**Sphero and block coding**

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| **Subject Areas** | Computer Science, engineering  |
| **Grade Level(s)**  | 7th to 12th grade  |
| **Learning Objective(s)** | 1. Describe the importance of writing pseudocodes before programming
2. Write a short program for a robot using block coding to complete a simple task
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**Activity 1. Writing pseudocodes. After showing the visual presentation (**[**The fast and the furious. Coding with Sphero**](https://docs.google.com/presentation/d/126TpzbOOvV3OO7L5Ydf1yReXeL2Djo30sRBw44TlR2k/edit#slide=id.gb64fc3a4a2_0_119)**) and the maze to students, let them brainstorm in groups to write a pseudocode for the task.**

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| **Task**  |  Your task is to program Sphero to complete a maze or labyrinth as fast as possible. Your robot cannot get out of the maze area and your starting point must be placed at any of the two ends of the maze. The objects placed on the pathway cannot be pushed or touched by the sphero ball and the toy must run completely on the program designed. Students cannot stop or reposition the ball during the test or competition.  |
| **Pseudocode**  |  |

**Activity 2. Check for understanding**

1. If you want the robot to move 180 degrees clockwise at a medium velocity for 5 seconds, how would you design the block coding?

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1. If you want the robot to move 45 degrees counterclockwise at the maximum velocity for 4 second, how would you design the block coding?

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**Activity 3. Programming Sphero with block coding. Screenshot your program and insert it on the space provided. Then, answer the reflection questions.**

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1. **Was Sphero able to perform the task? What are possible errors you made?**

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1. **What did you learn today? How do you plan to apply what you have learned?**

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