

POST MORTEM: *INANIMATE ALICE*

Post-Mortem: *Inanimate Alice*

By Amanda Hovious

Abstract

*Inanimate Alice* is a work of interactive transmedia fiction that combines text, animation, sound effects and gaming elements. Originally designed for entertainment purposes, *Inanimate Alice* offers an instructional opportunity to promote 21<sup>st</sup> century skills in an environment that is unique and inspiring to students. Core subjects, such as language arts, can be taught in conjunction with the digital story. The 4Cs (critical thinking, communication, collaboration, and creativity) can be promoted through gameplay, as well as through student-generated games and digital stories that fill in the storyline gaps that *Inanimate Alice* leaves. Overall, *Inanimate Alice* is an engaging experience that is well worth consideration for supporting 21<sup>st</sup> century learning.

Part digital story, part digital game, *Inanimate Alice* ([inanimatealice.com](http://inanimatealice.com)) combines text, images, sound effects, and animation to create a work of interactive transmedia fiction. Over a series of increasingly complex episodes, the story follows the adventures of a young girl named Alice as she grows up to become a video game designer at the world's largest gaming company.

### **Overview**

*Inanimate Alice* is a transmedia storytelling project that began as the backstory to a film that has not yet been made. With the original film's script written by Ian Harper (producer of the series), award-winning author Kate Pullinger and the innovative digital artist Chris Joseph lent their talent to the development of the series. While initially intended for entertainment purposes, *Inanimate Alice* has been adopted by educators as a tool to develop their students' digital literacy skills.

Ten episodes are planned for this series, spanning Alice's life from the age of eight to her mid-twenties. Currently, four episodes have been produced, with the fifth episode in production. Episode 1 begins when Alice is eight years old and living in China. By episode 4, Alice is fourteen years old and living in the middle of England. In each episode, you follow the dark - and sometimes scary - adventures of Alice as she and her parents travel around the world for her father's job in the oil industry. Alice wants to be a video game designer. As an only child who rarely lives in one place long enough to make good friends, Alice creates a digital friend named Brad. Brad serves as a source of comfort to her during frightening moments. As each new episode unfolds, gameplay becomes more complex, and more intrinsic to the story.

### **Learner Characteristics**

*Inanimate Alice* was developed for pre-teen and young adult readers, but the project has also found its way into college and university curricula. Point of view is in first person. Alice's character, nor any other character, is ever seen in any of the episodes. The story was created to be experienced through the eyes of Alice.

### **Interface Design and Interactivity**

At the beginning of each episode, an introduction provides you with directions on how to navigate and participate within that story. Game navigation is linear. As each scene unfolds, you can click on an arrow to go forward to the next scene. As you move to the next scene, a 'table of contents' begins to develop along the right side of the screen. You can click on the images in the 'table of contents' to replay previous scenes.

The primary tool used for interaction within each episode is Alice's ba-xi player. In episode 1, you are introduced to the player, and to Alice's interest in designing video games. You also meet Alice's digital friend Brad, a character she created on her player. Throughout the episodes, the ba-xi player serves as an interactive element within scenes, prompting you to click on key icons or play a game.

Game management is limited in *Inanimate Alice*. Because each episode is fairly short, lasting between 15 minutes and 30 minutes, you are unable to save your place within the story. When replaying a scene, you are taken to the beginning of that scene. No option is available to fast forward or re-wind within a scene.

### **Gameplay**

*Inanimate Alice* could be generally characterized as a role-playing game, much in the way fan fiction generates role-playing. The actual gaming elements within each episode consist of puzzles, and action and adventure games. Some of these are games that Alice has designed herself, so they play an integral part of the storyline. As Alice grows older in each episode, the games get increasingly complex. In episode 1, a simple puzzle game has you taking photos of wildflowers with Alice's ba-xi player, while she and her mother drive through the remote countryside of China looking for her father whose truck has broken down. In episode 2, set in the Italian Alps, Alice has further developed her game design skills with two puzzle games – a bicycle game on her ba-xi player that requires you to match colors, and a game where you select the correct piece of winter gear as the items float around the screen. In episode 3, which is set in Russia, Alice has designed an action-puzzle game which requires you to search for hidden matryoshka dolls in each scene. When you find one and click on it, you slide Alice's digital friend Brad along the bottom of the screen to catch the matryoshka doll as it falls. You must find and catch the matryoshka doll from each scene in order to allow Alice and her parents to pass a security checkpoint in Russia. Episode 4, set in the middle of England, is an adventure game, and the most complex of the games. Fourteen year old Alice has been dared to climb to the top of the stairs of an abandoned building. The stairs give way, requiring you to help Alice navigate her way out of the building.

The games in episodes 1 and 2 of *Inanimate Alice* require logical problem-solving strategies. As puzzles, they represent well-structured problems that can be easily solved by the application of simple principles. For example, in the bicycle puzzle game, the goal is to match the colors of a bicycle that is divided into three sections. This is achieved by clicking on each section until all three sections are the same color.

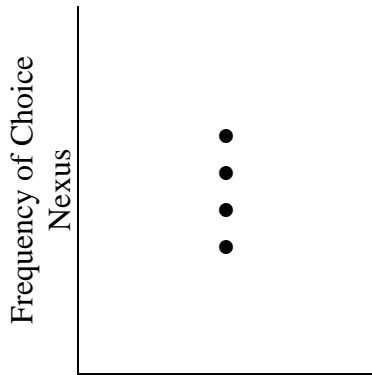
The matryoshka doll game in episode 3 is something of a story problem. The game is set contextually within the storyline. It is a game that Alice herself has developed. She introduces the game at the beginning of the episode, but it is up to you to figure out that the game is to be played throughout the episode, and that there are hidden matryoshka dolls in each scene. It is not until the very last scene, when Alice and her parents are trying to pass through a Russian security checkpoint (to escape some shady characters) that you learn the importance of collecting all the matryoshka dolls. At that point, you must go back to previous scenes to collect all the dolls, so that Alice and her parents can successfully escape. The strategies required to solve this game include logical, algorithmic, and analogical reasoning. Logical reasoning is required to find the hidden doll in each scene. Algorithmic reasoning is required to perform multiple actions to capture the doll in each scene: find the doll, click on it, and then maneuver Brad along the bottom of the screen to capture the doll. Finally, analogical reasoning is required to figure out that each scene has a doll that needs to be captured (i.e. recognizing that scene y is like scene x).

The labyrinth game in episode 4 requires a much higher level of problem solving skills than any other game in *Inanimate Alice*. Logical, analytic and strategic thinking, as well as situated awareness, are important strategies for helping Alice successfully navigate through the maze of the abandoned building. Logical and analytic thinking help you identify the best direction choice at each turn. Strategic thinking helps you eliminate the path choices that you have already identified as dead ends. Situated awareness helps you to analyze and make the most logical path choices throughout the game.

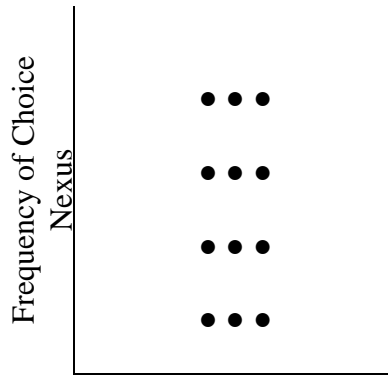
The following iGrids depict the essence of gameplay in *Inanimate Alice*. Figure 1 represents the wildflower puzzle game in episode 1. Figures 2 and 3 represent the bicycle and winter clothes puzzles from episode 2. Figure 4 represents the matryoshka doll action-puzzle

game from episode 3. Figure 5 represents the building labyrinth adventure game from episode 4.

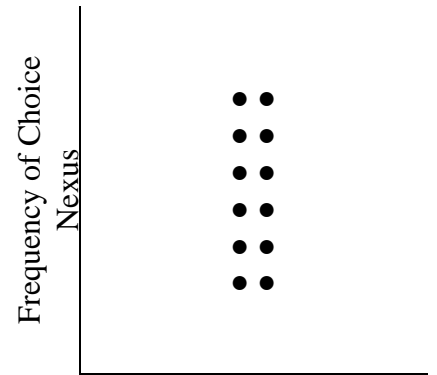
Figure 6 was generated to characterize the overall role-playing aspects of the transmedia project that *Inanimate Alice* represents (Hung & Van Eck, 2010).



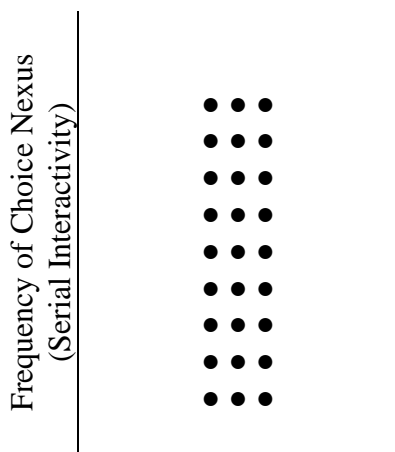
Number of Choices  
(Parallel Interactivity)  
*Figure 1: Wildflower puzzle (Episode 1)*



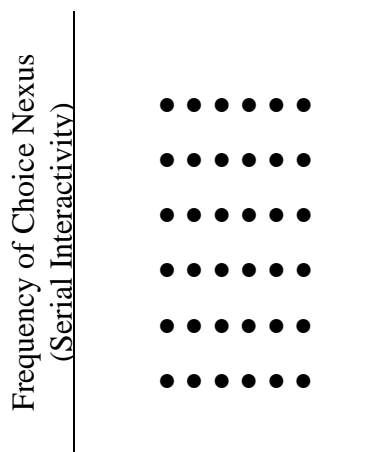
Number of Choices  
(Parallel Interactivity)  
*Figure 2: Bicycle puzzle (Episode 2)*



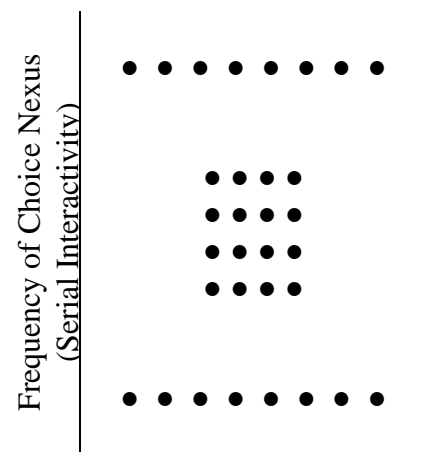
Number of Choices  
(Parallel Interactivity)  
*Figure 3: Winter Clothes puzzle (Episode 2)*



Number of Choices  
(Parallel Interactivity)  
*Figure 4: Matryoshka action-puzzle game (Episode 3)*



Number of Choices  
(Parallel Interactivity)  
*Figure 5: Labyrinth adventure game (Episode 4)*



Number of Choices  
(Parallel Interactivity)  
*Figure 6: Inanimate Alice as a role-playing game*

### **Instructional and Learning Factors**

Based on Gagne's Learning Taxonomy, the learning outcomes for the game elements of *Inanimate Alice* can be found under Gagne's five categories of intellectual skills. They are as follows:

- **Discriminations.** Discrimination requires an ability to distinguish between shapes, colors and/or images. In the bicycle puzzle, you must be able to distinguish between colors. In the winter clothes game, you must be able to distinguish the shapes of the long underwear, boots, hat, fleece, gloves, etc... In the matryoshka game, you must be able to distinguish the shape of the hidden doll in each scene. In the labyrinth game, you must be able to remember and recognize the rooms you have already been through.
- **Concrete Concepts.** Concrete concepts require an ability to categorize objects or events by their physical features. In the winter clothes puzzle, you must be able to distinguish between categories of clothing. In the matryoshka game, you must be able to recognize that when Alice shows you her player, you must interact with it (e.g. click on an icon, play a game). In the labyrinth game, you must be able to recognize the exit signs and what they mean to the game.
- **Defined Concepts.** Defined concepts require an ability to categorize objects or events abstractly. In the matryoshka game, you learn to recognize that each scene similarly requires you to find a hidden doll. In the labyrinth game, you must be able to recognize that ladders and pits are not dead ends.



- **Rule Using.** Rules can be thought of as ‘if-then’ statements. In the matryoshka game, you discover the rule that if you slide Brad under the falling doll, then you are able to capture and collect it. In the labyrinth game, you discover the rules for each segment of the maze (e.g. if you turn left twice here, you hit a dead end, etc...).
- **Problem Solving.** Problem-solving results from the combination of rules into more complex rules. In order to successfully navigate your way out of the labyrinth game, you must combine the set of rules for each segment of the maze to prevent backtracking or hitting dead ends (Gikas & Van Eck, 2004).

Even though *Inanimate Alice* was not originally developed for education, it has been enthusiastically adopted for instructional use in primary, secondary and even post-secondary education. An education pack is available through the *Inanimate Alice* web site, with lessons aligned to the Common Core Standards for reading literature. The objectives of the lessons are geared toward the development of digital literacy via reading in a hypermedia environment. Many students have even created their own digital stories that extend Alice’s adventures. A free tool called Snappy is available on the *Inanimate Alice* web site for that purpose. However, the primary focus for integration into the curriculum has been on the digital story only (not the games). In fact, in episodes 3 and 4, where gameplay is fully integrated into the story, you are given the option to ‘read and play the game’ or ‘read only.’ It can be concluded that some educators may view the games in *Inanimate Alice* as purely entertainment.

The games do have instructional value though. Alice is a character that students can empathize with, and they may even be inspired by Alice’s interest in video game design. This provides a window of opportunity for introducing students to computer science concepts by having them design their own video games through Scalable Game Design. Scalable Game

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Design allows students at all stages of expertise to learn programming based on their experience level. Research has shown that Scalable Game Design is universally appealing to a broad spectrum of students (Repenning, Web & Ioannidou , 2010). Additionally, the labyrinth game in episode 4 can be used to teach 3-D spatial skills to students. Students could cooperatively develop a map of the abandoned building that Alice is trying to escape. Strong 3-D spatial skills are an important prerequisite for STEM fields, such as engineering and technology, and girls tend to have weaker skills than boys in this area (Rafaelli, Sorby, & Hungwe, 2003). In essence, the games provide instructional opportunities for subjects outside of language arts, such as math, science and technology.

*Inanimate Alice* is accessible on any device that supports Flash. This makes it easily adaptable to virtually any classroom environment. Equally adaptable is the content of *Inanimate Alice*. The project is a work of digital fiction. This makes it broad, and without depth. This also creates opportunities for students to fill in the gaps. For example, if a student is developing a digital story that extends Alice's adventures in China, he or she will need to research more about living in China, and even find out more about oil drilling in China. This promotes research and critical thinking skills, and even global citizenship. Likewise, when designing a game like Alice has designed, students will need to be taught programming skills outside the game. The uniqueness of *Inanimate Alice* as a transmedia storytelling project with gaming elements creates an opportunity for broad application of teaching 21<sup>st</sup> century skills across the curriculum.

## Walkthrough of *Inanimate Alice*

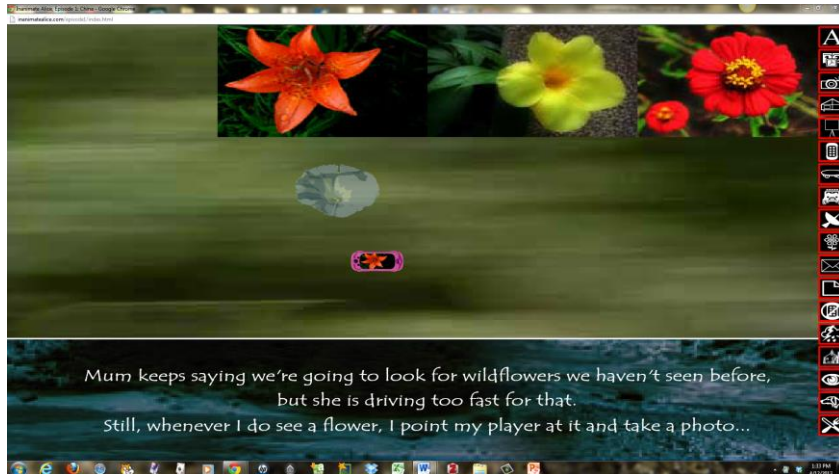
### Episode 1: China

- 1) Alice is eight years old. Alice and her parents are living in far north China. Alice's dad, John, uses a lot of equipment to look for oil. Alice's mom, Ming, is worried that John hasn't returned from a trip in his jeep. They haven't heard from him.
- 2) Alice introduces you to her ba-xi player. You click on the highlighted image on the player, and are introduced to Brad, the digital friend that Alice has created.

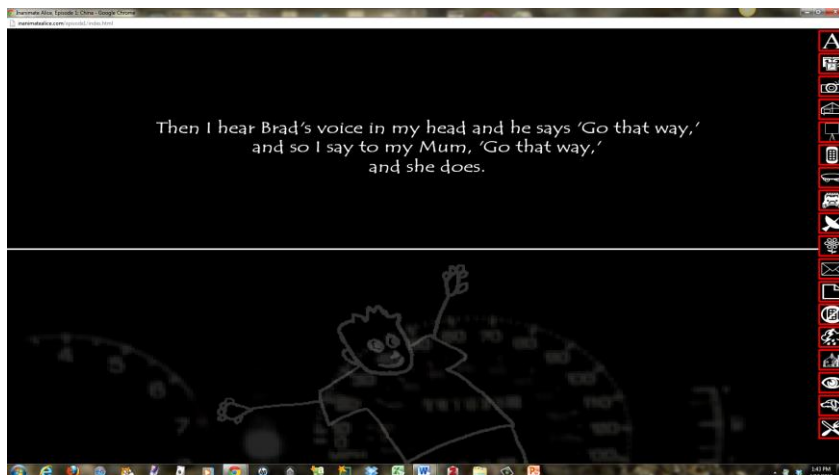


- 3) Alice and her mom go out looking for her dad in their jeep. Alice is told that they are going to look for wildflowers. In this scene, you can click on Alice's ba-xi player to take photos of wildflowers that they pass by. This is an example a defined concept skill – you learn to recognize that you need to do something on the screen in order for the scene to move forward.

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- 4) Alice's mom tells her to shut off the player. She is frightened. Alice is frightened too. Then, she hears Brad's voice in her head. He tells her where to find her dad.



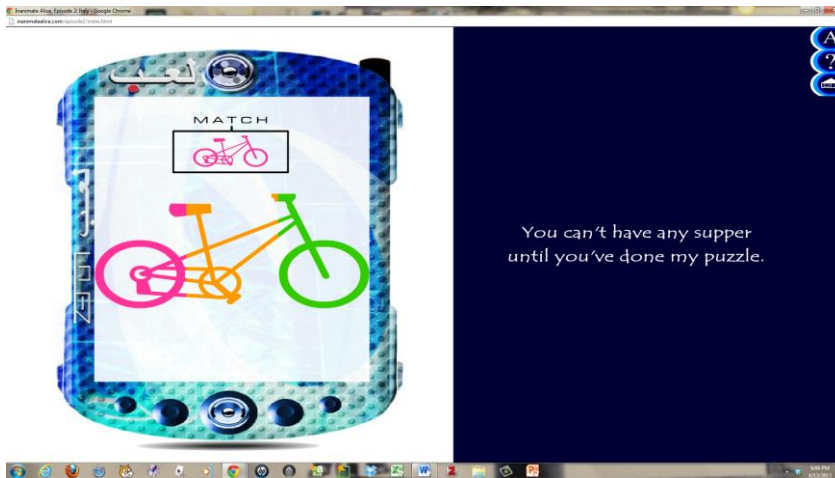
- 5) They find Alice's dad, whose jeep and equipment had broken down.

## Episode 2: Italy

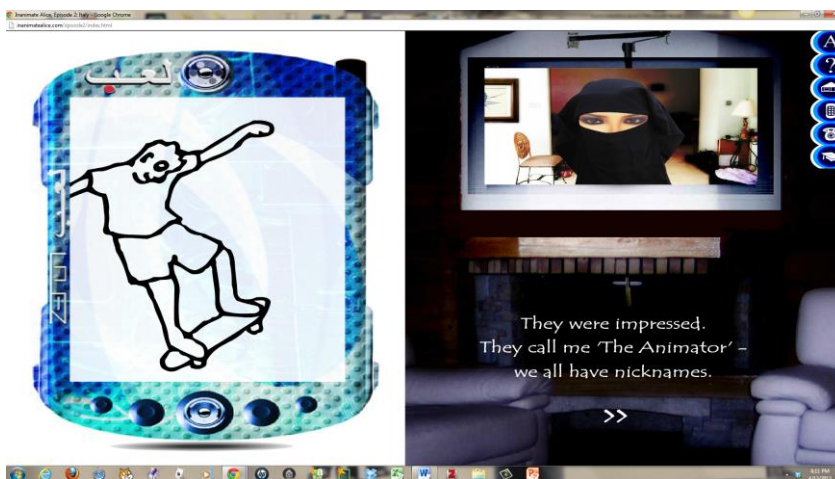
- 1) Alice is 10 years old, and on a ski vacation in the Italian Alps. Alice has 'lost' her parents. She is alone, and is worried that they haven't arrived back at the chalet yet. It's getting dark, the ski lifts are closed, and snow is falling heavily.

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- 2) Alice shows you a new puzzle she built on her ba-xi player. She wants to show it to her dad.
- The object of the game is to match all three sections of a bicycle to the same color. You do that by clicking on each section until it turns pink. This game requires basic discrimination skills – distinguishing between colors.



- 3) Alice is still worried about her parents. She decides to use her player to make a call. At this point, you are prompted to click on the phone icon on her player.
- 4) Alice calls Ayisha, her tutor at home in Saudi. She tells Ayisha that she showed Brad to her snowboarding friends. Her friends nicknamed her 'The Animator.'



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- 5) Alice then gives you some background on her life in Saudi. She shows you images of the compound she lives in. Alice hints that she and her mother rarely leave the compound because exploring town on their own “didn’t work out so well.” Instead, they stay at home where her mother can paint, and Alice can work on her puzzles.
- 6) Ayisha asks Alice where her parents are. Alice remembers that she was supposed to go to the ski school at the end of the day, and then get a ride back to the chalet where her parents would be waiting for her. Alice looks at Brad for reassurance.
- 7) Alice gets dressed to go outside. You are prompted to assist her by clicking on winter clothes items that are floating around the screen. You select the correct item and drag it over the figure, so it can be crossed off the list. This game requires concrete concept skills – distinguishing between categories of clothing.



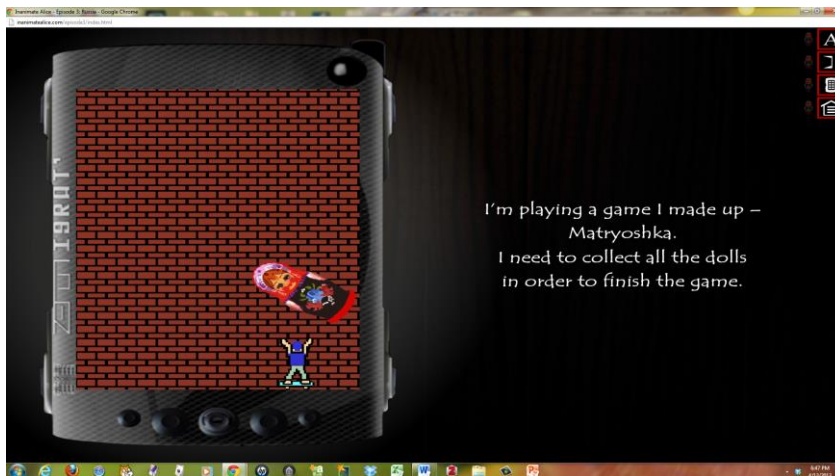
- 8) Alice leaves the chalet. It is dark and the snow is thick and falling fast. Alice is frightened. She doesn’t know where she is going. Suddenly, she falls and thinks she is trapped in the snow. She hears Brad’s voice inside her head. He tells her to stay calm. Alice is able to pull herself up. Then she hears her parents’ voices in the distance. She starts crying and yelling at

them. They ask why she is sitting in the snow - they've brought pizza. Then they all go back to the chalet together.

### Episode 3: Russia

In this episode, you are given the option to 'read and play the game' or 'read only.' The walkthrough below is for the game version.

- 1) Alice is 13 years old. She's living in Russia. The episode begins with Alice hiding in the closet of her bedroom. She hears loud voices. Men.
- 2) Alice's mother told her to hide in the closet when the men knocked on the door. This has happened before. Twice. Tonight, her father was there to let the men in. Alice has her player with her.
- 3) Alice shows you a game she made called Matryoshka. She needs to collect all the dolls to finish the game. This game requires rule using.

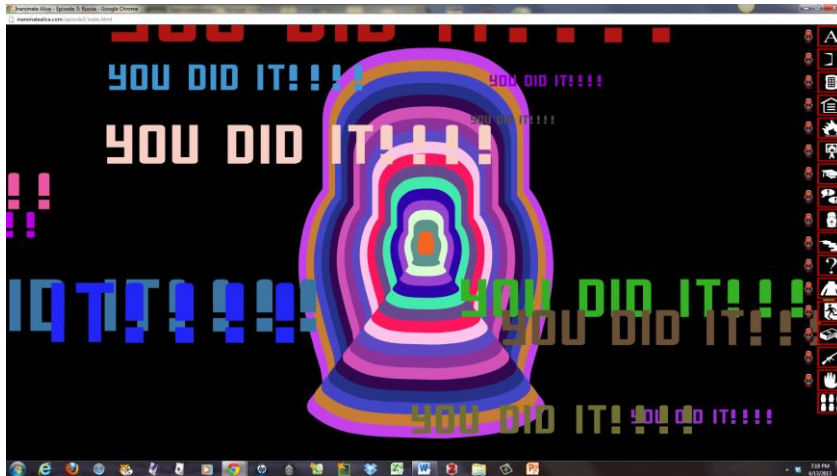


- 4) Each scene in the game contains a hidden matryoshka doll. You need to find each one and catch it by sliding Brad along the bottom of the screen. A matryoshka doll lights up in the 'table of contents' for each doll you have collected.

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- 5) Alice's dad works a lot in Siberia in the oil fields. He and her mother have begun to argue a lot, which is unusual. Alice was supposed to attend the International School, but that didn't work out. Her dad wouldn't let her go because of the risk of kidnappings. Alice is homeschooled instead.
- 6) Alice's dad is in trouble. Alice is scared. They need to leave Russia fast. They escape in the night, leaving their apartment and belongings behind. Alice takes her ba-xi player.
- 7) They pass the first check-point without a problem. As they approach the airfield, they pass through another checkpoint. Alice's dad was not expecting it.
- 8) The armed guard stops them. He walks around the car and shines his light at Alice. He wants her ba-xi player. She refuses. She looks at the player. Brad appears on the screen to reassure her. Alice's mother screams at her to give the guard the player. Two more guards appear. Alice's parents are told to get out of the car. The guard tells Alice to give him her player. Alice decides to show him how many matryoshka dolls she has collected. The guard stares at the screen.
- 9) At this point, if you have not collected the dolls from each scene, the guard says "Not enough dolls. You cannot pass. Find the missing dolls." You then have to revisit each scene where a doll has not been collected, and find and capture the hidden doll. You can tell the scenes in which you still need to collect dolls by the matryoshka symbol next to each scene in the 'table of contents' – if you have already collected a doll in that scene, a matryoshka appears.
- 10) Once you collect all the dolls, you get the screen below. Notice that in each scene in the 'table of contents' on the right, a matryoshka symbol has appeared.





#### **Episode 4: Hometown**

- 1) Alice is fourteen years old. She is living in the middle of England now. Her father is no longer in the oil business after their daring escape from Russia.
- 2) Alice's friends dared her to climb the rickety fire escape of an abandoned building. She accepts the dare, and begins climbing up. Two-thirds of the way up, the stairs begins to collapse. Alice is left dangling, but is able to pull herself up on the remaining stairs. Alice is frightened.
- 3) Alice explains how she ended up in the middle of England. You are prompted to explore the details of her home, school, friends, city, and project.
- 4) Alice shows you her latest project on her player. She created a tool called iStories to help her friends make their own stories. This is similar to the free tool Snappy that is available for download on the Australian version of the *Inanimate Alice* web site. The tool can be used to build visual stories as a part of the *Inanimate Alice* curriculum.

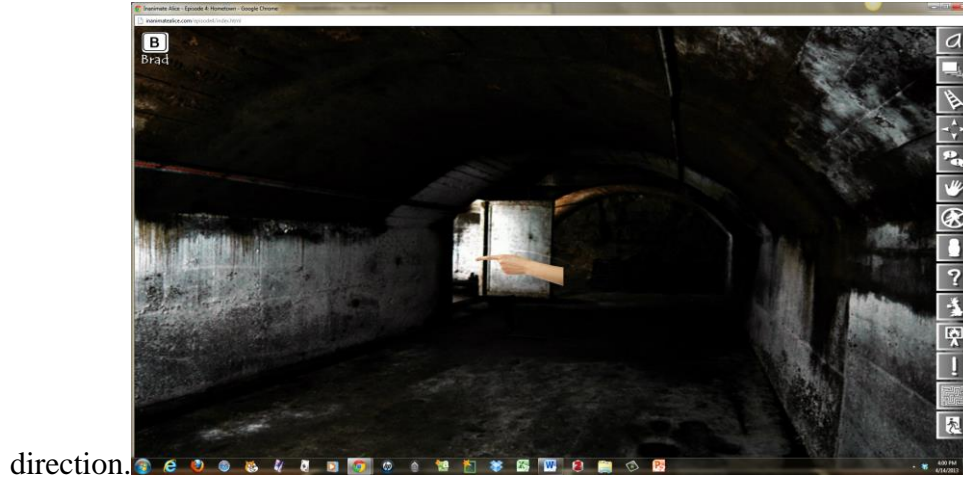
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- 5) Flash forward a few scenes: Alice needs you to help her find her way out of the abandoned building. You are given the option to 'play the game' or 'read only.' The rest of the walkthrough is for the labyrinth game.
- 6) You are inside the abandoned building. If you need help from Brad, you can press 'B' on your keyboard or on the screen. Moving your mouse around the screen changes the direction option you can choose. This is indicated by a finger pointing.
- 7) There is some variance to where you may begin in the labyrinth, so making your way through is more than an exercise in memorizing directions (and not just relying on Brad for help). Problem solving skills that build on rule using are needed. Situational awareness and 3-D spatial skills are learning outcomes that can result from playing this game.

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8) You become aware that in passages where light appears, you should move in that

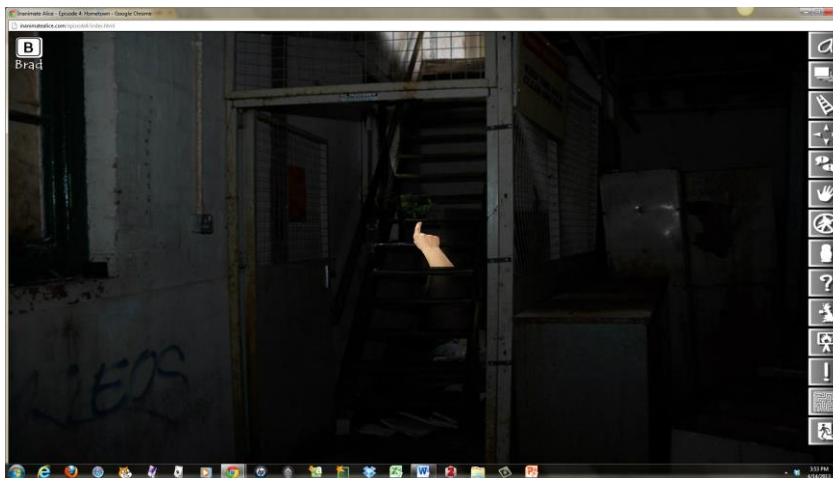


9) When you reach a pit, always go down.

10) When you see a ladder, go up.

11) Fire exit signs are another clue. Always take the fire exits.

12) This is the exit out of the labyrinth.



13) Both the game and the story end once you exit out of the labyrinth.

### **Overall Rating of *Inanimate Alice***

As a work of interactive transmedia fiction, *Inanimate Alice* offers an instructional opportunity to promote 21<sup>st</sup> century skills in an environment that is unique, engaging and inspiring to students. The Partnership for 21<sup>st</sup> Century Skills views the 4Cs (critical thinking, communication, collaboration, and creativity) and 3Rs (core subjects) as a central part of the framework for 21<sup>st</sup> century learning. Information, media and technology skills (i.e. digital literacy) support that framework. *Inanimate Alice* has the potential to promote 21<sup>st</sup> century learning in a way that traditional instruction cannot. Core subjects, such as language arts, can be taught in conjunction with the digital story. The 4Cs can be promoted through gameplay, as well as through student-generated games and digital stories that fill in the storyline gaps that *Inanimate Alice* leaves.

Any educator who is interested in supporting 21<sup>st</sup> century learning in the classroom should consider *Inanimate Alice*. While its storyline is primarily targeted for upper elementary and middle school students, *Inanimate Alice* may also be used at the high school or college level, especially in digital media courses where students are required to generate their own digital media content.

The only technical requirement for *Inanimate Alice* is the use of a Flash-supported device. However, for educators who wish to utilize Snappy, or any digital production tool for student-generated projects, they will need adequate access to a computer lab or computer classroom where these tools are available. Additionally, educators should consider the technology fluency of their students when looking to adopt *Inanimate Alice* in the classroom. Following the digital story requires only basic technology skills. The games in episodes 1, 2, and

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3 are also appropriate for all skill levels. However, the labyrinth game in episode 4 may be too difficult for younger students, and its story content may be more suitable to the middle school level or higher.

Overall, *Inanimate Alice* is an engaging experience that is well worth consideration for supporting 21<sup>st</sup> century learning. Better yet, its technical requirements make it almost universally adaptable to any classroom with adequate technology.

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