

LIFE AMONG LIONS

Design Document

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CONCEPT

Life Among Lions is a 2D educational game in which the player controls a lion guardian whose job is to prevent animal herders and lions from interacting to protect the herders, their livestock, and the lions. Players control the movement of the herders by using their mouse to click on the herder they wish to move and dragging to create a new path. *Life Among Lions* takes place in Kenya, Africa as this is where the Lion Guardians organization is based out of and does most of their work. The nature of this setting allows for a more realistic look at the group and their culture, which is important in terms of how they go about protecting the lions. The ultimate goal of *Life Among Lions* is to educate the player about the organization and the Maasai culture. *Life Among Lions* will be made to help educate children between ages six and nine and therefore will be marketed towards schools and parents looking to expand their children's worldly views, while also towards the children in an attempt to get them to seek the game out themselves. The game will feature art that draws upon both the classic mobile art style and the traditional art Maasai art style, offer a unique experience in which the value of the education is both in the game play and the art itself. Maasai art focuses heavily on elongated, stick figure-like humans with geometric patterned bodies and bright, eye-catching colors. Environments would consist of a warm color palette with a mix of bright and saturated colors, with background assets being more saturated and character assets being brighter to add for more visibility.

TARGET MARKET

Our target market consists of educators and parents trying to greater expand children's cultural knowledge. The game is focused on teaching a complex manner in a simplistic and entertaining way to children between the age of six and nine. We plan to market towards schools and educators, presenting a way to educate children about something they would not normally learn about in an engaging way. As we believe it's imperative to display to the teachers of our games educational purpose. It is our intention to provide a lesson plan with the

game to help assist teachers when using it in the classroom. Video games are proven to be an effective teaching method that in addition helps with both hand-eye coordination and reaction time. After we reach out to the schools and educators we intend to release the game to the public on PC and possibly IOS and Android devices so parents and others with an interest in cultures and/or wildlife conservation. In an attempt to better entice parents into buying our game, we plan to produce a story book, that seconds as a coloring book that would come with the game.

We have decided to release *Life Among Lions* on mobile and PC platforms as these are the two most used platforms by children; mobile devices have become the most common gaming device used by children in the United States, representing a 63 percent of the market and desktop and laptop devices represents around 45 percent of the market. Due to these numbers we believe we will be able to reach our target audience without an issue. Following this, in a recent survey of 700 teachers, 55 percent of the respondents said they use games at least once a week in the classroom setting. Taking this into account we believe we will be able to reach the educators too. This will also help us reach children and their parents, as if we can get it in the hands of the educators, the game will be shown to students, and hopefully to the parents by word of mouth.

MONETIZATION

We will monetize our game primarily with grants from various sources as there are a plethora of grants offered for both technology in education and diversity projects focused on diversity. Due to this fact, *Life Among Lions* will be released to free to educators, schools, and after school programs. It is our plan to apply for grants such as:

- *The UPS Foundation to Award in Diversity Grants* which provide funding to diversity projects.
- *The EAS Foundation Grant* which funds up to \$10,000 projects that are looking to create games which are attempting to make a positive impact on the community.

- The *Small Business Innovation Research (SBIR) Program* which provides up to \$1,050,00 in funding to small business firms researching and developing commercially viable education technology products.

These grants would allow us to fund our game development and pay our staff. There are additional grants that we intend to look at for more funding. Following this we plan to release the game for \$4.99. The game will be sold with an additional story/coloring book for children to read and color in along with playing the game. This is to not only help further the educational value of our game but to also to further entice parents into believing they are getting a good deal for themselves and their children.

MARKETING APPROACH

Demos

We intend to reach out to local schools as the Burlington area is a refuge area and has a diverse population. We intend to seek out schools in the area and letting the educators play the game and presenting them with the lesson plan. On top of this we plan to use our social media pages as a way to reach out to parents and local educators to give them the chance to play our game and see what it has to offer prior to purchasing our game. Following this we intend to sell copies of our game to educational review sites such as *www.appspy.com* and *www.teachthought.com*. As we our game will receive positive reviews which will help with our games awareness.

Social Media

Using social media platforms like *Facebook*, *Twitter*, and *YouTube* we plan to reach out to educators, keep them updated with the games progress and stay in contact with customers. The *Facebook* account will be used for promotions and forums to communicate with potential customers, along with the *Twitter* account. The *YouTube* account will be used for promotional videos and trailers in hopes of not only reaching educators, but children and their parents too.

Following this we intend to reach out to educational blogs such as www.edweek.org, dogtrax.edublogs.org, stepinto2ndgrade.com, and sunnydaysinsecondgrade.blogspot.com. We hope by reaching out to these blogs we can get out game some publicity and free advertisement.

Conferences/Conventions

Eventually we hope to show our game off at educational conferences such as the *Innovative School Summit*, *iNACOL Symposium*, *BETT*, and *National Charter Schools Conference*. By attending these conferences, we hope to spread our game awareness while also giving educators and potential customers the ability to get a hands-on experience with our game. Along with this we plan to provide our lesson plan at these conventions to show our games learning outcomes and educational purposes. On top of this we plan to show out story/coloring book off at these conferences in hopes of getting the educators to tell the children and their parents about the book that would come with the purchase of our game, as an additional form of word to mouth marketing.

CONTENT

Life Among Lions is comprised of a main menu, mission select screen, individual mission screens, game screen, pause menu, and a victory screen.

Main Menu

This is the first thing the player sees when they load up the game. The logo of *Life Among Lions* will be on the screen, with a background in the intended Maasai art style. Four options will be available for the player to click on: start, learn more, options, and quit. Clicking on start will take the player to the mission select screen. Clicking on learn more will take the players to a screen with more information about the Lion Guardian organization. Clicking on Options will let the player adjust things like the resolution, volume, etc. Clicking on quit will make the player exit the game (not available on mobile).

Mission Select Screen

The mission select screen will present the player with every single mission available in the game. These missions are displayed via mission previews, which will be displayed in a grid pattern, with arrows on the left and right that lead to another page of missions. When a player clicks on a mission preview, the game will go to that mission's respective individual mission screen. The bottom of the mission select screen will have a button that lets the player go back to the main menu.

Individual Mission Screen

This screen will give a more in-depth rundown of the mission the player selected. A blurb describing the context of the mission will be on the screen, along with art to make the screen look less bland. There will be two buttons available to the player: one to go back to the mission select screen, and one to go into the game screen.

Game Screen

The game screen is a top-down view of a savannah or plain in Kenya. Lions, poachers, and herders will spawn off the screen and will come into the play area. They all travel in a straight line, and when the player clicks on poachers or herders and drags in a different direction, that respective object in the game screen will be moved. A button will be available on this menu that lets the player pause the game, taking them to the pause menu.

Pause Menu

When the player pauses the game, the game screen will freeze and the pause screen will be displayed on top of the game screen. The pause menu will have a button to abandon the current mission and go back to the main menu, a button to continue the mission, and a button to go to the options menu. If the player continues the mission, a countdown from 3 seconds to 0

seconds on top of the frozen game screen will play in order to give the player time to react to anything on the play area.

Victory Screen

Once a player finishes a mission, they will be presented with the victory screen, congratulating them on their victory and showing them the contextual impact they had. This screen will automatically go back to the mission select screen once the player clicks anywhere on the screen.

PLAYER MOTIVATION

The player's motivation would stem from a mix of the feeling of making a difference and the want to overcome a challenge. While the game itself doesn't actually affect the world around them, it promotes a good message of coexistence in a way that sets the player up to a challenge, that being the timer set for every mission. Another reason for motivation is the want to learn more about the Lion Guardians. This second reason might not apply to as many people since the young children playing the game would most likely be more interested in the actual gameplay. Wanting to learn about the organization is definitely an appeal for the older audiences, probably those that bought the game for the 6-9 year olds.

GAME STATES

Mission Rundown

- Before entering a mission, the player is given a rundown of the context of the situation and a ranking on how difficult the mission they selected is
- If the player chooses to go on said mission, they will go into the game scene with that mission in effect

Beginning

- All the player sees is the timer starting from the maximum time limit and an empty background of a savannah
- Objects (lion, poacher, herder) will spawn on the edges off the screen along the edges of the map and begin to move onto the screen in a straight line

Gameplay Loop

- The player must redirect herders away from lions and redirect poachers so they don't harm the lions
- The player has to make sure neither of those things happen for as long as the timer on the screen says
- The mission the player selected will determine the spawn rate of the objects and time of the game

Lose State

- If a lion and a herder or a poacher and a lion come into contact, the player will lose the mission and will be taken back to the mission select screen

Win State

- If the timer on the screen runs out without the lose state ever occurring, the player will be moved to the victory screen, and that mission will be completed
- The win screen will show the player the outcome of their mission and why their success matters

SYSTEMS AND MECHANICS

Systems

- **Movement**
 - All the objects in the game will move in a straight line at any given moment. Some of these objects can have their direction be changed if the player decides to redirect them.
- **Time**
 - The game will end after a certain amount of time, leading to the win state of the game. This time is shown off via a timer on the screen during gameplay.
- **Aggro**
 - When some objects get close to other objects, they will freeze and focus their attention on them entirely. If these objects collide, it will lead to the lose state of the game.

Mechanics

- **Redirection**
 - If the player clicks and holds on either a herder or a poacher in the game scene, the object will stop moving and their sprite will slightly change color to indicate that the player has clicked on them. The player must then drag the mouse in a direction away from where they initially clicked on the object and release the mouse. At that moment, the object they were clicking on will start moving in the direction the player moved their mouse and their sprite will go back to normal.
- **Spawning**
 - The objects in the scene will spawn on the edges of the map just outside of what is visible to the player. Each separate object will have a different spawn percentage, and objects will be spawning at a set interval. When an object

spawns, they will move to a point on the other side of the screen and they will not stop unless they are redirected by the player.

- **Aggro**
 - If a herder gets close to a lion, the lion will stop moving and lock onto the herder. After a short amount of time, the lion will dart in a straight line to the herder. The player must try to move the herder away from the lion before it pounces, but if it does, the player still has a fraction of a second to redirect the herder away from the lion.
 - If a lion gets too close to a poacher, the poacher will stop moving and lock onto the herder. After a short amount of time, the herder will shoot at the lion, killing it instantly and ending the game. The player must try to move the poacher away from the lion before the poacher shoots. The timing on this interaction is a lot stricter than the timing between a lion and a herder.

DESIGN PIPELINE

File Modification

- Designers can set up an SVS repository in order to access the game. From this SVN folder anyone can edit the files needed to add mechanics, etc.

Version Control

- All game files will be pushed to the repository on Pineapple in the same format that Unity reads them and builds a project. This makes downloading the game for development purposes the same for all working on the project.

Project Building and Storage

- The most recent version of all art, scripts, documentation, etc., will be uploaded to the Pineapple repository.
- The project will be built using Unity and uploaded to the Pineapple repository.

Changes Made in Editor

- All units and spawners have public variables that can be modified in the Unity editor. These variables include unit movement speed, unit spawn rate, etc. These are in place for the designers to play around with the balance of the game in a way that is quick and easy.

GAME ENGINE

For developing this game, we are going to be using Unity. There is no real need for high quality art, as our goal with the game is to push across the traditional African art. Because of this, a game engine that is capable of high quality light rendering, texture mapping, etc, is not necessary and Unity fits this description. Our programmers are very familiar with the Unity game engine and feel confident producing games from it. Unity allows for creating builds to multiple different platforms such as Xbox, Playstation, Windows, MacOS, and mobile devices, so if the decision is made to port the game to another platform, it could be done so easily.

ART DIRECTION

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mobile art style and the traditional art Maasai art style, offer a unique experience in which the value of the education is both in the gameplay and the art itself.

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