



# Bits & Bricks

Teacher notes

## LESSON OVERVIEW

The robot Bit is controlled by putting together behavior blocks in a sequence. Each block contains an instruction that tells Bit to move, turn, switch on/off, express himself with a sound etc... 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.

## GRADE

2 – 5 (Age 7-10)

## RECOMMENDED DURATION OF LESSON

40 minutes to 1 hour – ( levels 1-8 approximately)

## THE STORY

The story so far... The Kingdom of Cybit is a happy and friendly place floating on a digital cloud in Cyberspace. It is populated by 'Bits' – little LEGO® robots who solve puzzles and learn programs. Cybit is ruled by King Bit and his daughter, Princess Bittina, who protects the secret of CODEX – the digital building blocks that help Bits solve puzzles. One day, a mysterious container appears on Cybit. The container opens suddenly, unleashing the TERA VIRUS. The TERA VIRUS spreads quickly. It changes every Bit it finds into Badbots. The TERA VIRUS starts to infect all of Cybit. Even King Bit became infected. Bit and Princess Bittina narrowly escape Bad Byte, but the TERA VIRUS is out of control! To avoid the TERA VIRUS, Bit goes into shutdown... can you reboot him and save Cybit?





## INTRODUCTION TO LEVEL 1

Help Bit to the finish line by coding a sequence that helps him move through Cybit. Code his movements by clicking on the blank sequence at the bottom of the screen. Choose from moving straight or turning and select the number of steps you'd like Bit to take.

## INTRODUCTION TO LEVEL 2

Bit needs help again getting to the finish line. But beware of springboards that make Bit jump and trapdoors that take Bit to another land. If you do fall down a trapdoor, code Bit to get out by getting him to another trapdoor. Code his movements by clicking on the blank sequence at the bottom of the screen. Choose from moving straight or turning and select the number of steps you'd like Bit to take.

## INTRODUCTION TO LEVEL 3

Help Bit to reach Bittina. Code his movements by clicking on the blank sequence at the bottom of the screen. Choose from moving straight or turning and select the number of steps you'd like Bit to take. Portals will instantly teleport you to another portal of the same colour. This might be on the same level, or another part of Cybit. There's another special building block you might like to try called Chat. You can make Bit giggle, talk and whistle as you solve puzzles. Watch out for tiles that are infected by the TERA VIRUS. Walking on them will reboot Bit and you will have to start again.

If you managed to complete Level 3, move on to the next level and see how far you can get beyond that. Watch out for "lever" blocks which are introduced in Level 8.

