## 30 Exciting (STEAM\*), Pat's Projects you can Build, Code and Run with a Microcontroller.

-Picaxe

Pat McMahon-3/2/2018

NOTE— All of Pat's Projects use his Picaxe 14M2 Blackboard Microcontroller, but you can use any other suitable Microcontroller.



1 - LED Light Tower



2 - 5x5x5 LED Cube



3 - Basketball Counter



4 – Switch Activated **Jumbo 7 Segment Demo** 



5 - 10 LED/12Tunes



6 - Light & Sound



7 - Infrared Robot **Buggy** 



8 -"Rock & Roll' Marble M/c



9 -"Ring Around Marble M/c



10 -Hexapod Robot



11 - Animated Disc



12 - ReCycloBot



13 - 5x5 Dot Matrix Display



14-Robotic Arm -Servo



15 - Interactive OLED



16 - Ultra Sonic **Tape Measure** 



17 - Tri Temp Probes



18 — Analog/Digital Display



19 - Servo Coding Demo



20 - Dancing Circles



21- Dancing Squares



22- Animated Disc Demo



23—Swinging Musical 24–5x5 Coding Demo **Jingle Bells** 





25-5 Bi-Directional **DC Motors** 



26- Robotic Arm DC Motors



27 - Infinity Mirror



28—Pneumatic **Can Crusher** 



29-5x5 Dot Matrix 20 mm Jumbo LED's



30 - LED Light Bar (25 LED's)

<sup>\*</sup> STEAM - Science, Technology, Engineering, Art, Mathematics.