

GAMECHANGINEER

Activity Guide

Get Started

- ▶ Go to <https://gc.ece.vt.edu>
 - ▶ If you have a Google account (such as gmail, or your school account that is managed by Google), use option 1 to log in with your Google Account
 - ▶ If you do not have a Google account, you can create your own account under Option 2
 - ▶ You may also use the “Try It Out” as a guest

Activity 1

- ▶ On the left panel, select “Beginner Samples” 1 - Rabbit n Foxes
- ▶ Enter a Title on the right
- ▶ Copy & paste the blue text into the Game Plan textbox on the right

The screenshot shows the GameMaker software interface. On the left, the 'Instructions' and 'Tutorials' panels are visible. The 'Beginner Samples' dropdown menu is open, showing a list of samples: '1 - Rabbit n Foxes', '2 - Breakout', '3 - Simple Invaders', '4 - Simple Jump', and '5 - Downhill Ski'. A red arrow points to the '1 - Rabbit n Foxes' option. On the right, the 'You Are A GAMECHARACTER' panel is visible, with the text 'Explore, Create, Write, and Play'. Below this, there are two text input fields: 'Activity 1' and 'Sample'. The 'Game Plan' section contains the following text: 'Show/Hide Example Game Plan', 'There are 40 carrots.', 'There are 10 foxes near the top.', 'There is a rabbit near the bottom.', 'When the left arrow is pressed, the rabbit moves left.', 'When the right arrow is pressed, the rabbit moves right.', 'When the up arrow is pressed, the rabbit moves up.', 'When the down arrow is pressed, the rabbit moves down.', 'When the rabbit touches a carrot, it eats the carrot.', 'When all the carrots are eaten, you win.'

Activity 1 (cont.)

- ▶ Read the game plan
 - ▶ What do you observe?
- ▶ Click on the “Execute” button on the right
- ▶ On the left panel, scroll down to your game

Instructions

Tutorials

You Are A GAMECHANGER

Explore, Create, Write, and Play

Activity 1

Sample

Game Plan: [Show/Hide Example Game Plan](#)

There are 40 carrots.
There are 10 foxes near the top.
There is a rabbit near the bottom.
When the left arrow is pressed, the rabbit moves left.
When the right arrow is pressed, the rabbit moves right.
When the up arrow is pressed, the rabbit moves up.
When the down arrow is pressed, the rabbit moves down.

When the rabbit touches a carrot, it eats the carrot.
When all the carrots are eaten, you win

Execute

No Music

No Image



Activity 1 (cont.)

- ▶ The game area is called the “canvas”
- ▶ Click inside the canvas
- ▶ Can you move the rabbit with the arrow keys
- ▶ Are you able to eat the carrots?
- ▶ Nothing happens when you touch a fox, why not?

- ▶ How would you add interactions between the foxes and the rabbit (Click ‘Execute’ after you add the sentences)?
 - ▶ **Hint:** When a fox sees a rabbit, it ...
 - ▶ **Hint:** When a fox touches a rabbit, ...

Activity 1B (for Grade 7 and up)

- ▶ Open a new tab and choose “Intermediate Samples” 1B
- ▶ Copy & paste the blue game plan text into the right panel

The screenshot shows the 'You Are A GAMECHA' website interface. At the top, there are three main sections: 'Instructions' (in red), 'Tutorials' (in blue), and 'You Are A GAMECHA' (in blue and red). Below 'Instructions', there is a paragraph: 'A fun platform for creating your video game in object-oriented English. Discover and Practice logical reasoning, problem-solving, algorithmic design, critical and computational thinking, starting with the following Samples!'. Below this, there are three dropdown menus: 'Beginner Samples', 'Intermediate Samples', and 'Advanced Samples'. The 'Intermediate Samples' dropdown is open, showing a list of samples: '1B - Rabbit n Foxes 2', '2B - Breakout 2', '3B - Invaders 2', '4B - Doodle Jump', and '5B - Downhill Ski 2'. A red arrow points to the '1B - Rabbit n Foxes 2' sample. Below the dropdowns, there is a link 'Show / Hide Instruction'. On the right side, there is a section titled 'Explore, Create, Write, and Play'. It contains two input fields: 'Activity 1B' and 'Sample'. Below these fields, there is a button 'Game Plan: Show/Hide Example Game Plan'. The main content area below the button contains the text 'There are ...'. At the bottom of the page, there are three buttons: 'Execute', 'No Music', and 'No Image'.

Instructions **Tutorials** **You Are A GAMECHA**

A fun platform for creating your video game in object-oriented English.
Discover and **Practice** logical reasoning, problem-solving, algorithmic design, critical and computational thinking, starting with the following Samples!

Beginner Samples ▾ Intermediate Samples ▾ Advanced Samples ▾

Check out other Samples

Show / Hide Instruction

Intermediate Samples

1B - Rabbit n Foxes 2

2B - Breakout 2

3B - Invaders 2

4B - Doodle Jump

5B - Downhill Ski 2

Explore, Create, Write, and Play

Activity 1B

Sample

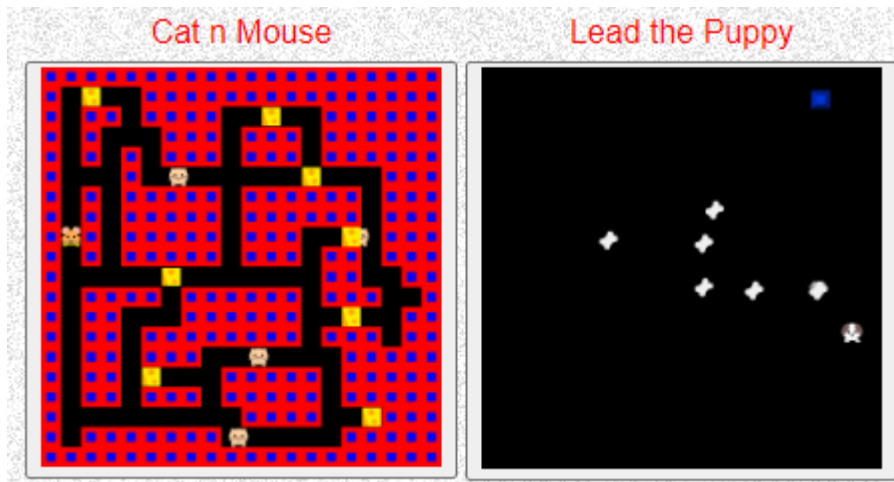
Game Plan: **Show/Hide Example Game Plan**

There are ...

Execute No Music No Image

Activity 1B (cont.)

- ▶ **How would the following sentences change the game?**
 - ▶ When a fox sees the yellow rabbit, it ...
 - ▶ When a fox sees the rabbit that is not yellow, it ...
 - ▶ When a fox touches the yellow rabbit, it ...
 - ▶ When a fox touches the rabbit that is not yellow, it ...
- ▶ Check out “Sample Video Games” (Other intermediate and advanced games) and add a maze to your game, such as the Cat-n-Mouse below



On Design and Debugging





- ▶ Every sentence describes an action or interaction among the characters in the game
 - ▶ Write **in the perspective** of the acting character in the sentence
 - ▶ When **I** see a rabbit, **I** chase the rabbit → When **a fox** sees a rabbit, **it** chases the rabbit
 - ▶ Every sentence is **descriptive**, not imperative
- ▶ Use the WARNING and ERROR messages to help you fix the errors
 - ▶ **Listen** to the sentences to find any typos / grammatical errors
 - ▶ **Read / listen** to the error messages
 - ▶ **Use** the Example sentences (in blue) to help you debug

positions.

NOTE: There is no character controlled by the player.

Pre-processing your actions...

Processing your actions...

- When a fox sees a rabbit, it chases it. --  Listen sen #3 
- **WARNING:** for the second pronoun 'it', it is interpreted as **rabbit**. For sentences containing multiple objects, you should have only one pronoun to reduce ambiguity. Example:
 - **When a fox sees a rabbit, it chases the rabbit.** 
-  Listen to the above message
- **Understood** with 96% certainty. -- **note:** the pronoun 'it' is interpreted as **fox**

Game Plan: **Show/Hide Example Game Plan**

There are 3 foxes.

There are 4 rabbits.

When a fox sees a rabbit, **it chases it.** 

Next Steps

- ▶ Follow the other Beginner and Intermediate Games, and use the Hints given to make games such as [Breakout](#), [Space Invaders](#), [Downhill Ski](#), etc.
- ▶ Check out many other Sample Games and Tutorials

Instructions **Tutorials** **You Are A GAMECHA**

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Beginner Samples ▾ Intermediate Samples ▾ Advanced Samples ▾

Beginner Samples

- 1 - Rabbit n Foxes
- 2 - Breakout** ←
- 3 - Simple Invaders
- 4 - Simple Jump
- 5 - Downhill Ski

Explore, Create, Write, and Play

Title

Your Name

Game Plan: **Show/Hide Example Game Plan**

There are ...

Execute No Music ▾ No Image ▾