



Logic

Space



Coding



Focus



Classroom Discipline

01

Please sit down and keep quiet in class.

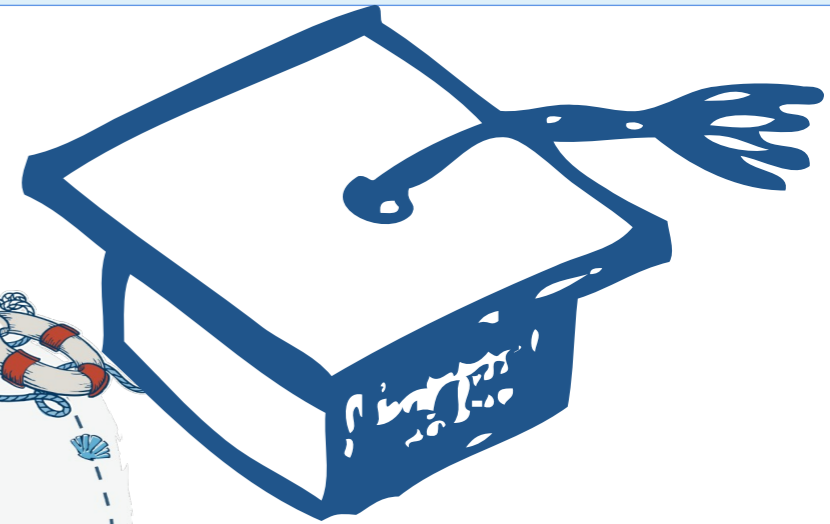
02

Please raise your hand if you have any questions.

03

Please observe carefully when the pictures are played.





Tyrannosaurus

04





Course Goals



Thinkidea

1

Learning goals

2

Project Discussion

3

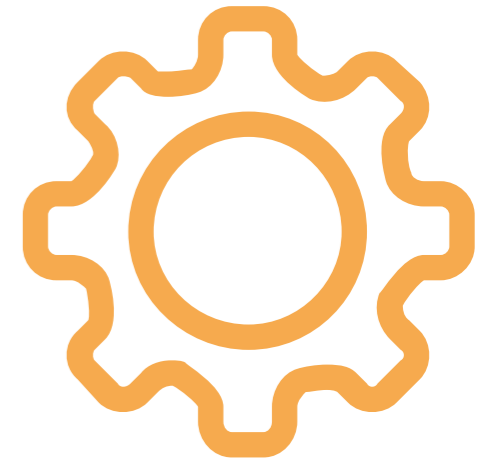
Logic Programming

4

Have a try

5

Consolidate and extend





1

Build a dinosaur park and let the dinosaurs can respond to its own name. When you wave at it, it will move forward. When you call its name and it will stop.

2

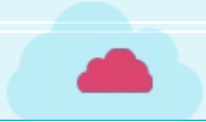
Consolidate the scripts learned in the first eight lessons.

3

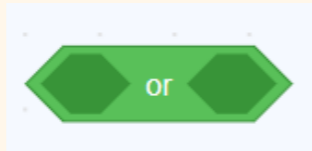
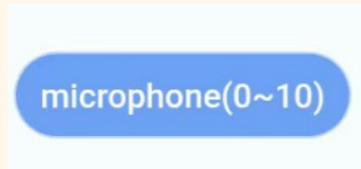
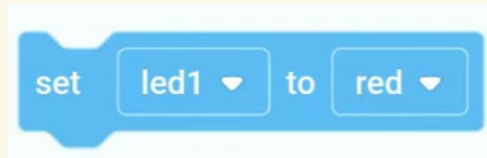
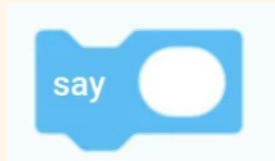
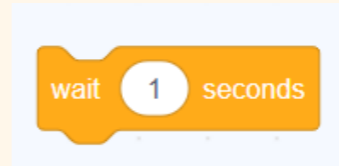
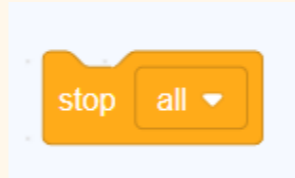
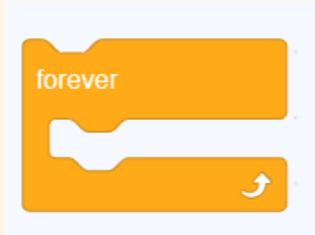
Learn new modules such as **“wait”** .

4

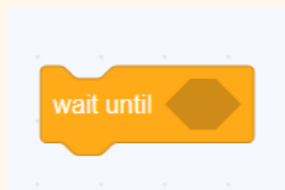
Comprehensively apply the learned modules to complete programming projects and expand.

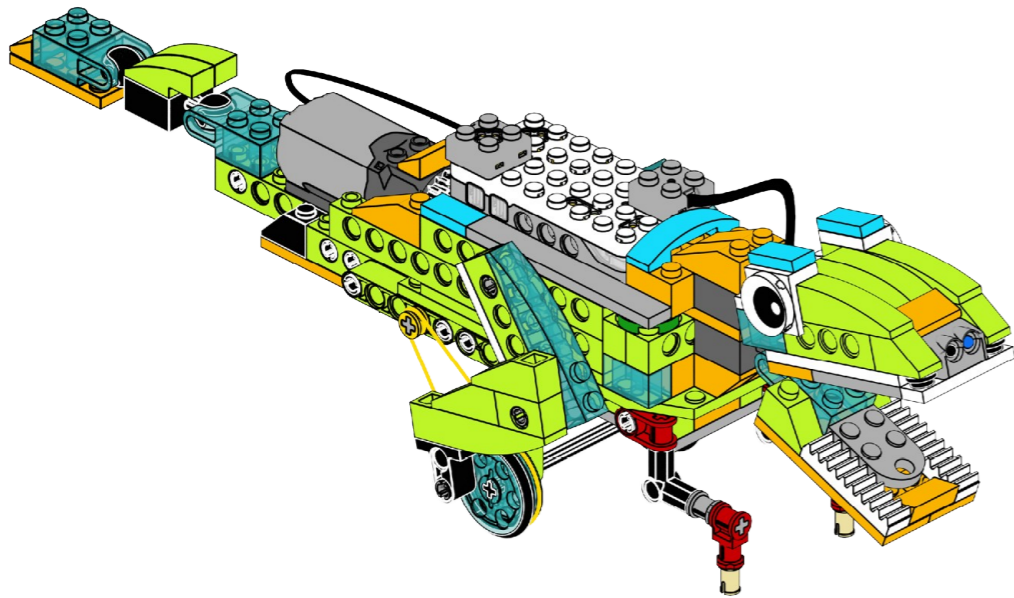


Consolidate modules:



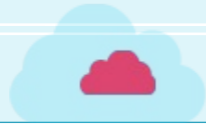
New modules:



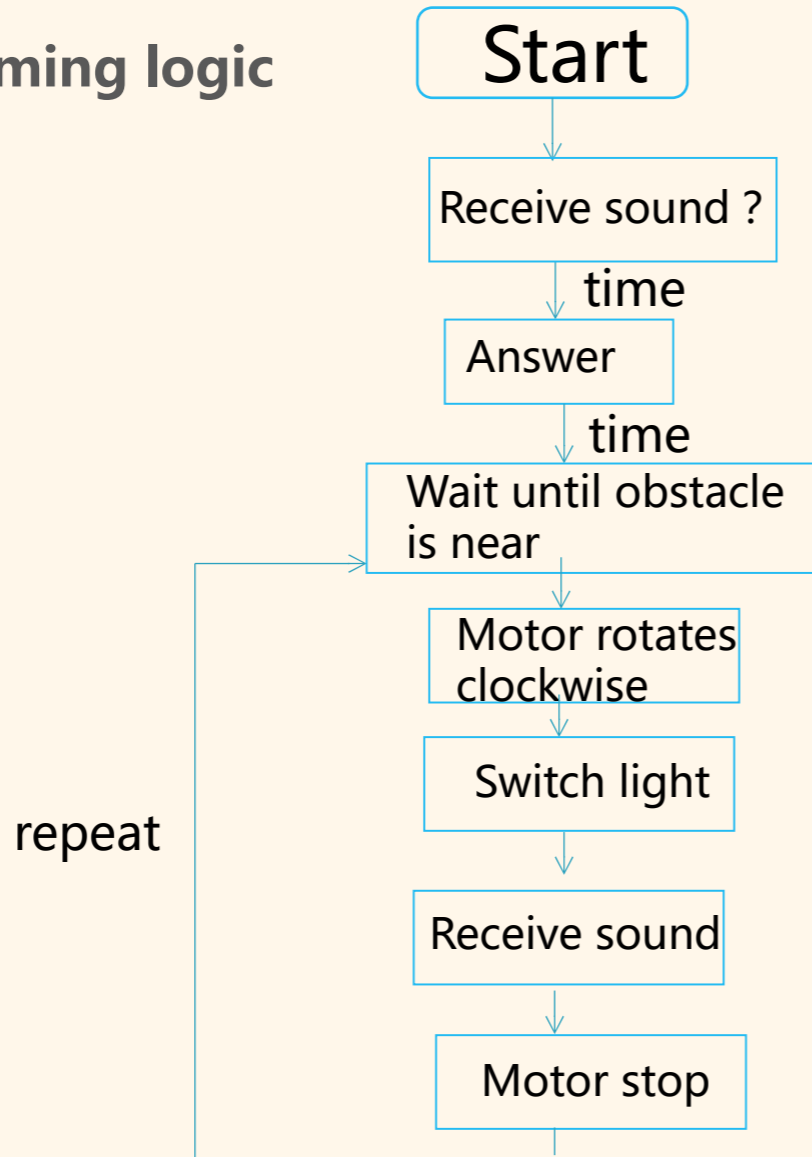


Project Discussion

- 1. The dinosaur responds to its own name.**
- 2. The dinosaur moves forward when you wave your hand.**
- 3. Switch between different lights.**
- 4. When it hears its name again, it stops.**



1. Programming logic

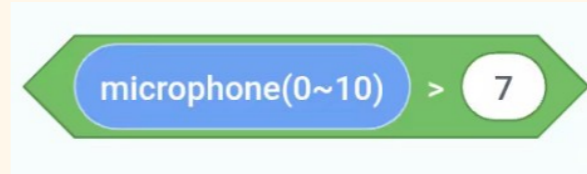


1. Programming logic

1. How should the dinosaur answer the question?



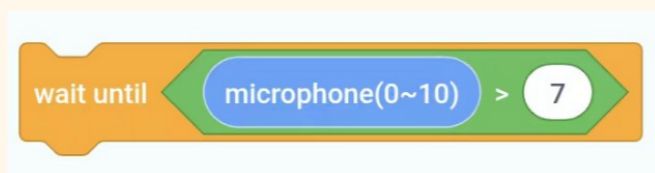
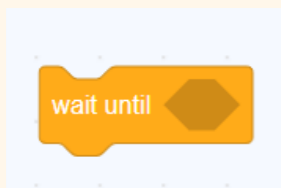
microphone(0~10)



How can we make the robot understand what we say?

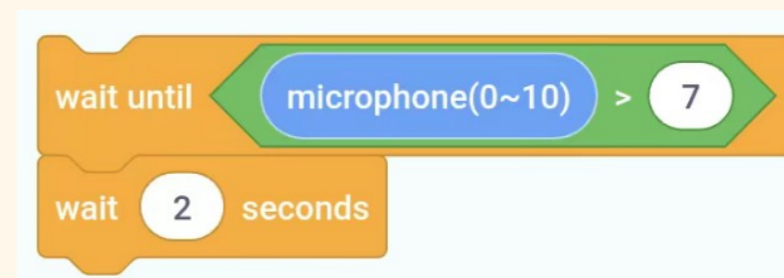
Why do we need to use ">"?

2. Learn new modules



Find the "Wait" module in the "Control" category.

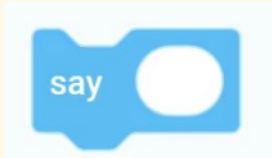
3. Thinking



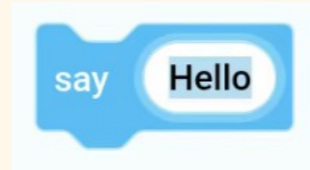
Why do we need to add a time delay?

1. The dinosaur answers its own question.

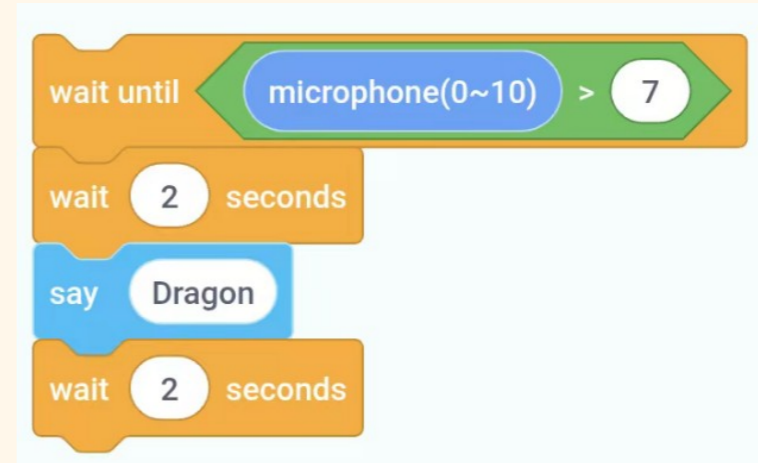
1. How should the dinosaur answer?



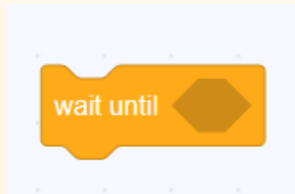
Find the "Say" module in the "Show" category.



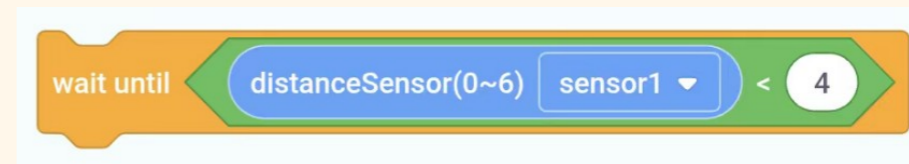
Let's give your dinosaur a name!



2. The dinosaur moves forward when you wave your hand.

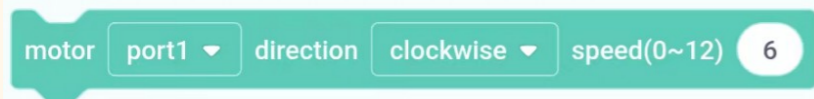


Find the "wait" module in the "Control" category.

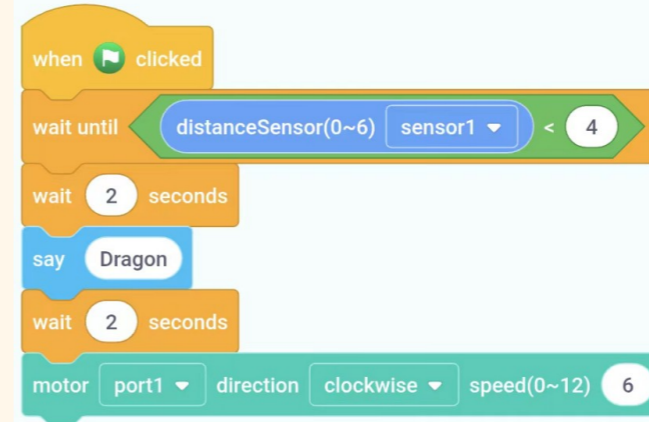


1. Programming logic

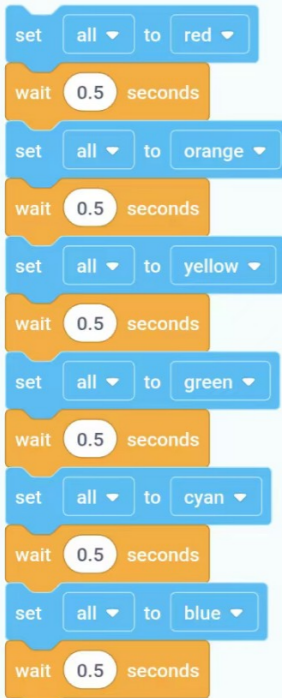
1. The dinosaur moves forward.



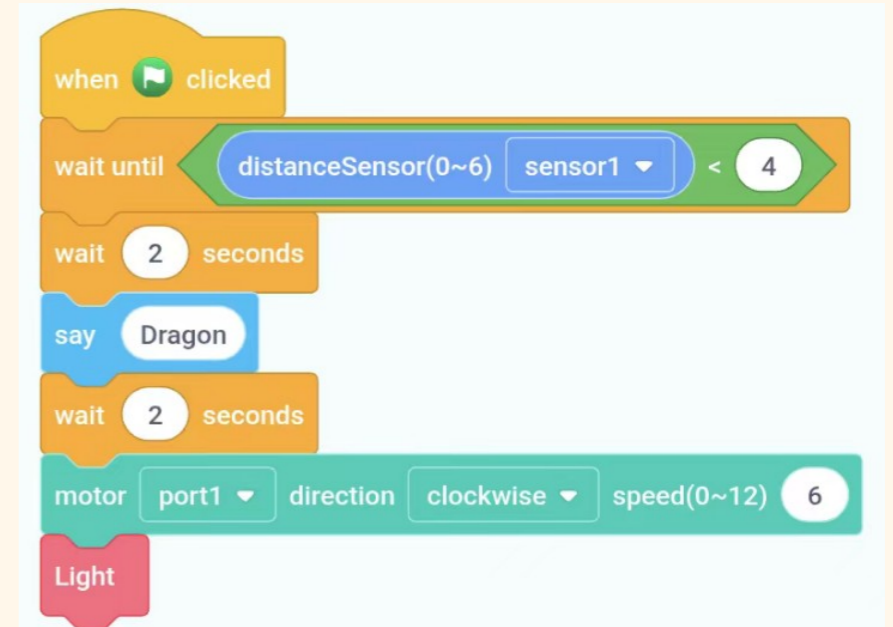
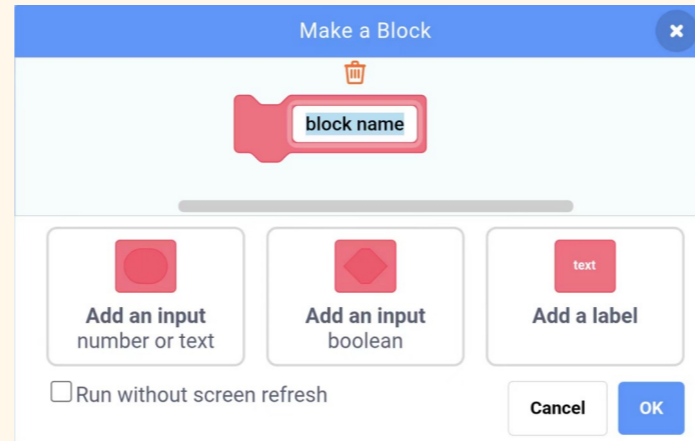
Find it in the “Move” category.



2. Switch between different lights.



How can we shorten the program?



2. Dinosaur Program

1. Let the dinosaur stop.



```
when clicked
wait until microphone(0~10) > 7
wait 2 seconds
say Dragon
wait 2 seconds
wait until distanceSensor(0~6) sensor1 < 3
motor port1 direction clockwise speed(0~12) 6
Light
wait until microphone(0~10) > 7
motorStop all ports
```

The image shows a Scratch script for a dinosaur program. The script starts with a 'when clicked' event block. It then has a 'wait until microphone(0~10) > 7' block, followed by a 'wait 2 seconds' block, a 'say Dragon' block, another 'wait 2 seconds' block, a 'wait until distanceSensor(0~6) sensor1 < 3' block, a 'motor port1 direction clockwise speed(0~12) 6' block, a 'Light' block, a 'wait until microphone(0~10) > 7' block, and finally a 'motorStop all ports' block.

1. Have a try

Task 1: Try to make the dinosaur follow your hand!

```
when clicked
wait until microphone(0~10) > 7
wait 2 seconds
say Dragon
wait 2 seconds
forever
  if distanceSensor(0~6) sensor1 < 3 then
    motor port1 direction clockwise speed(0~12) 6
  else
    motorStop all ports
```

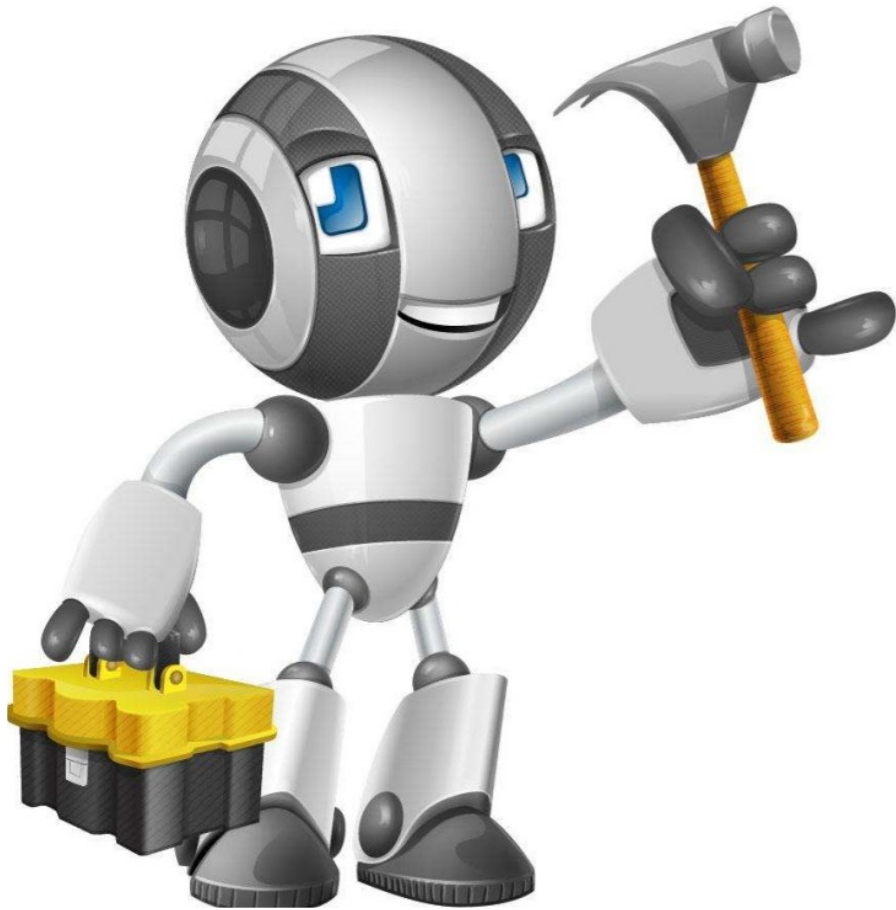


Consolidate and extend

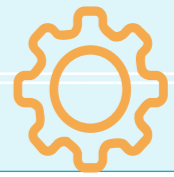
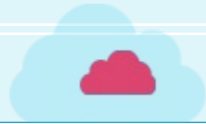
Q1 : Alex programmed the dinosaur like this, but the dinosaur answered before the question was even finished. Why did this happen?

```
when clicked
wait until microphone(0~10) > 7
say Dragon
wait 2 seconds
wait until distanceSensor(0~6) sensor1 < 3
motor port1 direction clockwise speed(0~12) 6
Light
wait until microphone(0~10) > 7
motorStop all ports
```

A1 : Because no waiting time was added.



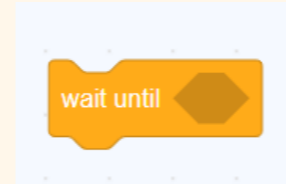
Q &
A



Knowledge Review

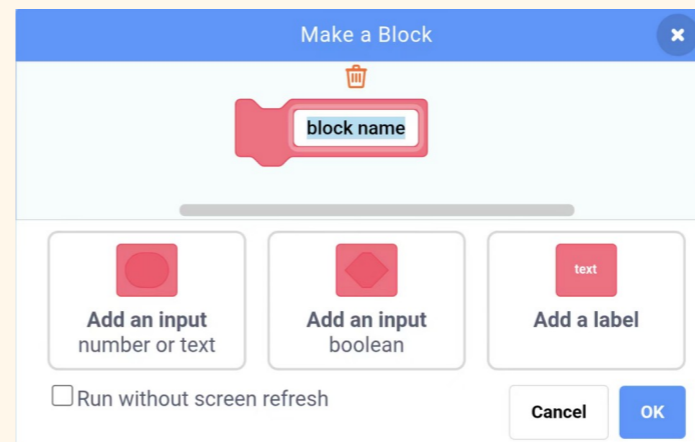


(1)

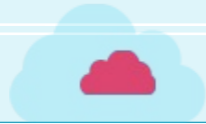


It needs to wait for different conditions to be met.

(2)



Make a new custom block.



Knowledge Review



(3)

microphone(0~10)

Receive volume

(4)



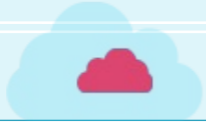
Compare the values on both sides.

Alex programmed the dinosaur like this, but no matter how we call its name, it never stops. Why is that? ()

```
when clicked
wait until microphone(0~10) > 7
wait 2 seconds
say Dragon
wait 2 seconds
wait until distanceSensor(0~6) sensor1 < 3
motor port1 direction clockwise speed(0~12) 6
Light
wait until distanceSensor(0~6) sensor1 < 3
motorStop all ports
```

- A** The program is wrong **B** Because the program uses a distance sensor to stop.
- C** Because the loop block was not added. **D** Called wrong name.

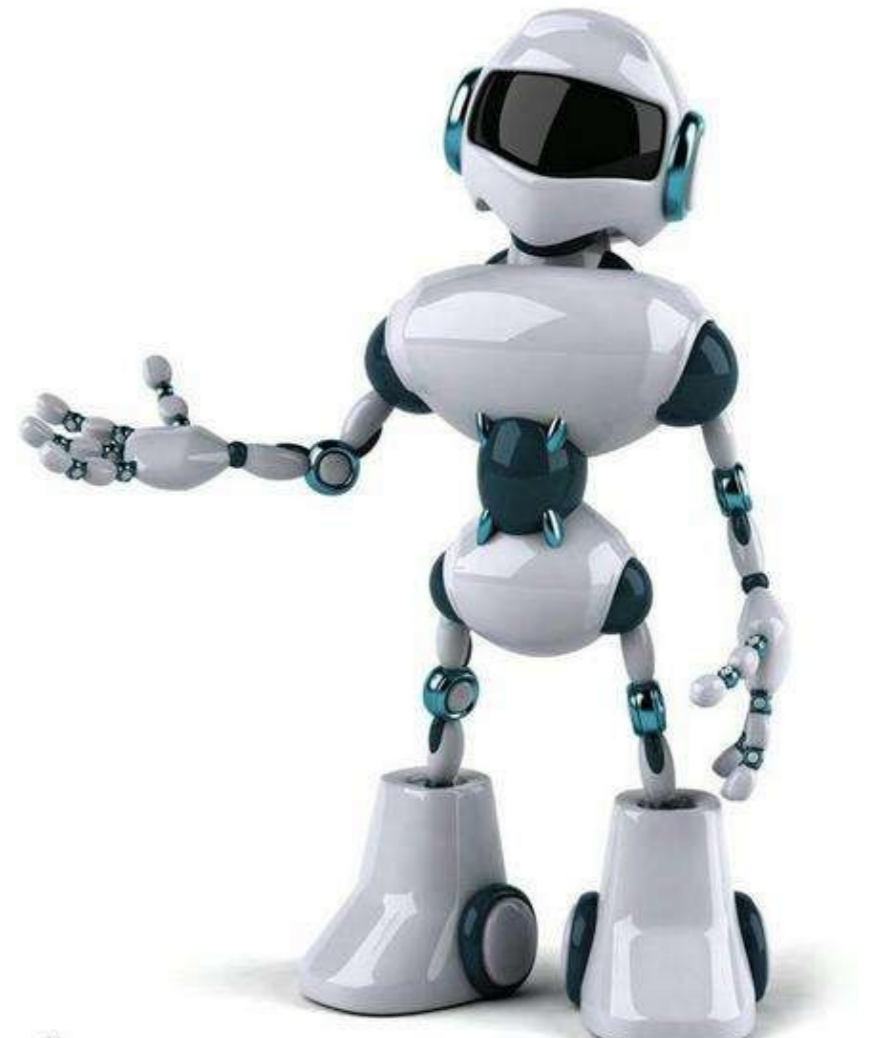




Answer **B**

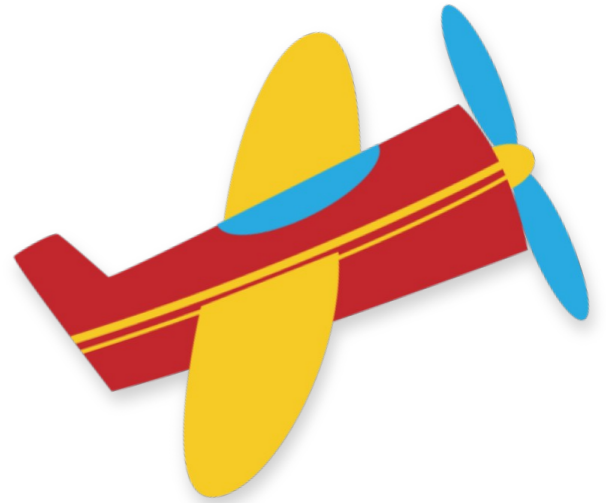
Analysis : **Because the program uses a distance sensor to stop.**

```
when clicked
wait until microphone(0~10) > 7
wait 2 seconds
say Dragon
wait 2 seconds
wait until distanceSensor(0~6) sensor1 < 3
motor port1 direction clockwise speed(0~12) 6
Light
wait until microphone(0~10) > 7
motorStop all ports
```





Talk





THANKS

