

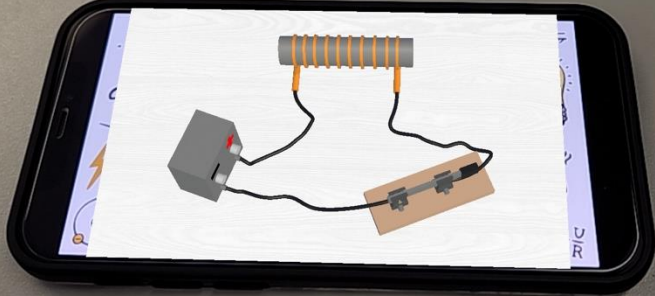
Lab - Strength of Electromagnet

Steps to follow-

1. Press the Lab – Strength of Electromagnet button.
2. The camera of the phone will open after pressing the Lab – Strength of Electromagnet button.
3. Please hold the camera on top of the image target.
4. An animated experimental setup with a wired coil, a power source and a key will be visible.
5. Number of turns of the wire can be changed with the dropdown and the value of current can be changed by a slider.
6. Changing the values will show the magnetic field of the electromagnet.

Magnetic Field (磁場), $B = \mu NI/L$,
where, N = number of turns of wrapped wire around an iron core (綫圈環繞鐵柱的圈數), I = current (電流), L = Length of the electromagnet (電磁鐵的長度)
Here, $\mu = 0.005$, N = 10, I = 5A, L = 0.5m
Therefore, B = 0.5 T

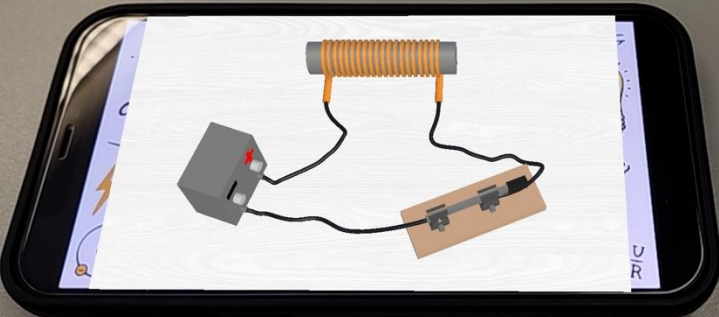
Current | 電流 5 A
10 turns | 10 轉



Back 返回

Magnetic Field (磁場), $B = \mu NI/L$,
where, N = number of turns of wrapped wire around an iron core (綫圈環繞鐵柱的圈數), I = current (電流), L = Length of the electromagnet (電磁鐵的長度)
Here, $\mu = 0.005$, N = 20, I = 5A, L = 0.5m
Therefore, B = 1 T

Current | 電流 5 A
20 turns | 20 轉



Back 返回

Fig. Screenshots from the topic “Lab – Strength of Electromagnet”

圖：「實驗：電磁鐵的磁場強度」截圖

實驗：電磁鐵的磁場強度

步驟：

1. 按「實驗：電磁鐵的磁場強度」按鈕。
2. 按「實驗：電磁鐵的磁場強度」按鈕後，手機的相機鏡頭將會打開。
3. 將相機放在目標圖片上。
4. 有線線圈、電源及鑰匙的實驗裝置動畫將於螢幕上顯示。
5. 線圈數量可於下拉菜單改變，電流數值可藉拉動滑動條改變。
6. 更改數值後，將顯示電磁鐵的磁場轉變。