BITS & BRICKS – TEACHER'S NOTES

Sequence programming with behavior blocks

Grades: 2-5 (Age 7-10)

Duration of lesson: 40 minutes to 1 hour.

Objective: Have fun while using basic math and logic to solve creative puzzles

Introduction: Bit is a little, adventurous LEGO® robot that has lost its programming and needs help to get through a maze. You do this by creating a sequence of small behavior blocks.
The robot Bit is representing what is happening in a computer where detailed instructions are needed in order to do anything. The building blocks represents basic programming commands and the sequence is the final code.
Using these simple building blocks to program a computer is an introduction to how more advanced programming can be made with real world elements like LEGO® WeDo or LEGO® Mindstorms.

Activity: The robot Bit is controlled by putting together behavior blocks in a sequence. Each block contains an instruction that tells Bit to move, turn or express himself with a sound.
Drag and drop the behavior blocks to the sequence bar to help Bit get around the maze. Remember that it is the robot Bit that should read your code – and that turning left or right for him may be different from how you see it.
It is important to be accurate and specific when giving instructions as Bit may otherwise hit walls or other objects that will stop the execution of his program.
Simple loops can be used to repeat the same command a number of times, instead of manually adding the same instruction multiple times.
Each level in the maze will contain good opportunities to explore the world of Bit. Hopefully you can help Bit find its way home.