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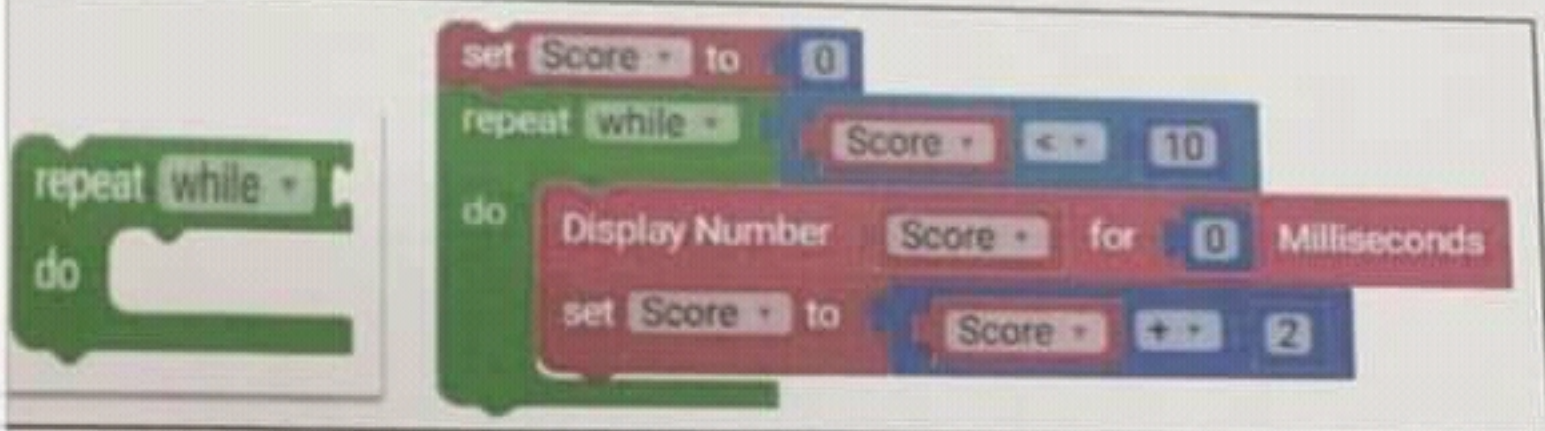
<https://almanahj.com/ae/grade6>

للتحدث إلى بوت المناهج على تلغرام: اضغط هنا

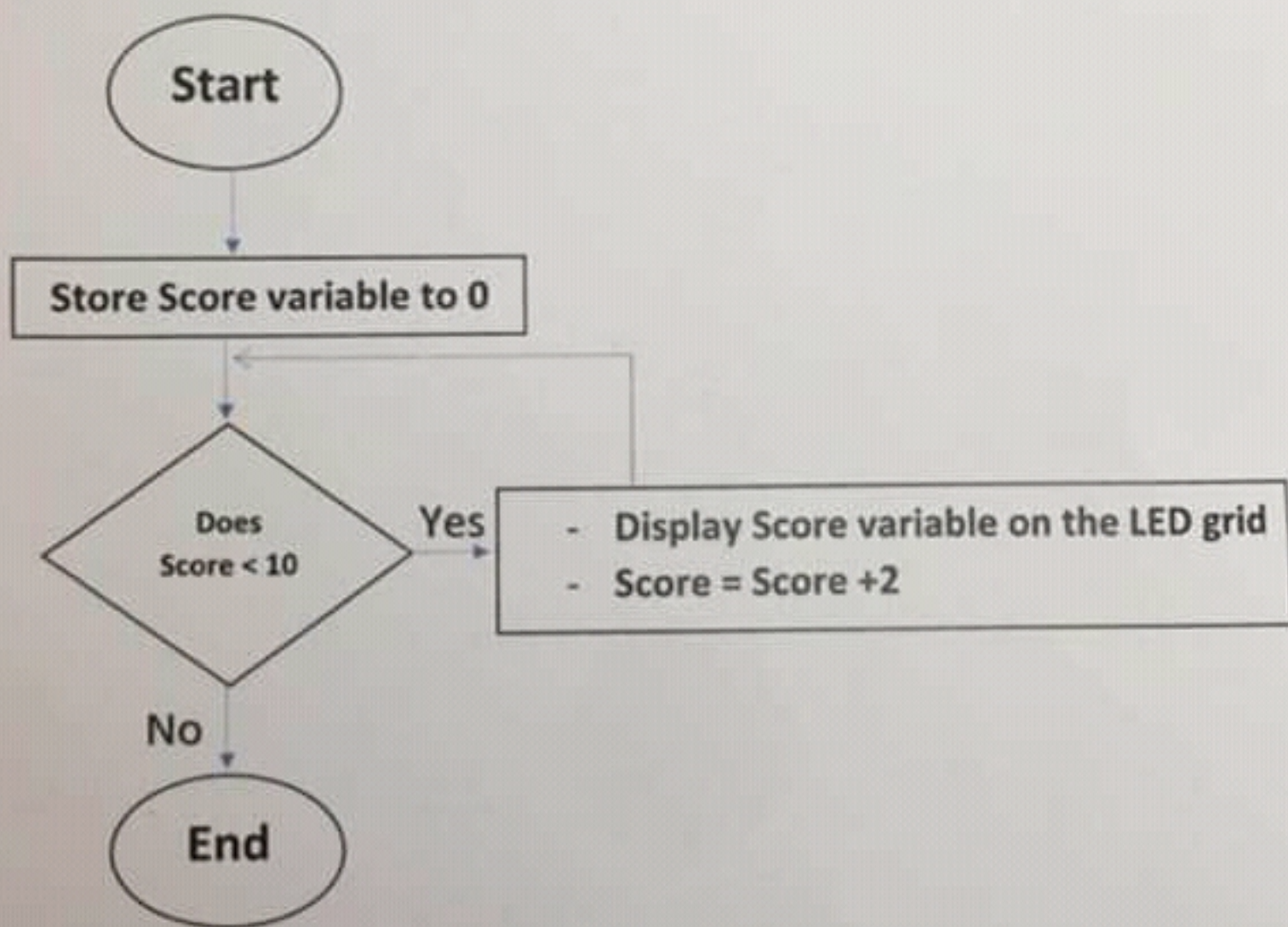
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### 3-Repeat While Loop (Condition)




### Flowchart





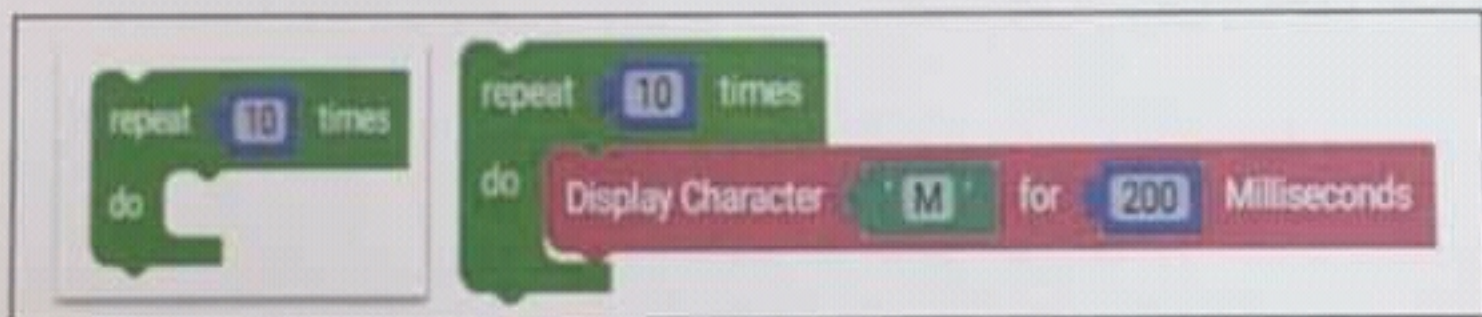
## Unit 4 - Looping

-Why **Block based** (Graphics) programs (Ardublockly )?

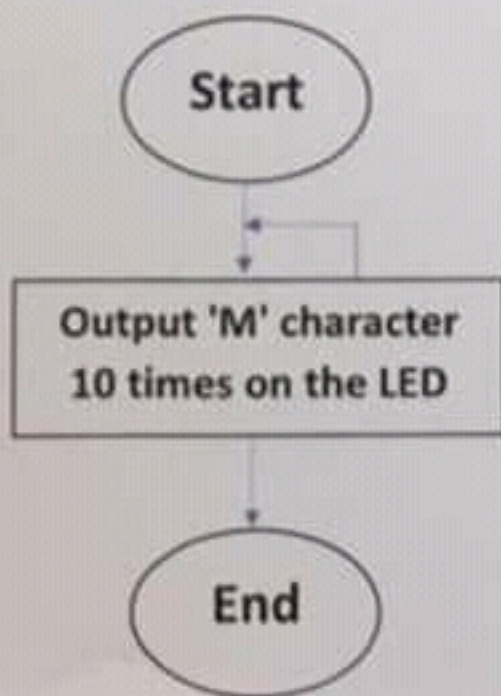
1. You can **see** and **touch**.
2. Makes your learning **Kinesthetic** (Learning by doing things).
3. Can experience without learning the **syntax** (Words).

### Loops types:

#### 1- Repeat Time Loop



### Flowchart



### Notes For Exam:

#### Practical: (30 marks)

- Display **Numbers** and **Letters** on LED grid.
- Program **Counting**.
- Change the **NeoPixels colors**.
- Adding **comments**

#### Theoretical: (20 Marks)

- Why we use **Block based program**.
- Complete the **Flowchart**.

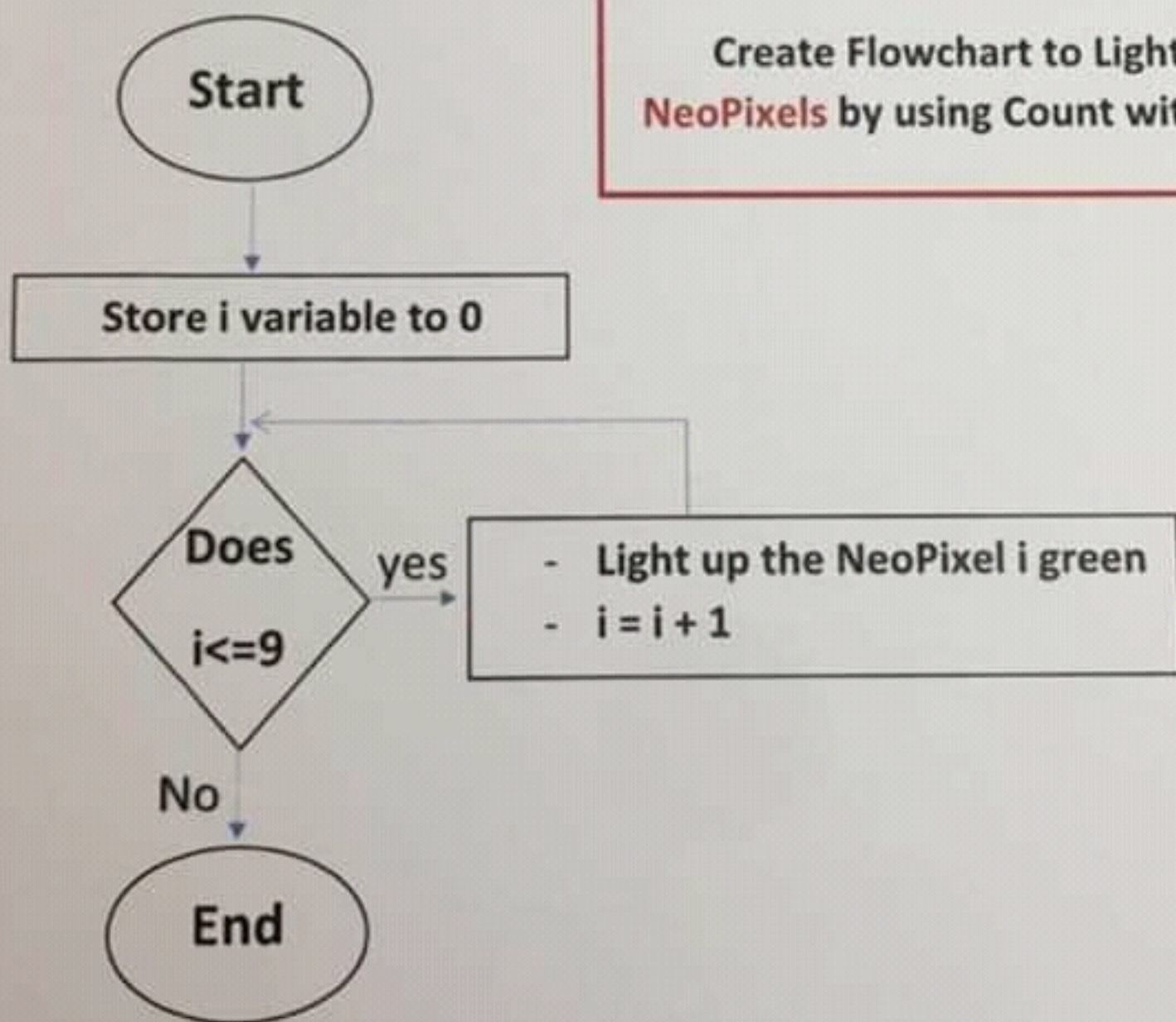


## Count with Loop – NeoPixels:

```
count with [ ] from 1 to 10 by 1  
do
```

```
count with [ ] from 0 to 9 by 1  
do  
  Set NeoPixel Number [ ] R: 0 G: 255 B: 0
```

### Flowchart

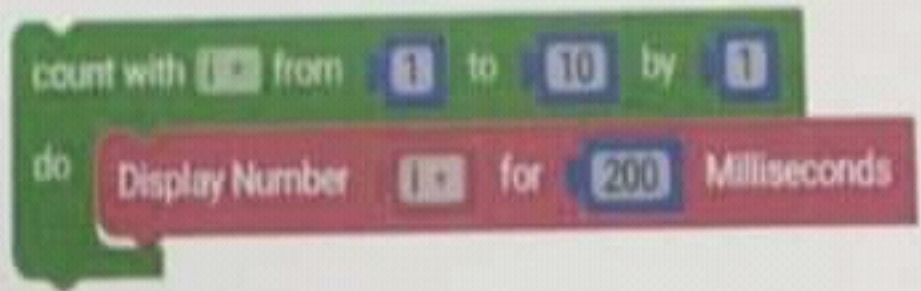
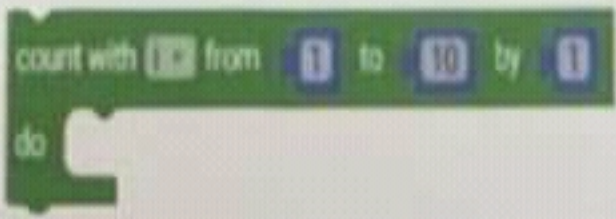


### Question:

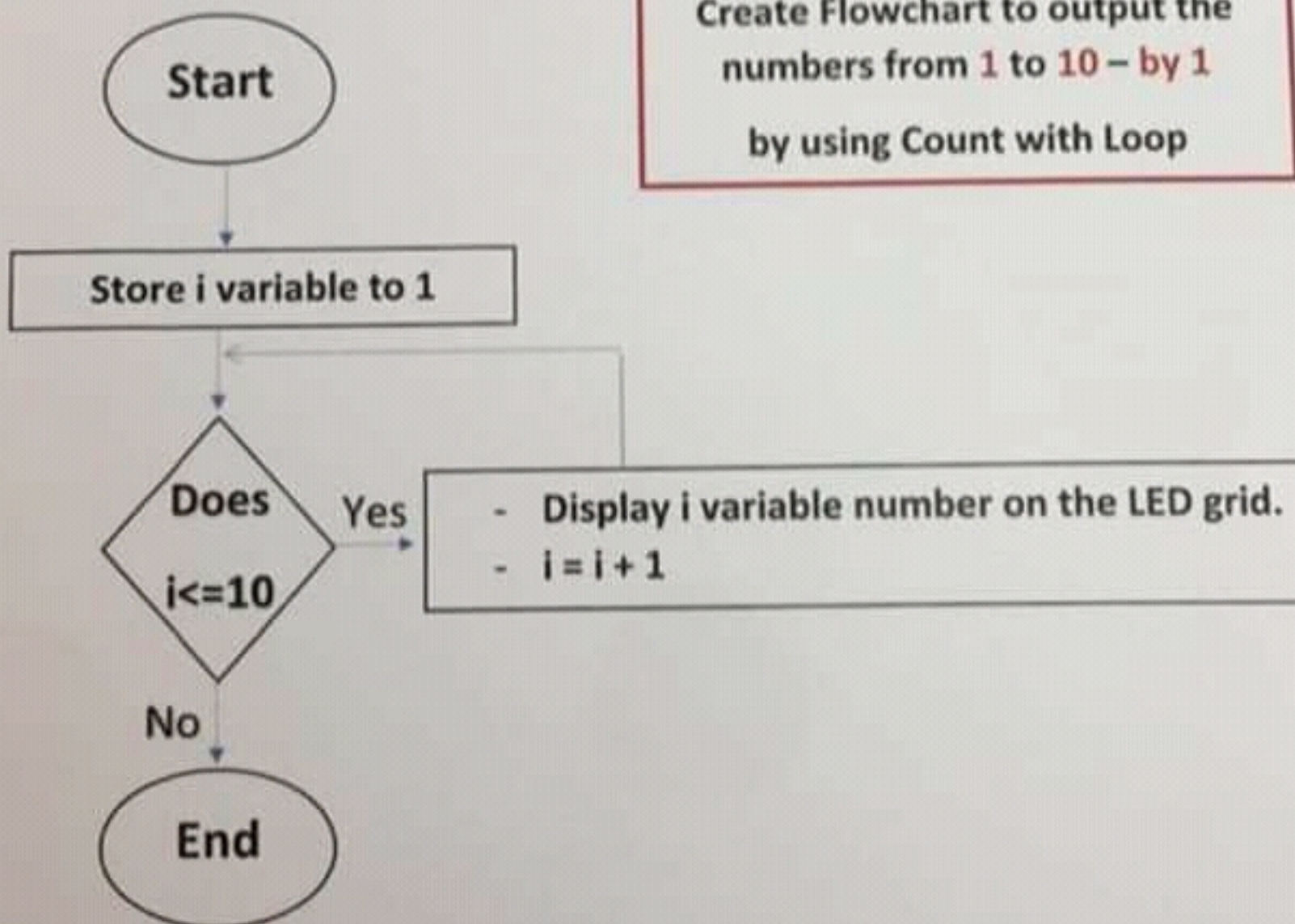
Create Flowchart to Light **all** NeoPixels by using Count with Loop



## 2-Count with loop – Counting Number (Range Numbers)



### Flowchart



### Question:

Create Flowchart to output the numbers from 1 to 10 – by 1 by using Count with Loop



The program will:-

1. Output "Hello" when the program starts
2. Output a count to 10 on the LED grid using button A as the input
3. Light NeoPixests red using button B as the input
4. Light NeoPixests yellow using pin pad (D9) as the input
5. Output letter C using pin pad (D0) as the input

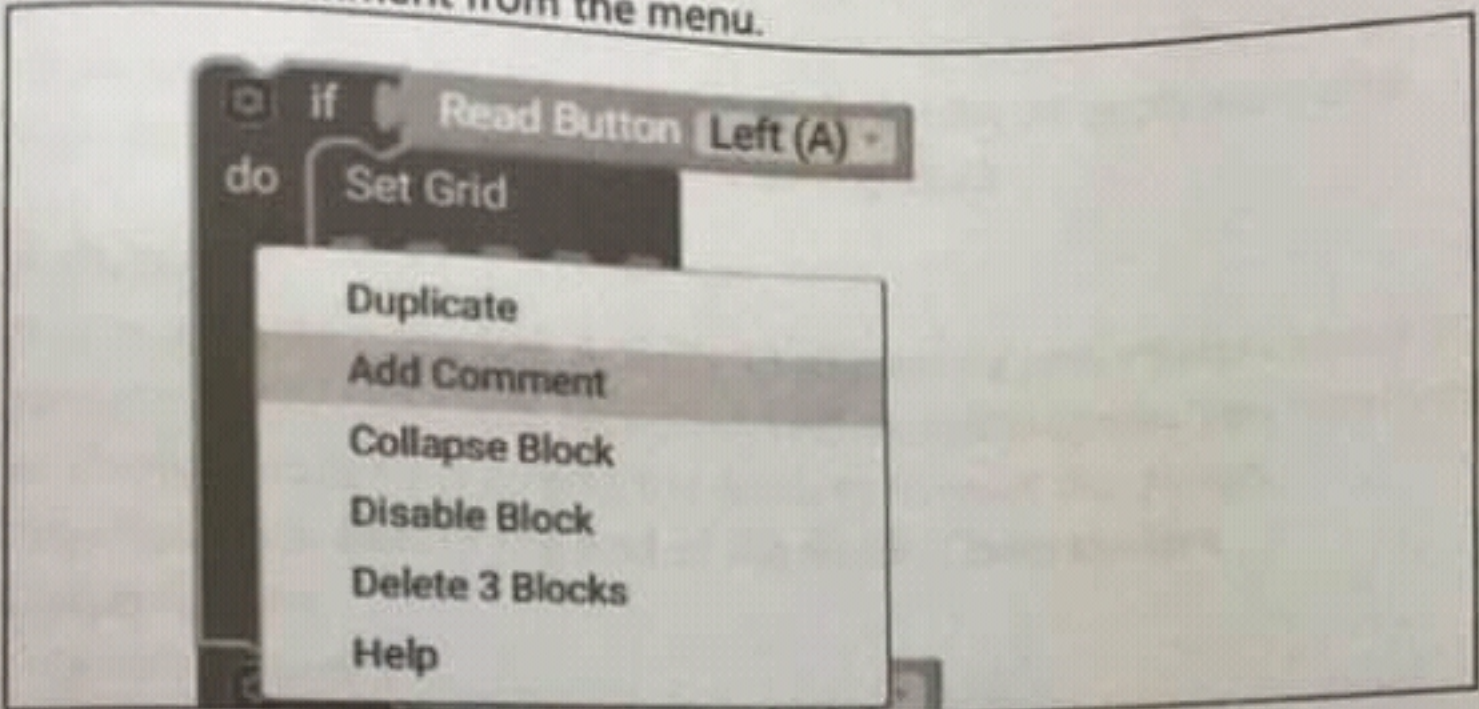


student comments before moving on. Opportunity to assess student understanding of the programs they created.

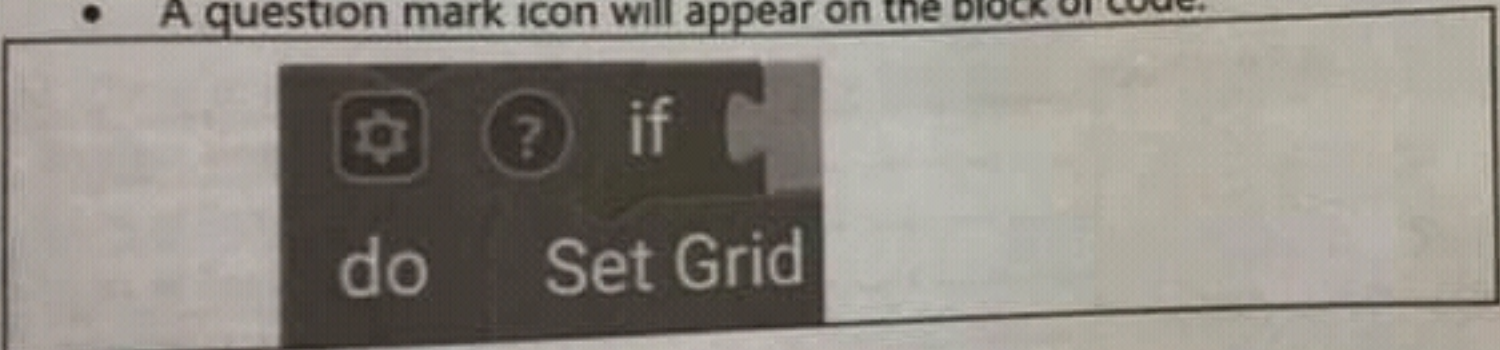
Teacher Answers

There is a routine to use when adding comments in Ardublockly.

- Using the mouse, right-click on a block of code. Next, left-click on Add Comment from the menu.



- A question mark icon will appear on the block of code.



- Using the mouse, left-click on the question mark icon. A text box will appear where you can explain what the block does.

