Save the Fish – Part I

Hello everyone!

Great to see you again!

In our last mission, we created a game to douse dangerous wildfires to save a large forest and the animals living in it. Today, we are going on another mission!

Our mission will be to try and save aquatic animals living in seas and oceans from the pollution caused by toxic oil spills.

Before we begin our mission, let me tell you a bit about it.

Do you know how oils spills are caused?

Oil spills may be caused due to the release of crude oil from tankers and drilling wells or spills of refined petroleum products such as gasoline and diesel either on land or on sea. According to the U.S. National Oceanic and Atmospheric Administration or NOAA, there were 137 oil spills in 2018 alone. This makes it approximately 11 spills per month on an average. Shocking, isn't it?

Have you ever heard of the Ennore Oil spill near Chennai which is one of the biggest oil spills in India? It is estimated that almost 9.9 million US gallons affected an area of approximately 34,000 square metres. In fact, the Persian Gulf War Oil Spill in 1991 released 380 million to 520 million gallons into the gulf making it the biggest oil spill in history.

Oil spills at sea are generally much more damaging than those on land since they can spread for hundreds of nautical miles. They destroy ecosystems, often disturbing aquatic biodiversity. They can kill seabirds, mammals, shellfish and other organisms that they coat.

Oil spills can also cause immediate fire hazards. The Kuwaiti oil fires led to air pollution that was responsible for respiratory distress among thousands of people.

I am sure that after hearing about the immense damage that oil spills cause, you must be now ready to take on this mission.

We will create a game in scratch to help the fish stuck in oil spills in the sea to navigate safely to clean waters. We have to be careful and make sure that our fish does not touch the oil spills. If it does, the fish will die. Let us get going and use our creativity to code this interactive navigation game called 'Save The Fish'.

In order to create our 'Save the Fish' game, we will work on four distinct tasks.
a)   Designing the screen for the game
b)   Coding the Fish sprite
c)   Coding the Oil Spill sprites
d)   Bringing all the elements of the game together

Task – I: Designing the screen for the game

Let us begin with our first task of designing the Screen for the 'Save the Fish' game.

As usual, delete the cat sprite and any other images so that the screen looks empty. Add the backdrop of an ocean or a sea since fish live in water. Go to the extreme right at the bottom and click on the image icon. Choose an image from the available backdrops, create an image or upload an image. Go the costumes tab and convert the image into a vector. Resize the image to fill the screen.
Now we will upload all the sprites that we need for the game. Begin by creating or uploading the oil spill sprites. We are using 3 different oil spill shapes which we will upload. Don't forget to convert each sprite into a vector after uploading them.

Our next step is to upload the fish sprite. Use the flip button to change the direction of the fish, if needed. Convert the fish into a vector and resize appropriately.

We will now adjust the sizes of the oil spill sprites and arrange them on the screen for the game. Make sure that you keep adequate distance among the oil spill sprites so that the fish can swim through them easily. The difficulty level of the game depends on the space among the oil sprites. The narrower the distance between the sprites, the more difficult the game will be.

Our fish and oil sprites are ready. We need 2 more sprites to denote the start and finish positions for the game. Click on the cat icon and go to paint. Select the text tool and type 'Start'. You can beautify the characters according to your requirements and then covert the sprite into a to vector. Repeat the same process for creating the 'Finish' sprite. You can also duplicate the start sprite and edit it like we are doing. Don't forget to rename the sprites and position them appropriately.

Our first task of designing the screen is over.

In the next video, we will begin coding the game.