**WEEK 6 – Race in Space**

**Unit:** Number Sense and Numeration

**Grade:** Primary (K-3)

**Curriculum Expectation**
 Describe relationships between quantities by using whole-number addition and subtraction (e.g., “If you ate 7 grapes and I ate 12 grapes, I can say that I ate 5 more grapes than you did”)

**Activity**Note-It is recommended to complete the following activity using Scratch Jr (downloadable on a tablet or a Chromebook). If you do not have access to Scratch Jr and the student is capable, they may wish to use the website https://scratch.mit.edu. Another option would be to print the coding blocks below and have the students arrange them to create a code, fill in the white bubble with the number of repeats of an action then complete the code with two different “robots”(ex. Game pieces, blocks, stuffed animals, etc.)
Sprite: the character that does the movement in the game by following the algorithm.
1) Students will use Scratch Jr to describe the relationship between quantities.
2) Students will change the background to outer space and pick any 2 different Sprites.
3) Students will bring their 2 Sprites to the far-left side, one above the other (imagine that your Sprites are getting ready to start a race and are waiting behind a line!) For students using the printed coding blocks make sure your two “robots” are also starting at the same spot.
4) Using the chart below students will program their Sprites to move to the right the specified number of steps for each race.
5) Students will then start the race by pressing the green flag. Don’t forget to cheer on your Sprites and watch to see which Sprite travels the farthest!
6) Finally students will use their code to help them determine the difference between the number of steps of their 2 Sprites, fill in the chart and write a sentence describing the relationship between the quantities.
Students may wish to use the following sentence and to fill in the blanks.
If the \_\_\_\_\_\_\_\_\_ (Sprite 1) ran \_\_\_\_ steps and the \_\_\_\_\_\_\_\_\_ (Sprite 2) ran\_\_\_\_\_steps then Sprite 1 ran \_\_\_\_\_ fewer/more steps than Sprite 2.

**Check for Understanding**
 I understand the importance of each piece of ‘code’
I can describe the relationship between quantities by using addition and subtraction

**Materials**
 Recording chart (attached below), Scratch Jr/ Scratch/ printable coding blocks (attached below), 2 “robots” (ex. Game pieces, blocks, stuffed animals, etc.) pencil and an eraser

Race in Space Recording Chart

|  |  |  |  |
| --- | --- | --- | --- |
| Race # | Steps of Sprite 1 | Steps of Sprite 2 | Difference in Number of Steps  |
| Race 1 | 12 | 10 |  |
| Race 2 | 18 | 6 |  |
| Race 3 | 5 | 13 |  |
| Race 4 | 9 | 17 |  |
| Race 5 | 16 | 8 |  |
| Race 6 | 15 | 14 |  |





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