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Using micro:bit to develop a table lamp

Subject: Science **Level:** Primary 5
Unit: Light
Topic: Intensity of light

Summary

Students will be exposed to the world of programming. They will see for themselves how a simple programming device can help them in their everyday life. Students will use the micro:bit to develop a table lamp that will switch on by itself when it gets dark.

Prior Knowledge:	
Objectives:	Use the micro:bit to develop a table lamp that will switch on by itself when it gets dark
Resources:	micro:bit with battery pack Computer with Internet access Recycled building materials

Step/Time	Teacher Activities	Purpose	Resources Needed
Pre-activity			
Lesson Development	In this activity, students will be giving each other instructions to allow them to successfully navigate a maze. Students will be grouped in pairs. 1 member of the pair (student A) will be giving instructions while the other member (student B) who is blindfolded will use those instructions to navigate the maze. Student A can only give 1 instruction at a time. After each instruction, student B must execute the given instruction. Each instruction should only be 1 statement at a time, e.g. “turn 90 degrees to your right) After this activity, teacher will make the link between the activity and how programming works	To understand the importance of giving clear instructions when doing programming	

Main activity			
Lesson Development	Teacher will inform the group that they will be designing and constructing a table lap and programming it to switch on automatically when it is dark. It will be a group work and at the end of the project, there will be a mini competition to determine the best table lamp. In groups of 3, students will design and construct a table lamp and program it. Groups will be given the opportunity to test their table lamp On the final day, each team has to present their table lamp	Students will be exposed to the world of programming. They will see for themselves how a simple programming device can help them in their everyday life.	▪ micro:bit with battery pack ▪ laptop with internet access ▪ building materials

Additional Remarks: