STEMS ROBOTICS PBL LESSON PLAN

Lesson 6:- Switches

**DURATION:**  72 mins

**OUTCOMES:**-

MA4-1WM Communicates and connects mathematical ideas using appropriate terminology, diagrams and symbols

MA4-2WM Applies appropriate mathematical techniques to solve problems

MA4-3WM Recognises and explains mathematical relationships using reasoning

SC4-WS6 A student follows a sequence of instructions to safely undertake a range of investigation types, collaboratively and individually

SC4-WS7.1 Students process data and information by:

a. summarising data from students’ own investigations and secondary sources (ACSIS130, ACSIS145)

e. applying simple numerical procedures, eg calculating means when processing data and information, as appropriate

SC4-WS7.2 Students analyse data and information by:

d. using scientific understanding to identify relationships and draw conclusions based on students’ data or secondary sources (ACSIS130, ACSIS145)

SC4-10PW PW1 Change to an object’s motion is caused by unbalanced forces acting on the object. (ACSSU117)

a. identify changes that take place when particular forces are acting

b. predict the effect of unbalanced forces acting in everyday situations

**BIG IDEA**:- Students will learn how to program their robot to decide what to do out of different choices  
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**Activities:-**

1. Work through the Switches Powerpoint through to slide 3
2. Split up class into groups as needed and give each team a copy of the Switches Challenge Worksheet.
3. Students work at own pace through Challenges 1 and 2 (Slides 4 and 6). Facilitation from teacher.
4. Post challenge:- Challenge Solutions (Slide 5 and 7).
5. Close lesson

**Reflection/Homework/Evaluations**

What use could you make in using a switch in your projects design? Will it help you to achieve the goal you are looking at?

**Do Now**