
USING GAMES IN EDUCATION PART II

SPRING 2011



FREE EDUCATIONAL GAMES

■ Geography

Discover the World

(http://www.clubbing.com/Pages/Games/GamePlay.aspx?game=Discover_the_World&mode=play)

- Can you keep up with Matt Lauer?
- Select a puzzle and give it a try.
- Consult the map thumbtacks, and then answer questions about his past whereabouts.
- Check Live Search to see if you're right.

FREE EDUCATIONAL GAMES

■ Other Areas

- There are other games that teach relevant and interesting topics such as:
 - Outbreak at Watersedge (<http://www.mclph.umn.edu/watersedge/>)
 - This game introduces you to the world of public health as you help discover the source of the outbreak that has hit the small community of Watersedge and stop it before more residents get sick.
 - *Play Against all Odds* (http://www.playagainstallodds.com/game_us.html)
 - This game puts you in the shoes of a refugee fleeing from his/her country due to political reasons.
 - Players need to escape, learn to integrate to their new life, etc.
 - Carabella goes to College (<http://privacyactivism.org/carabella/carabella.html>)
 - Originally, this game was about finding the right balance between privacy and convenience.
 - However, the game is being expanded now as a year long project.

FOOD FORCE



- Educational game by the World Food Programme.
- WFP's video game to about the logistical challenges of delivering food aid in a major humanitarian crisis.
- Set on a fictitious island called Sheylan riven by drought and war, Food Force invites players to complete six virtual missions that reflect real-life obstacles faced by WFP in its emergency responses both to the tsunami and other hunger crises around the world.

PEACE MAKER

- Simulation game about the core struggles and multiple perspectives in the Israeli-Palestinian conflict.
- Intended for people of all ages who are socially aware and interested in new media that deals with serious content.



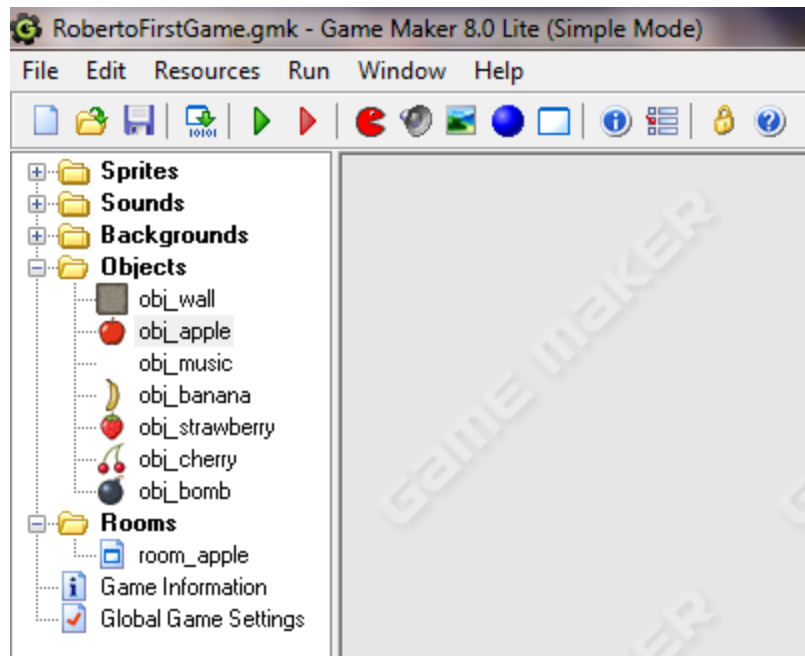
INNOV8

- Educational game by IBM.
- An interactive, 3-D business simulator designed to teach the fundamentals of business process management and bridge the gap in understanding between business leaders and IT teams in an organization.



GAME MASTER

- Software that allows you to create your own games.
- You can your own backgrounds to your games, sound effects, music, etc.



GAME MASTER: STEP ONE -- SPRITES

- A sprite is a 2D image that is integrated into a larger scene.
- You need sprites to start building the game, and game maker contains a small library of them to get you started.

GAME MASTER: STEP ONE -- SPRITES

■ Follow these steps:

1. Click the **create a sprite button** (red pac-man) button on the toolbar.
2. Click **Load Sprite**.
3. Browse for the desired sprite and click **Open**.
4. Give the sprite a meaningful name (e.g. sprite_apple) and click **OK**.

PRACTICE #1

1. Add the following sprites to your game: wall, apple, banana, strawberry, cherry, and bomb. They should have meaningful names (e.g. `spriteBanana`).
2. Save your game in your flash drive as `MyFirstGame`.

GAME MASTER: STEP TWO -- OBJECTS

- Sprites are just images; they don't do anything on their own.
- However, objects in your game must perform actions.
- Objects must move around, react to mouse clicks, etc.
- Thus, the next step is create some objects.
- **NOTE:** Not all objects need sprites.

GAME MASTER: STEP TWO -- OBJECTS

■ Follow these steps:

1. Click the **create an object** button (blue ball) on the toolbar.
2. Click the **Select Sprite** button to use the sprites previously added to your game project.
3. If the object is meant to be solid (like a wall) put the corresponding checkmark.
4. Give the object a meaningful name (e.g. obj_wall)



GAME MASTER: STEP TWO -- OBJECTS


5. Click the **Add Event** button if you need to create events that, when triggered, certain actions will take place by the object. The first event to do should be **Create** since every object needs to exist first, before it can be used.
6. Set the action to be done when the event previously created triggers.
7. Repeat steps 5-6 as many times as needed.
8. Click **OK** when finished.

GAME MASTER: STEP THREE-- ROOMS

- Once that we have a set of objects, we need to have rooms for our game in which to place the objects and where to run the game.
- The room may need boundaries. Otherwise, objects could go off screen.
- A game needs at least one room, but it can have more than one.

GAME MASTER: STEP THREE-- ROOMS

■ Follow these steps:

1. Click the **create a room** button (white rectangle) on the toolbar.
-  2. In the object to add with the left mouse section, click the **Select Object** button to use the objects previously added to your game project.
3. Click on a location of the room where you want the object to appear. You may do it several times in different locations if you want multiple copies of the object to exist.
4. Repeat steps 3-4 as many times as necessary.
5. Give the room a meaningful name and click **OK**.

PRACTICE #2

1. Add the following objects to your game: apple, and wall. They should have meaningful names (e.g. objApple).
 - ❑ The wall object must be solid.
 - ❑ The apple object must be able to bounce when a wall is hit, should move in any direction at random, and when clicked it will add 50 to your score.
2. Resave your game.

GAME MASTER: STEP FOUR – TESTING THE GAME

- Once that you have setup the basics of the game, you can test it to see if its working correctly so far.
- When you test the game, it creates an executable file that can be run from any computer (Windows based) and does not require Game Maker.
- Just press the green triangle to run the game.

EDUCATIONAL GAMES RESOURCES

- Educational computer games can be either purchased or acquired as freeware.
- These games can be acquired as freeware at the following sites:
 - Math Games
 - <http://www.subtangent.com/maths/games.php>
 - Free Software Downloads and Software Reviews
 - http://www.download.com/3120-20_4-0.html?tg=dl-20&qt=educational%20games&tag=srch

EDUCATIONAL GAMES RESOURCES (CONT.)

- ❑ *Freeware Home: Free Software Downloads*
 - <http://freewarehome.com/>
- ❑ *Free Educational Software Downloads Freeware Files.com*
 - http://www.freewarefiles.com/cat_1_13_Educational-Games.html

ADVANTAGES AND DISADVANTAGES OF COMPUTER EDUCATIONAL GAMES

■ Advantages

- ❑ Provides a more engaging learning environment, since a game by nature can provide exciting roles to players.
- ❑ Facilitates learning by providing more visual (colors, textures, etc.) and audio (music, sound effects, etc.) stimulation.
- ❑ Helps meaningful learning by associating new knowledge with existing knowledge.
- ❑ Students learn by doing, instead by just listening.

■ Disadvantages

- ❑ Increase a student's dependency on technology in order to acquire knowledge or skills*.
- ❑ Searching for online games could lead students to computer viruses, spyware, etc. if their computer systems are not adequately protected.
- ❑ Spending too much time on a computer can cause eye-strain, carpal tunnel syndrome and other health problems.
- ❑ Computer educational games may not be found for many specific topics yet; or they might be in different languages.

VIRTUAL WORLDS

- Often mistaken for games, they are computer-based simulated environments intended for its users to inhabit and interact via avatars.
- These avatars are usually depicted as textual, two-dimensional, or three-dimensional graphical representations.
- The computer accesses a computer-simulated world and presents perceptual stimuli to the user, who in turn can manipulate elements of the modeled world.
- Such modeled worlds may appear similar to the real world or instead depict fantasy worlds.
- The model world may simulate rules based on the real world or some hybrid fantasy world. Example rules are gravity, topography, locomotion, real-time actions, and communication. Communication between users has ranged from text, graphical icons, visual gesture, sound, and rarely, forms using touch and balance senses.

VIRTUAL WORLDS

- The model world may simulate rules based on the real world or some hybrid fantasy world.
 - Example rules are:
 - gravity
 - topography
 - locomotion
 - real-time actions
 - communication
- Communication between users has ranged from text, graphical icons, visual gesture, sound, and rarely, forms using touch and balance senses.
- Some examples of virtual worlds include: Second Life, There, and Active Worlds.

SECOND LIFE

- Here is a sample video explaining some features of Second Life.



ACTIVE WORLDS

- Here is a sample video of a user exploring Active Worlds

