<div align="center">"A trip in space"</div>

"**A trip in space"** is an interesting theme, which allows students to get familiar with the basic notions.

Step 1: Sprite and stage

Let's start by choosing the backdrop "Stars" from the Library. Now, we introduce some sprites from the Library: the Sun, Earth, Planet, Star1 (which we should multiply 4 times), Scratchy. These characters can be grown or shrunk, using the tool Picture. In order to learn how the coordinate axes work, the students can be asked to place the Sprites in different spots, like: the Earth in the centre (x:0; y:0), the Sun in the top right corner etc.
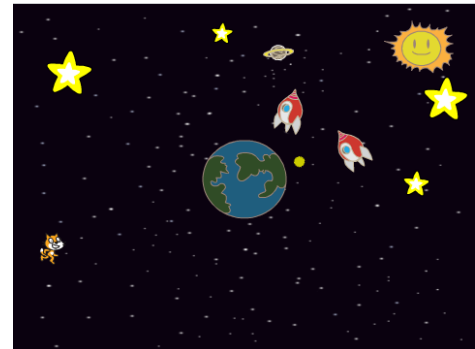
Step 2: Looks

We can now modify the sprites' appearance. (e.g.: We can provide Scratchy with a cosmonaut's helmet, make a star smile etc.). Also, we must draw the Sprite Moon, and place it in the proximity of Earth.
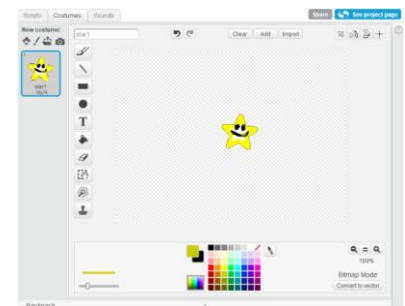

Step 3: Sprites coming to life

We start using simple motion instructions, such as move or rotate. It is important for the students to practice these instructions. They can be asked to move the Moon around the Earth, to make a star blink or to randomly move a spaceship.

Step 4: Sprites responding to Events

When the Space key is pressed, the Moon Sprite changes its colour.
When the up-arrow key is pressed, the spaceship goes to the Moon
When the arrow keys are pressed, Scratchy moves in the corresponding directions
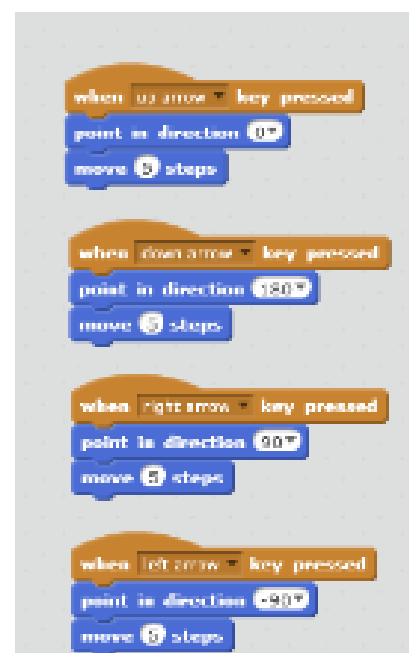
Step 5: Variables
We can now introduce the variables, so our project could become more attractive by starting to look like a game. We use the timer variable, which we set on 0 at the beginning, so Scratchy must pick up the stars as soon as possible. We also need a variable to keep the score. When Scratchy touches a star, it disappears, and the score increases. When all the stars are gone, the game is over and it shows us the time.
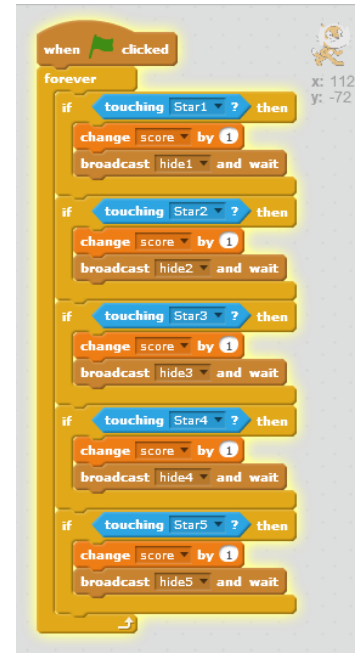
Step 6: Challenge!
Using the cloning related blocks from the Control category, make more stars.
The game has to end at a certain time, set by the programmer.
The students are encouraged to add new sprites and rules to improve this game. (so it becomes more challenging).
This first application enables the students to know how to use the basics of Scratch and to be more confident in their ability of creating apps.
We suggest other interesting themes related to Space: Moon's or Sun's eclipse, the Earth's rotation around the Sun, How to draw a constellation, Walking on the Moon, The Moon's phases.