once the Resolution Point is completed, new Challenge Stacks are unlocked. To change a Resolution Points requires a Power Skill of a particular kind & level, as well as certain Key Points.

Consequences - The process by which the player moves from the Lifeline to the Epilogue. In this animatic, the player finds out the Consequence- positive or negative- from each Challenge Stack- even those that have not yet been unlocked or completed.

Sense Skill - A skill that can be used as a tool to activate Touchable Objects in Challenge Scenes, finding Key Points and Minigame Cards. Sense Skills include: People Sense, Trouble Sense, Future Sense, & Priority Sense.

Touchable Object - A visual object in a Challenge Scene that responds to a player's touch.

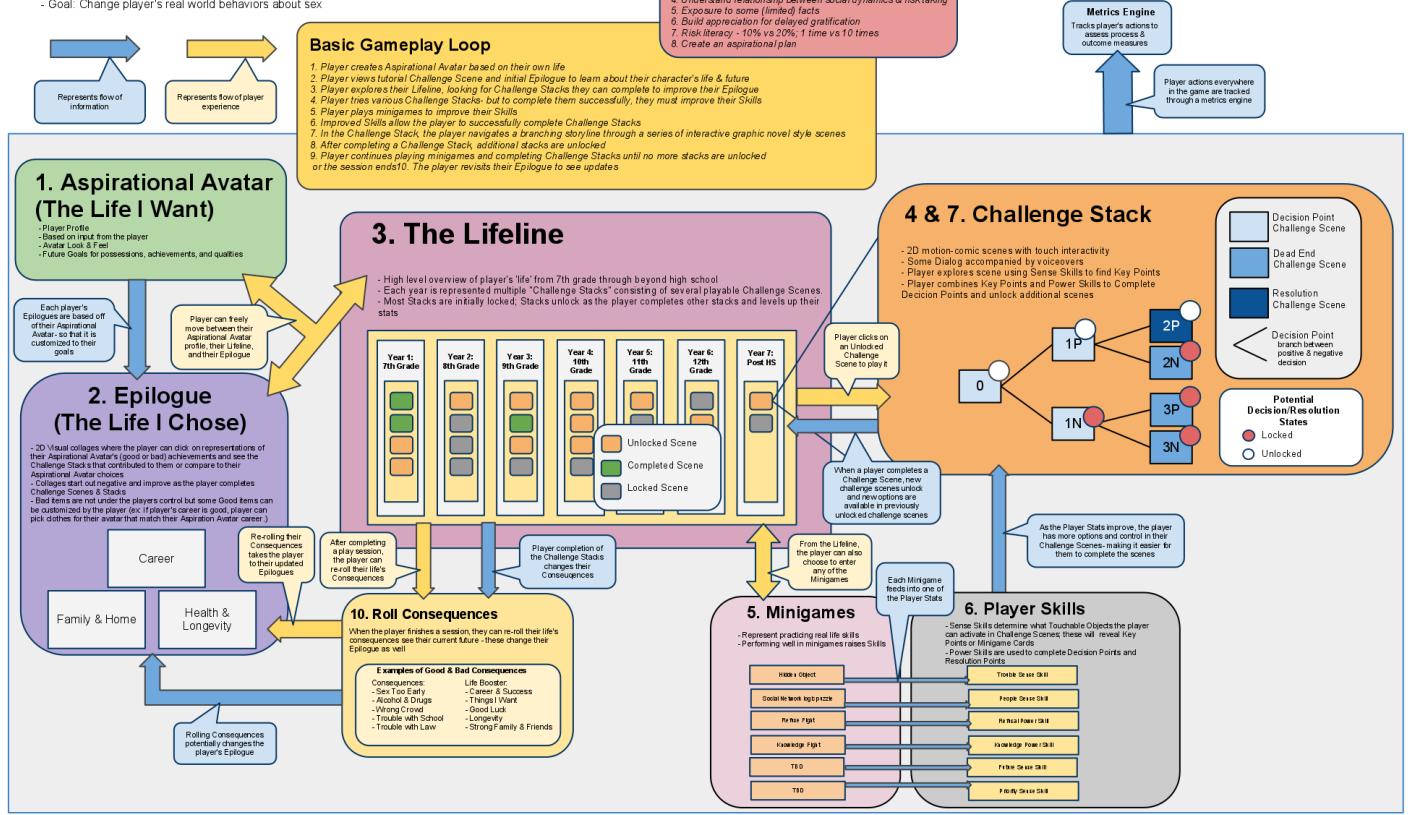
2. Player Experience Summary

In *Elm City Stories*, the player begins by designing a high concept of their ideal (but attainable) future self. Then they work to fulfill and detail that self by playing non-linearly through a series of interactive, adventure style scenes from their life, as well playing various minigames. At the start of the game, the player is shown the potential of their character as a preview of their positive future. Then they are told that their character needs help to make this ideal future come true. They must play through a series of stories from their character's life. These stories start out negative but as the player advances, they improve the outcomes of these life scenes and make their ideal future self a reality.

The art style is 2D graphic novel and the platform is the Apple iPad 2 touch tablet. The game is designed to be played in multiple sessions over a series of weeks.

Project Ivy: My Future is My Life

- 2D RPG/Choose Your Own Adventure style game about the effect of choices on short-term and long-term life goals
- Allows teens (11-14) practice making decisions about risky situations
- Set primarily in junior and high school
- Goal: Change player's real world behaviors about sex



[See a history of design one-sheets here.](#)

2. Player Transformation Goals

Elm City Stories seeks to create 8 aspects of transformation in players:

- Ability to look at a situation and see sources of potential trouble (Challenge Scenes)
- Ability to envision outcomes and consequences of a situation (Lifeline, Challenge Stacks, Future Sense)
- Ability to refuse others (Refusal Power)
- Understanding of relationship between social dynamics & risk taking (People Sense, Challenge

Scenes)

5. Exposure to some factual knowledge (Knowledge Sense, Challenge Scenes)
6. Appreciation for delayed gratification (choosing long term goals over short term gains) (Priority Sense, Epilogues)
7. Exposure to concept of risk - 10% vs 20%; 1 time vs 10 times (Challenge Stacks, Consequences)
8. Creation of a personal aspirational life plan (Aspirational Avatar, Epilogue Collages)

The overall goal is **to delay the onset of sexual activity in young at-risk teens (ages 11-14 years) by changing their response to risky behavior.** A key component to this change are skills that allow teens to predict and understand future consequences of actions.

3. Core Game Components

1. Aspirational Avatar - The Life I Want

The player begins the game by creating the first version of their Aspirational Avatar. This avatar embodies the player's life goals, including a visual avatar of their self and answers high level life questions including:

- Their name, gender, & age
- What kind of home they have, where they live, and where they go to school
- Where they would like to visit in the future, and live in the future.
- What kind of car, house, and other items they'd like in the future
- What they imagine their family will be like in the future
- Someone who they'd like their future self to be like
- Something they would like to be good at, the job they'd like to have, and what they'd like to do for fun in the future

Some of this information can be optionally used throughout the game to make characters and situations more personalized to the player.

The player also choose their avatar's appearance- choosing from a range that includes variations in:

- Head (Head shape & Face)
- Hairstyle (+ Head Accessories)
(comprised internally of 2 hair pieces- one behind head and one in front.)
- Glasses
- Earrings
- Skin Color
- Eye Color
- Hair Color
- Primary Clothing Color (main color on top)
- Accent Clothing Color (accent color on top, bottom, shoes, and other accessories)

Later, in the **Epilogue**, the player will see an aged version of their Avatar- a visual representation of their character's future self.

2. Player's Role

Once the player has created their Avatar, the game explains that there is someone who is extremely similar to the player- looks very similar and has the same long term aspirations. Like the player, this character has a lot of positive things going for them: A family, friends, hobbies, education, crushes, etc. However, also like the player, they face a number of challenges from their external environment and from their own ability to make good choices. This person needs the player's help because they're about to have a lot of bad things happen to them that will prevent them from reaching their ideal future.

The player's role is to explore the life of this person, increase their personal skills, and help them avoid bad situations as much as possible by improving their decisions and reducing their risky behavior.

This couching of the main character as very similar to the player but not exactly the player is very intentional based on several points:

- Player should be able to view the main character as a slightly idealized proxy for their own life and future life
- Player should be able to view the main character as an independent person so that references to specific family members or community locations don't distract the player. The story features such characters as the main character's mother, father, grandmother, little sister and such places as the main character's bedroom, school, community playground, etc.
- Player should be motivated to improve main character. There is [some research](#) that shows that tasking a player with helping another character learn something creates stronger investment in learning the material on the part of the player
- Player should be able to accept some skills/dreams of the main character that are featured in the story but may not be shared by the player.(Currently these are basketball & writing.)

2. Lifeline

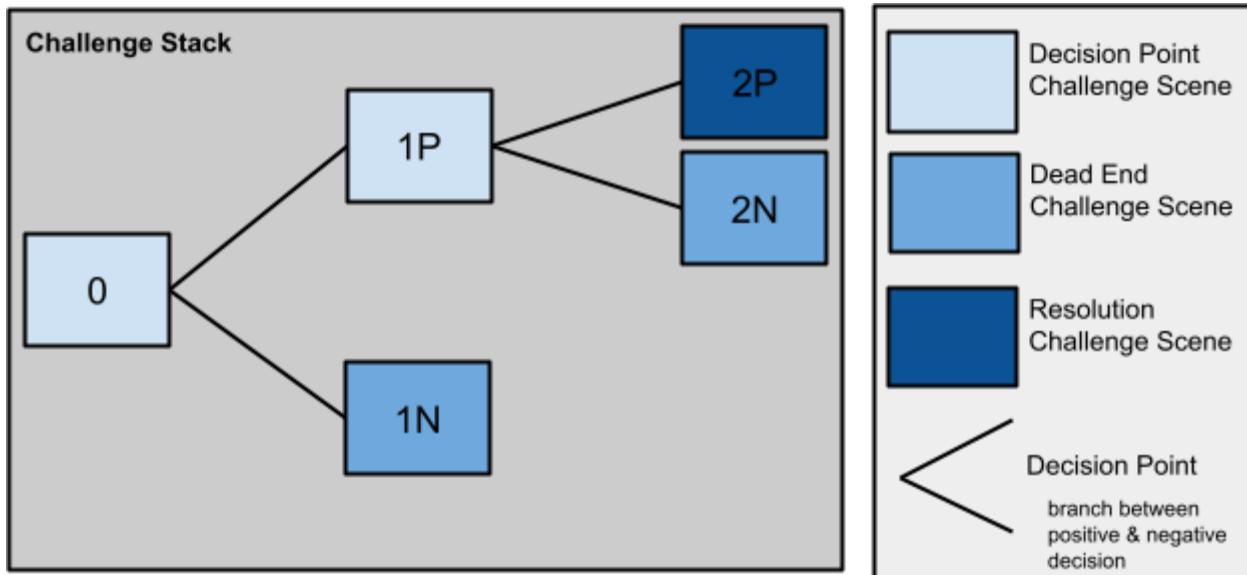
This is the core area of the game. It shows the player's fictional life, from 7th grade to 12th grade. Each year has several **Challenge Stacks**. It also shows the Player's **Avatar**, along with information about their future goals. It is also the interface from which the Player enters **Minigames** and increases their **Skill Levels**. From the Lifeline, the Player can also **Roll Consequences** which shows them the long term outcomes of the Challenge Stack stories in their Lifeline and then takes them to their **Epilogue** where they can review and end that game session.

Each **Challenge Stack** on the Lifeline has 3 states: Locked, Unlocked, & Completed. Locked A play session in the Lifeline ends when the player has run out of unlocked, uncompleted Challenge Scenes or they choose to quit. Players will play through the timeline multiple times. Often, especially the first few times, they will not be able to unlock every single **Challenge Scene** in a playthrough. The higher their **Skill Levels**, and the wiser the actions they choose, the more **Challenge Scenes** they will have an opportunity to affect before the game ends.

3. Challenge Stacks

A Challenge Stack represents a storyline in the overall life of the player's character. This storyline is broken into moments called **Challenge Scenes**. A Challenge Scene is a first person visual view of a particular point in the Challenge Stack storyline. Some of these Scenes are have an associated

Decision Point that determines what happens next in the story. Typically a Challenge Stack has 2 Decision Points and 5 Challenge Scenes. The final Challenge Scene of a Challenge Stack is called the **Resolution Challenge Scene**. This Scene has a **Resolution Point**, which is very similar to a Decision Point. Story end points that are not final endings are called **Dead End Challenge Scenes** and do not have a Decision Point or Resolution Point.



The primary gameplay in a Challenge Stack is to explore each Challenge Scene, looking for objects which can be interacted with. Interacting with these objects requires certain Skill levels of different Sense Skills.

A player will typically enter and explore a Challenge Stack 2-3 times before they are able to **Complete** it. Completing a Stack will unlock additional Challenge Stacks. Successful Completion requires the appropriate in-game **Skill Levels** of the player's character. The player uses these Skills to explore the visual Scenes inside the stack. Each Scene has multiple interactive items called **Touchable Objects**. These Touchable Objects reveal some form of media (audio, text, image) when activated. Some Touchable Objects require a particular **Sense** Skill Level to activate. These Touchable Objects reveal **Key Points** or **Minigame Cards** when activated. Key Points are used, along with **Power** Skills, to change **Decision Points** inside the Challenge Stack, thus changing the outcome of the story in the Stack. Changing a Decision Point unlocks a new Scene inside the Challenge Stack. At the last Scene of the Challenge Stack, the player uses Key Points and Power Skills to complete a **Resolution Point**, thus completing the Challenge Stack. Minigame Cards represent minigame levels which the player can play to earn additional Skill Levels.

Additional detail about Challenge Stacks can be found in the [Challenge Stack design document](#).



Example of a Challenge Scene and related UI. Note that UI shown here is to illustrate functionality, not actual style or final layout.

4. Skill Levels

The Player has a number of skills which they level up by playing [Minigames](#) and completing [Challenge Scenes](#). Each of these skills is associated with a specific minigame. Some of these skills are **Senses** which allow the player to find **Key Points** items inside a Challenge Stack. Other skills are **Powers** which allow the player to change **Decision Points** and **Resolution Points** inside a Challenge Stack. For more detail on how skills are used inside Challenge Scenes, refer to the [Challenge Stack design document](#).

- **People Sense Skill** - The player can see the unspoken motivations of people in a Scene
 - ex: Player can click a character in the scene and see that even though they are offering the player a ride home from the party, they are thinking about harming the player. If their Trouble Sense Skill is not high enough, they see the person is clickable and what skills they need to find out more about it, but the actual information is hidden..
- **Priority Sense Skill** - The player can identify objects of high or low personal priority in a scene
 - ex: In a classroom scene, the player's friends want the player to skip school with them. A calendar is visible in the scene. If the player has enough Priority Sense Skill, they can click on the calendar to see that their basketball team has a big game tonight. If they skip school, they won't be able to play in the game. Their team and their position playing basketball is a high priority for them, so this becomes an important Key Point to changing the Decision Point in this scene. If the player does not have enough Priority Sense Skill, they can see that the calendar is clickable and that they need more Priority Sense to activate it..
- **Refuse Power Skill** - The player can change Decision Points that involve saying 'No' to pressures
 - ex: In a scene, the player's friends are talking about shoplifting from the local convenience store. If the player has a high enough Refuse Power Skill (and have found the appropriate Key Points), they can change this Decision Point to convince their friends to do something else instead —

something more legal.

- **Know Power Skill** - The player can change Decision Points that involve being firm in relevant real world knowledge
 - **ex:** In a scene, the player is in a situation where drugs are being done by injection and characters are sharing needles. If the player's Know Power Skill is high enough (and they have found the appropriate Key Points), they can change the Decision Point with the knowledge that a shared needle can spread disease like HIV/Aids.
- **Me Power Skill** - The player has unlocked and completed a profile about their own personal lives and future
 - **ex:** In a scene in the player's bedroom, the player's boyfriend/girlfriend wants them to engage in unsafe sex. If the player has enough Future Power skill, they can click on a college application on their room desk and collect a key point that points out that an unplanned pregnancy or STD could make it more difficult to achieve their future goals

5. Minigames

There are several minigames in the game- each one addressing one or more [**Player Transformation Goals**](#) and affecting the player's [**Skills Levels**](#). These minigames are not accessible from within Challenge Stack. Rather, the player must choose to power up their skills outside of a Challenge Stack in preparation for trying to complete the Stack. In minigames, the player role plays as a particular character- not the main character. This allows the player to play minigame levels that represent situations of characters not exactly like them, including situations for someone of the opposite gender.

Minigames are designed to teach specific content based on research and publications about achieving behavior change and real world skill development. More information for each minigame [is available here](#) as it is developed.

At present there are 5 minigames, each affecting a single Skill. Each minigame has 10 levels or sections. Additional information about how minigames work overall in the game can be found in the [**Minigame System design document**](#).

6. Consequences Animatic

When the player's session is nearing its end, they will exit the **Lifeline** and enter their **Epilogue**. This transition occurs as a presentation of the **Consequences Animatic** based on the state of each **Challenge Stack** in their Lifeline. This is an animation that recaps the story so far in the player's life. It is presented as a montage of images and audio from the Lifeline Challenge Stacks.

This montage fades out to reveal the player's Epilogue, where the player can more closely examine their Consequences- both imagery and text.

There are broad categories of both good and bad Consequences:

- **Good Consequences**
 - Career Success
 - Things I Want
 - Opportunity

- Good Health
- Strong Family & Friends
- **Bad Consequence**
 - Health Problems
 - Alcohol
 - Drugs
 - Wrong Crowd
 - Trouble with School
 - Trouble with Law

Each of these Consequences then impacts what Items & Photos turn out good or bad in the player's **Epilogue**. For example, an example Bad Health Problem Consequence might be an HIV infection from unprotected sex. The result is increased bad Items in the player's Health collage (like HIV medication) and a sickly Epilogue avatar.

● **Epilogue - The Life I Chose**

After a completed game session or when the player is ready to stop playing, the player sees the **Consequences** of their Lifeline that result, and then is presented with a visual Epilogue of their future life.

The Epilogue is broken into three areas: Career & Education, Home & Family, Health & Life Experiences. These areas each feature the player's Avatar at age 30, looking either healthy or unhealthy, as well as people from the player's life, items from that portion of the player's life, and Photos showing consequences of events that had a direct impact on this aspect of the player's life.

The Epilogue also shows the player how close they are to their character's ideal future, allows the player to customize some items, allows the player to see the cause of the state of the various Items and Photos, and possible rate or label Items or Photos in the Epilogue.

Each collage item is tied to player's progress in minigames & story. Collage items echo items player's customize as part of their Aspirational Avatar. Some collage items are completely determined by player progress:

- Story character outcomes (here's what happened with this character)
- Key memories ('photos' of pivotal events in character's life as a result of challenge stack progress- may match Roll Consequences events)
- Player's visual avatar's apparent health

Some collage items have customizations that can be unlocked by player progress: such as:

- house
- family
- car
- career
- etc

The player can label and/or rate items in their Epilogue

Additional detail about the Epilogue can be found in the Epilogue design document.

7. Metrics & Save Game Engine

The Metrics Engine [tracks information](#) the player's actions in the game and relevant information about these actions.

8. Tutorial

When the player begins the game for their first session, a tutorial guides them through the process of choosing their avatar, completing the first portion of the MyFuture Power, and a tutorial Challenge Stack scene.

9. Last Session Review

When the player starts a session (except for their first session), they see a list of important events from their previous session including:

- Increase in Skill Stats
- Unlocking or Completion of Challenge Stacks
- Completion of Minigame levels

10. Configuration System

To facilitate localization and iteration, Ivy has a configuration system that includes all the localizable text in the game.

11. Help

There is no built in help system in the game. Staff will be on hand while the game is being played and paper instructions will also be available to assist players who need help.

4. Basic Gameplay Loop

This is the typical gameplay experience of the player in a play session:

1. Begin Session
 - a. If first session: create Aspirational Avatar and play tutorial Challenge Scene
 - b. If not: briefly review game so far
2. Enter an unlocked, uncompleted Challenge Stack
 - a. Explore the Challenge Scenes within the stack
 - b. Find new Key Points and new Minigame Cards
 - c. Change some Decision Points within the Challenge Stack
3. Return to Lifeline
4. Enter a Minigame
 - a. Pick a minigame level by selecting a minigame Card
 - b. Play minigame level & earn additional Stars to increase overall Skill Level represented by that minigame
 - c. Earn additional star increases that Skill one level

5. Return to Lifeline
6. Re-enter uncompleted Challenge Stack
 - a. Use new Skill Levels to unlock additional Key Points and complete Stack
7. Repeat from Step 2 until near end of session
8. Enter the Epilogue and see the changes from this session
 - a. Customize anything customizable
9. End Session

.The player's Skill Levels remains intact and continues to advance with every game session.

5. Storyline

The Story of Elm City Stories is a compelling, sometimes gritty tale of common situations that come up in the life of the 11-14 year old minority at-risk kids from middle school until post-High School.

The story is told through 12 **Challenge Stacks**, comprised of 3-5 **Challenge Scenes**. Each Challenge Stack is a mini-storyline that include at least 2 decisions that change the outcome of that storyline.

Some aspects of Challenge Stacks change based on the player's Gender & ethnicity. This includes backgrounds & other characters.

[**The outline of the story and supporting documents can be found here.**](#)

Player Representation in Game

Player initially chooses basic body type to represent themselves as a 7th grader as part of the [**Aspirational Avatar**](#) creation. This includes limited customization of body & clothes as needed to allow player to be satisfied with their avatar

The player's avatar is not shown inside Challenge Scenes. These scenes are considered to be first person.

In [**Epilogue**](#), player sees 30 year old version of their original avatar. There are variations of each aged avatar body to reflect cues about happiness and health in the player's future.

Incorporating The Player's Life Into the Game

When a player first encounters a new character or location, the game names this character or location based off of a person or location from the player's own life that they submitted in the MyFuture profile. For example, when a new positive, female character is introduced in the story, the game chooses from a list of names of female friends which the player entered as part of Me Power. This heightens the connection between the player and the outcome of the game story.

6. Study Format Integration

12 Sessions over 6 weeks

Players will play the game over 12 45-60 minute sessions over 6 weeks- 2 sessions per week.

After the main study there may be followup “booster” sessions where players can revisit parts of the game. However, no booster session specific content is slated for development.

Session Opening - The Story so Far

To help re-acclimate the player to the game, a welcome screen summarizing their current progress will be displayed when the player logs in (excluding their initial play session, which begins with the avatar creation process.)

Session Closing

Players will be prompted prior to the end of the session to enter the Epilogue and see their progress from this session. The Epilogue provides the closing interaction to each session.

7. Game Data & Metrics

An important component to Elm City Stories is thorough data collection. The game not only stores the traditional **Player Game State Data** file which saves each player’s progress, it also generates detailed **Activity Logging Data** log files that chronicle each player’s actions in the game.

Player Game State Data File - Player’s Progress in Game

The player’s progress in the game is stored in **Player Game State Data File**. This file stores that player’s progress to date and is the file that must be loaded by the game to allow the player to continue their game. This file is updated as the player’s game is saved. Saving happens automatically during the game. A snapshot of the player’s saved progress is saved by the study administrators at the end of each playsession.

Representative Examples of Player Game State Data:

- Player’s latest avatar customizations
- Player’s latest progress in each Minigame
- Player’s latest progress in each Challenge Stack
- Player’s important game events during last session (for Last Session Review when player logs in)

Activity Logging Data Files - Detailed Record of Player’s Actions Over Course of Game

Data from the player’s actions in the game is stored in **Activity Logging Data files**. A new log file is created during every session the player engages in the game. This Game Data Log file appends each significant action the player does in the game along with relevant data such as the player’s playerID (unique identifier for the purposes of the study), timestamp, etc. Over the course of the study, many Game Data Log Files will be generated (approx. 12-14 per player). This data will be processed and collated outside the game by the study administrators.

Representative Examples of Activity Logging Data:

- Player chose this avatar customization

- Player touched this button in the game
- Player chose this action in a Challenge Scene
- Player chose this action in a Minigame
- Player applied this label to an item in their Epilogue

An list of Activity Logging Data events can be found [here](#).

8. Audio Direction

Voice Over

To enhance immersion and sidestep issues with reading level, dialog in the game will be accompanied at key points by approximately 1000 lines of voice over dialog.

Music

The game music will be influenced by Hip Hop, which is a popular genre with the target demographic.

Sound Effects

Sound effects will be incorporated as needed to support the gameplay experience.

Physical Audio Setup

Players will be wearing headphones while playing the game.

9. Art Direction

The artistic direction of Elm City Stories is grounded in a style that is a combination of "urban" and "graphic novel". This look allows for slight character exaggeration and expression, but is still more realistic than a highly abstracted cartoon. The recognizable ethnicity and age of characters are important elements of both story and relate-ability to the target audience.

The look feels fresh and modern, and will be appealing to the player. The intent via art is to engage the player emotionally in the characters and choices made in the game experience. Images of actual students and audience to gather authentic clothing, hair, body type and accessory styling are used as real world reference. In combination, the game uses visual cues for ethnicity and exaggeration found in many popular African-American graphic novels- such as Boondocks, DreadLocks, Brotherman, and several other comic inspirations.

This combination of clean stylization and authentic character design creates a unique and engaging look for Elm City Stories.

Further details can be found in the [Art Style Guide](#).

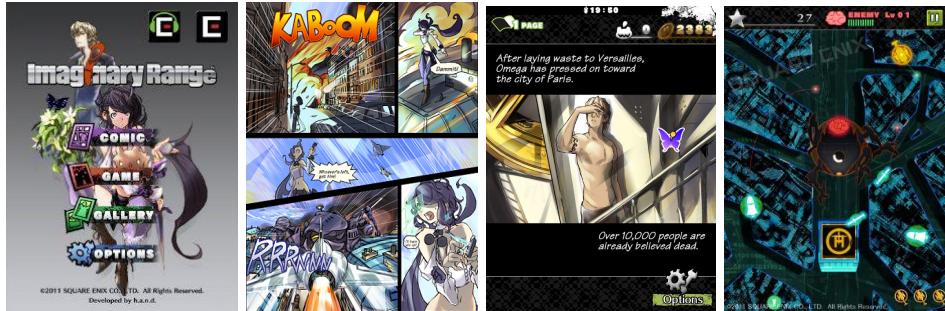
11. Gameplay Reference

Imaginary Range, by Square Enix

on the [Apple iPad](#) | [Gameplay Video](#)

Imaginary Range is an interactive comic book. Players progress through a completely linear series of comic panels. At times, players can collect objects in a panel in exchange for game money or to keep as items to use later. At key panels, players must play a minigame to advance the story. This minigame is somewhat themed around the current story moment. The story has only minor variations within it.

This is currently available as a single episode demo in the US. Once the player has completed the demo, they can unlock a gallery of game concept images with developer notes on them. They can also replay the minigames at their leisure to earn high scores.



Surviving High School, by Electronic Arts

on the [Apple iPhone](#) | [Gameplay Video](#)

Surviving High School is a choose your own adventure where the player's goal is to guide their character through a successful high school career. The game play involves navigating conversation trees to guide the story outcome and affect NPC relationships with the player's character. Interspersed in the story gameplay are themed minigames. The player's choices and performance in these minigames determine their social standing at the ending of the game, including which love interest they end up with.

New episodes for Surviving High School are released on a regular basis- allowing players to play as different characters, including different genders, and to experience different storylines. Surviving High School uses 2D, mostly static visuals.



Argument Wars, by iCivics

online at [iCivics.org](#)

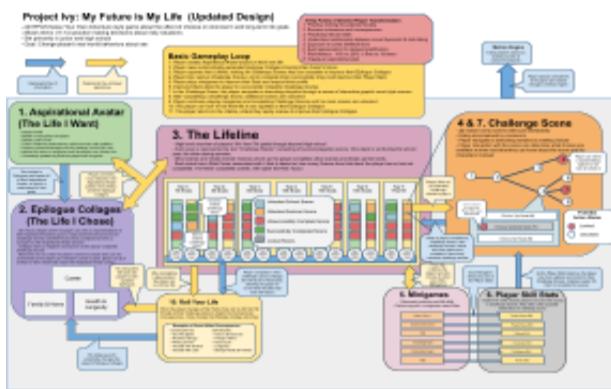
Argument Wars and other games at iCivics convey a lot of curriculum information with gameplay. These games are relatively text heavy. The break curriculum content into approachable chunks and focus on different interactions allowing the player to choose the best possible answer from an array of choices with the benefit of additional information available on demand.



12. Design Evolution

A history of previous design iterations:

v1.1



v1.0

