

## Assignment #2 - Game Based Learning

### Part B - Exploration of a serious / educational Game

#### SOLVE THE OUTBREAK APP

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#### **What is the age or grade of the learners**

- Grades 6-12 (middle school through high school)

#### **What is the cost (educational pricing?) and what are the hardware requirements?**

- Free to download on a mobile tablet for apple or android or play online
- Must have JavaScript enabled.
- Only works on Chrome, Firefox, Opera, Safari, and IE 10+.
- Safari on windows must have QuickTime installed.
- Game uses local storage, which must not be erased in order to save game progress.

#### **Is it online or computer based - if so, which platform PC/Mac**

- Online or app-based

#### **Is it stand alone or multiplayer?**

- Single Player Game

#### **Which of Gee's Learning Principles were Evident?**

- **Information: Just in Time and on Demand**

#### **Small pieces of information are given and you can read them again whenever you need to**

This game provides clues, data, tips and relevant information in a 5-step process for each outbreak that help you solve it. Only information pertinent to the stage of the outbreak is given.

- **System Thinking - Model-Based Reasoning**

#### **Games are a form of scientific reasoning.**

This game teaches how to use scientific reasoning to solve a realistic outbreak. The complex variables all need to be considered to solve the outbreak with a full score.

#### **Synopsis**

The overall goal of this game is to educate students about epidemiology by having them solve a variety of disease outbreaks by examining clues, data, timelines, and tips. For each outbreak there are 5 clues worth increasing point values (100,200,300,400,500) for a total of 1500 per outbreak

Badges ribbons and achievements are earned as you move through the outbreaks. Points are also accumulated in each level.

There are only two levels in the game but it looks as though they are still adding more levels to the game

- Level 1 (12 Outbreaks) A possibility of 18000 points can be achieved. 17000 are needed to move onto Level 2
- Level 2 (5 Outbreaks) A possibility of 7500 points can be achieved

While there are a total of 17 outbreaks to solve, they are all independent challenges and do not increase in difficulty. Therefore, they may be done in any order (with the exception of having to finish all level 1 outbreaks with a near perfect score in order to access level 2.

This game is a great way to have students study the cause, effect, and remedy of different kinds of disease outbreaks. They must use inductive and deductive reasoning as well as common sense to solve the problems. There are many resources including a glossary, explanations, and teacher curriculum/lesson guides. Although the guide relates to American curriculum, it is easily adapted to meet whichever outcomes are necessary for the target curriculum. The lesson plans provide ways to link the game to the classroom and offer extensions and adaptations for learning in and outside the classroom.

**Consider at least one of these and comment on the following**

**1. Storytelling (character, setting, and narrative - Was this engaging)**

While the game is not one continuous story, each outbreak is a story in itself. As you try to solve the outbreak, you are part of the story. The clues form the narrative and depending on if you choose the correct or incorrect answer, the feedback is different. If you are incorrect, there is an explanation about why your answer is wrong and what you needed to consider to choose the right answer. Each outbreak has its own setting and characters. You are often trying to save "Character A's" life or the lives of a group of people.

**2. Game Play (mechanics - easy, difficult etc)**

The game is very easy to learn. You can navigate through any of the level 1 outbreaks as you like so you can choose missions that you are interested in. Each outbreak is sandboxed so you do not have to have completed the other outbreaks to have the knowledge to complete the next one. Depending on your reasoning abilities and background knowledge, some of the outbreaks can be easier or more difficult to solve on the first try. You can restart missions if you want to try and get more points.

**3. User Experience (User interface - windows, icons, menus etc)**

In the menu, you can very easily maneuver through each clue if you need to go back to find previous information. Any information you might need is at your fingertips. All the instructions are clear and you can return to the main menu at any time if you want to change missions.

**Final Game Assessment**

Overall, this game could be a great addition to a Science and/or Health unit on diseases and epidemiology. Due to the fact that the answers and intended outcomes of the game are finite, there is no opportunity for different variations. The only variation the user can be a part of is the order in which they solve the outbreaks.

Perhaps the most disappointing part of the game is that when you finish all 17 outbreaks, the game just ends with you having accomplished everything. It would have been nice to see a printable certificate for the completion of each level, or something that students could take away.

Unfortunately for us, we are not currently teaching a class where this game would be able to be tested out, but based on our prior experiences and the content, we feel that it would be a good fit as an extension or component of a Science and/or Health unit because it could be used inside or outside the classroom easily.

## **References**

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