**Science Taster Day – Engineering**

**Build a Light Dependent 555 Astable Oscillator – Here is the Component Layout**



**Layout Photo**



**555 Timer Astable – Buzzer**

* This circuit uses a **CAPACITOR**.
This is like an electronic bucket.
It’s repeatedly filled and emptied.
* The two **RESISTORS** control how quickly the **CAPACITOR** fills and empties.
* The light dependent resistor (LDR) makes it possible to play a tune by shading the light.
* The 555 Timer fills the **CAPACITOR** until it’s 2/3 full.
Then it empties it until it’s 1/3 full.
This repeats for ever.
* The 555 Timer also drives the **SOUNDER**.
* The **DIODE** passes current in one direction only.
If you wire up the power the wrong way round, this protects the circuit.