**Rocket Launch**

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**Challenge:**

Create an environment with a drawn rocket which includes four buttons. The buttons should have the following functions:

1. Launch the rocket toward the sky with repeated button clicks. Each click will move the rocket higher up.
2. Launch the rocket with one button click. The rocket will move at a steady predetermined rate.
3. Launch the rocket with one button click. The rocket will move at a rate that is adjustable by the user. This requires the placement of a Watcher variable on the form in addition to the button.
4. Reset the rocket to the bottom of the form ready to be launched again.



**Things you will need to know:**

* How to create a button from script.
* How to use, pause and launch a timer script.
* How to create and use a variable.
* How to create a watcher variable.
* How to pause a running timer script.

**Extensions:**

* Create a button that that will more accurately recreate the flight of a launched rocket by flying slower at first and then gaining speed.
* In addition to the speed change mentioned above, arc the rocket either left or right has it gets higher.
* Rocket automatically resets when it hits the clouds.

**How to do it:**

First draw the rocket and clouds. Then move the rocket to the bottom of the screen and note the y-position. This will be the y-position used in the Reset button. All of the scripts will make some adjustment to the y-position of the rocket.

To get a button, create the script and then click on this image and select, “button to fire this script”. To get Watcher variable, first create the by clicking on wide V on the top viewer, then drag the viewer variable onto the form.

Buttons 2 and 3 will require two scripts each. One script will have a paused timer to move the rocket and other script will start the script to unpause the timer. Note: the Start and Pause script can be found by going to the Rocket viewer and search for Start and Pause.

Button 4 (Reset) does three things. It resets the y-position of the rocket and pauses the auto launch buttons 2 and 3.

