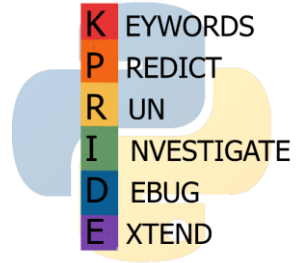


inclusive programming pedagogy

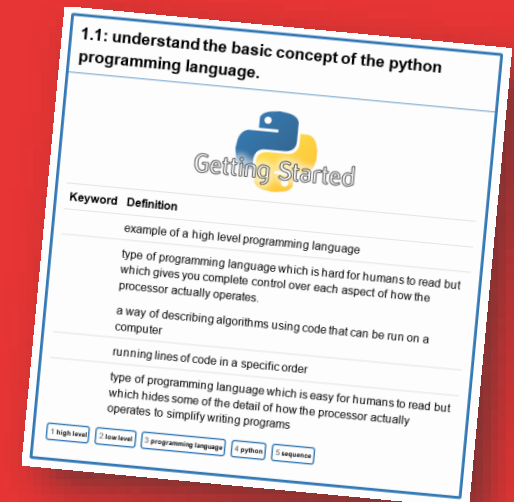
# Keywords



**What:** • *Clearly define all of the key vocab that students need to understand*

**Why:** • *Students may need to identify and recall keywords in an exam*  
• *Discussion and questioning is much more effective if students can understand and use the right terminology*  
• *Build students' confidence and technical vocab*

**Example:**



# Predict

**What:** • Give students short sections of code and get them to estimate what it will do before they run it



**Why:**

- Encourages logical reasoning
- Great opportunity for discussion and paired work
- Allows common mistakes and misconceptions to be identified and avoided

**Example:**

Code	Prediction:	Actual result:
<a href="https://create.withcode.uk/python/8Sg">https://create.withcode.uk/python/8Sg</a> 1 score = 20 2 score = score + 100 3 print(score / 10)		
<a href="https://create.withcode.uk/python/8Sh">https://create.withcode.uk/python/8Sh</a> 1 score = 200 2 # print(score) 3 print("score")		
<a href="https://create.withcode.uk/python/8Uu">https://create.withcode.uk/python/8Uu</a> 1 number1 = input("Enter the first number please") 2 number2 = input("Enter the second number please") 3 total = number1 + number2 4 print(total)		

# Run

**What:** • Ask students to compare their predictions with what actually happens with they run the code

**Why:**

- Encourages reflection and greater depth of engagement
- Allows common mistakes and misconceptions to be identified and avoided
- Students can refer back to examples and re-use them later

**Example:**

Code	Prediction:	Actual result:
<a href="https://create.withcode.uk/python/8Sg">https://create.withcode.uk/python/8Sg</a> 1 score = 20 2 score = score + 100 3 print(score / 10)		
<a href="https://create.withcode.uk/python/8Sh">https://create.withcode.uk/python/8Sh</a> 1 score = 200 2 # print(score) 3 print("score")		
<a href="https://create.withcode.uk/python/8Uu">https://create.withcode.uk/python/8Uu</a> 1 number1 = input("Enter the first number please") 2 number2 = input("Enter the second number please") 3 total = number1 + number2 4 print(total)		

# Investigate

## What:

- *Share a short but working section of code with students*
- *Give them clear instructions on how to change the code*

## Why:

- *Adapting existing code is less intimidating than starting from a blank canvas*
- *Encourages curiosity and problem solving*
- *Greater sense of pride and ownership discovering solutions than being presented with answers*

## Example:

Template	Investigation
<p><a href="https://create.withcode.uk/python/8Si">https://create.withcode.uk/python/8Si</a></p> <pre> 1 print(10 + 3) 2 print(10 - 3) 3 print(10 / 3) 4 print(10 // 3) 5 print(10 ** 3) 6 print(10 % 3) </pre> <p>Change one of the numbers on each line to make the output 100</p>	

# Debug

**What:** • *Share some code with student that has been deliberately sabotaged with some common mistakes (syntax, runtime and / or logic errors)*

**Why:** • *Builds resilience so students can cope with their own errors*  
 • *Allows students to become more independent*  
 • *Helps students understand and cope with error messages*  
 • *Helps students avoid making common mistakes*

**Example:**

Code		Line	Problem
<a href="https://create.withcode.uk/python/8Sk">https://create.withcode.uk/python/8Sk</a>			
1	my name = input("what is your name?")		
2	food = intput("What's your favourite food?")		
3	address = input("where do you live?")		
4	job = input(what's your job?)		
5	music = input("what music do you like?")		

# Extend

## What:

- Give students a choice of challenges to add features to code you provide or to create their own project

## Why:

- Allows students to be creative
- Students take pride in what they've created themselves
- Ideal opportunity to assess level of understanding



## Example:

Create a program that...	Link
1) ...asks five questions about a sport of your choice	
2) ...displays each line of a nursery rhyme	
3) Find all the operators in <a href="https://create.withcode.uk/python/8K2">https://create.withcode.uk/python/8K2</a> and try replacing them with a different operator	