Trivia Game

If statements in Python

Resource

Secondary

11-14 years

Contents

Noteable Activities for Schools: Trivia game

These resources are a guide for teachers to demonstrate to the whole class or direct individual students as appropriate. The activities below can be directly distributed to pupils.

For instructions on how to install and use Noteable resources, please look at our guides for teachers in GLOW: GLOW guidance for teachers to start using Noteable.

Content and Curriculum links

Level	Context	Indicators
11-14	Using basic if statements in Python	if, else, print

Knowledge	Using bullet point lists to give instructions
Curriculum links (England) Computing KS2	• design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. • use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.
Curriculum links Wales)	
Scottish Curriculum for Excellence	**Experiences and Outcomes:** • I understand language constructs for representing structured information. **TCH 3-14a** **Benchmark:** o Understands simple compression and encryption techniques used in computing technology
All: Cross-curricular opportunities	The activities have identified opportunities for Mathematics, Language, Social Studies, Science, Art, Music, Physical Education, Geography, History, and Computer Science

What is an if statement in coding?

An **if statement** is a way to make a decision in a program. It allows the program to execute a block of code only if a certain condition is met. Here is an example of an if statement in Python:

```python
age = 10

if age >= 18:

    print("You are an adult!")

else:

    print("You are a child!")
```
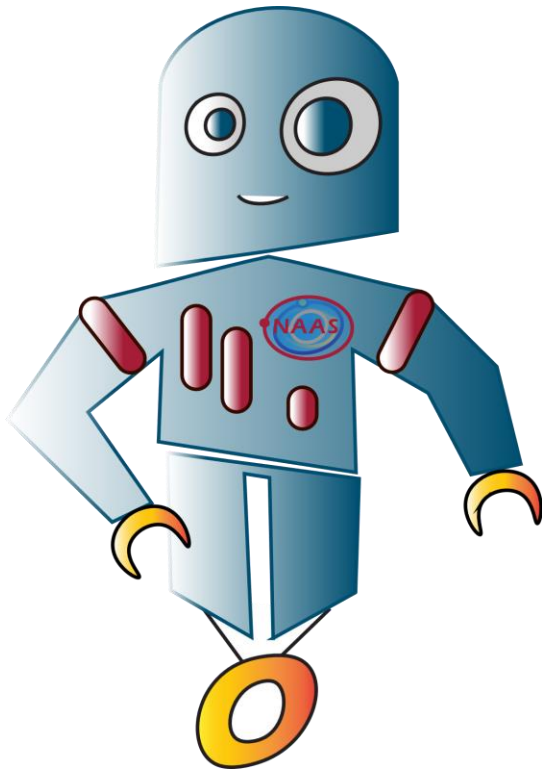
In this example, the program checks whether the variable age is greater than or equal to 18. If it is, the program prints "You are an adult!". If it is not, the program prints "You are a child!".

So, let's say you have a variable called score that holds your score in a game. You can use an if statement to check if your score is greater than or equal to 100. If it is, you can print a message saying "You won!". If it's not, you can print a message saying "You lost!".

> **Please note that the indentation of the word 'print' is important in Python. The code inside the if statement must be indented to indicate that it is part of the if statement.**

Activity 1

NAAS would like to play a trivia game with you. Your teacher will divide you into pairs. Each one of you will receive a list (A or B). Do not show your list to your partner as both lists contain questions and answers. Create a code in Python for each of the questions using the example below:


```python
Python                                          Copy code

QB1 = input('What is the capital of Peru? ') if QB1 == 'Lima':

print('You are correct!')

else:

print('Sorry, that's not it!')
```

List A

AQ1: Which school supply is the most purchased?

- **Answer: Pencils**

AQ2: Erasers were first made out of? (Hint it's food!)

- **Answer: Bread**

AQ3: Which came first, the pencil or pen?

- **Answer: Pen**

AQ4: Gluesticks are mimicked after which makeup product?

- **Answer: Lipstick**

AQ5: In which year did a man land on the moon?

- **Answer: 1969**

List B

BQ1: What is the closest star to Earth?"

- **Answer: Sun**

BQ2: Nearly all fossils are preserved in what type of rock?

- **Answer: Sedimentary**

BQ3: What is an eight-sided shape called?

- **Answer: Octagon**

BQ4: How many points does the Star of David have?

- **Answer: Six**

BQ5: Which country hosts the Great Barrier Reef?

- **Answer: Australia**

Activity 2

Evaluate your results!

Use the code:

```python
score = float(input("How many questions did you get right?: "))
if score < 3:
    print("Better luck next time")
elif 3 <= score <= 4:
    print("You are good at this game!")
else:
    print("Perfect Score! You are a trivia master!")
```

Cross-Curricular Opportunities

1. **Mathematics**: Modify the code to ask the user for their age and calculate how many years they have until they become an adult.

2. **Language Arts**: Write a short story that uses an if statement to make a decision. For example, you could write a story about a character who has to choose between two paths in the woods.

3. **Social Studies**: Research the legal age of adulthood in different countries and compare them to the age of adulthood in your own country.

4. **Science**: Write a program that uses an if statement to determine whether a number is even or odd.

5. **Art**: Create a drawing or painting that illustrates the concept of an if statement. For example, you could draw a fork in the road with two different paths.

6. **Music**: Write a song that uses an if statement to make a decision. For example, you could write a song about choosing between two different types of food.

7. **Physical Education**: Create a fitness program that uses an if statement to determine which exercises to do based on the user's age.

8. **Geography**: Research different countries and write a program that uses an if statement to determine which continent each country is located in.

9. **History**: Write a program that uses an if statement to determine which historical event happened first.

10. **Computer Science**: Write a program that uses nested if statements to make more complex decisions.

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