Technology-enhanced Learning - Activity Plan

Name: *Jurate Urboniene*
Grade / Course: *Robotics with Lego Mindstorms EV3 education*
Length of Activity: *50 minutes*

Lesson Summary:
Students will get acquainted with the color sensor operation principles and learn how to program the robot action when color sensor detects a target color.

Lesson Objective:
To provide students with an opportunity to develop a process which engages them to create program which controls robot's actions when color sensor reacts to a target color.

Resources/Technology – Teacher
Interactive Whiteboard
Online Resources
- https://www.youtube.com/watch?v=if1yk4WiaiQ "EV3 Color Sensor"
- https://www.youtube.com/watch?v=IplkMchOabc "Detecting Light"

Resources/Technology – Students
Computer Lab or Student Laptop setting
Color sensor working principles, color sensor programming
Online Resources
- https://www.youtube.com/watch?v=aJToMY-3Mq4 "How to Program the EV3 Color Sensor"
- https://www.youtube.com/watch?v=n3HrnskQ92E "How to Make an Effective EV3 Line Follower in 2 Minutes!"
- https://www.youtube.com/watch?v=lTrtXxk_dPg "Lego EV3 Color Sensor - Follow a Line"
- https://www.youtube.com/watch?v=P50CE0xwhvo "What is the Best EV3 Line Follower For You?"

Intended Curriculum Learning Outcomes
- Students will be familiar with color sensor working principle
- Students will develop program for the Lego Mindstorms EV3 robot
- Students will have an opportunity to try develop program and evaluate their own knowledge and skills

Instructional Activities
Teacher will review and present video material using interactive whiteboard to the whole class. Teacher to provide instructions on how to create program for the robot and the web links to the resources provided to students. (15 minutes)
Students are given time to complete the lesson activities (35 minutes)

Learner Assessment
   Students will demonstrate robot's actions.