

Cycle 1 Homework

September 2020

Subject: Computer Science



Year 8

This cycle you are learning: Creating algorithms, creating flow diagrams and Micro: bit programming.

What you will learn	Week
What is an algorithm?	1
Flow chart creation	2
Micro:bit basic concepts	3
Creating my program	4
Improving my program	5
Evaluating my program	6
Revision	7
Assessment	8
Super Teaching Week	9

Expectations

- Complete 3 homework tasks per cycle.
- Complete 1 week of revision based homework per cycle ready for week 8.
- Your homework will be marked online or in class (peer assessment).
- It must be completed by the due date or you will receive an automatic detention.
- Use your knowledge organiser to help with your homework as well as with your lessons.

Rationale for home work this term:

- To consolidate in class learning
- To secure your knowledge of key topics
- To practice skills related to your assessment

Name _____

Teacher _____

Task 1: Week 1 Algorithms Task

Due: Week 2 **Date:** _____

Success criteria:
Create your own algorithm

Assessment method:
Peer Marked

TASK:

In the space below, define the word 'Algorithm' then create an algorithm for logging onto your school computer.

Algorithm definition: _____

My 'logging on' algorithm:

Peer Evaluation

WWW: _____

EBI: _____

Task 2: Week 2 – Creating Flow Diagrams

Due: Week 3 Date: _____

Success criteria:

- To be able to draw a flow diagram using the correct symbols.

Assessment method:

- Peer Assessed

TASK:

In the space below; create a flow diagram to represent the following algorithm:

1. Start
2. Ask user what their favourite lesson is (output).
3. User types their answer (input).
4. If the answer is ICT (decision) say “Well done! ICT is the best!” (output).
5. If the answer is not ICT (same decision) say “Oh dear – you have a detention!” (output).
6. End

Peer Evaluation

WWW: _____

EBI: _____

Task 3: Week 3 – Algorithms & Flowcharts Mini Quiz

Due: Week 4 Date: _____

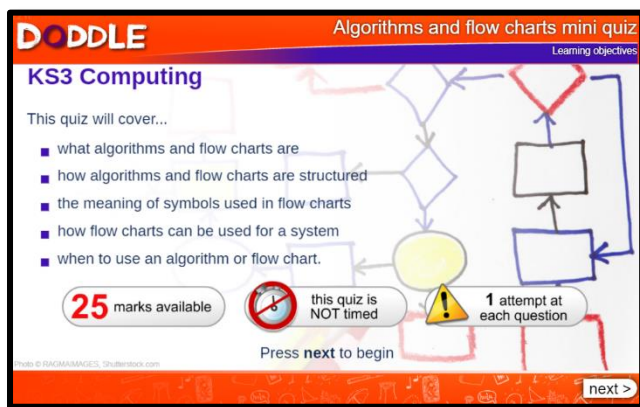
Success criteria:

- To be able to answer the questions successfully.

Assessment method:

- Assessed online.

Task: Go to Doodle and complete the online quiz.



Score:

Task 4: Week 4 – Programming Basics Mini Quiz

Due: Week 5 Date: _____

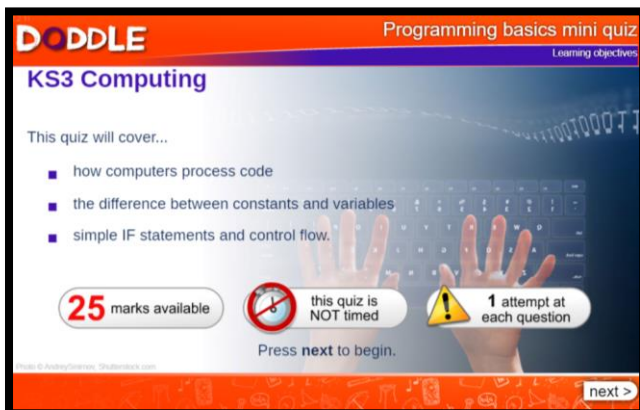
Success criteria:

- To be able to answer the questions successfully.

Assessment method:

- Assessed online.

Task: Go to Doodle and complete the online quiz.



Score:

Task 5: Week 5 – Labelling the Micro:bit

Due: Week 6 Date: _____

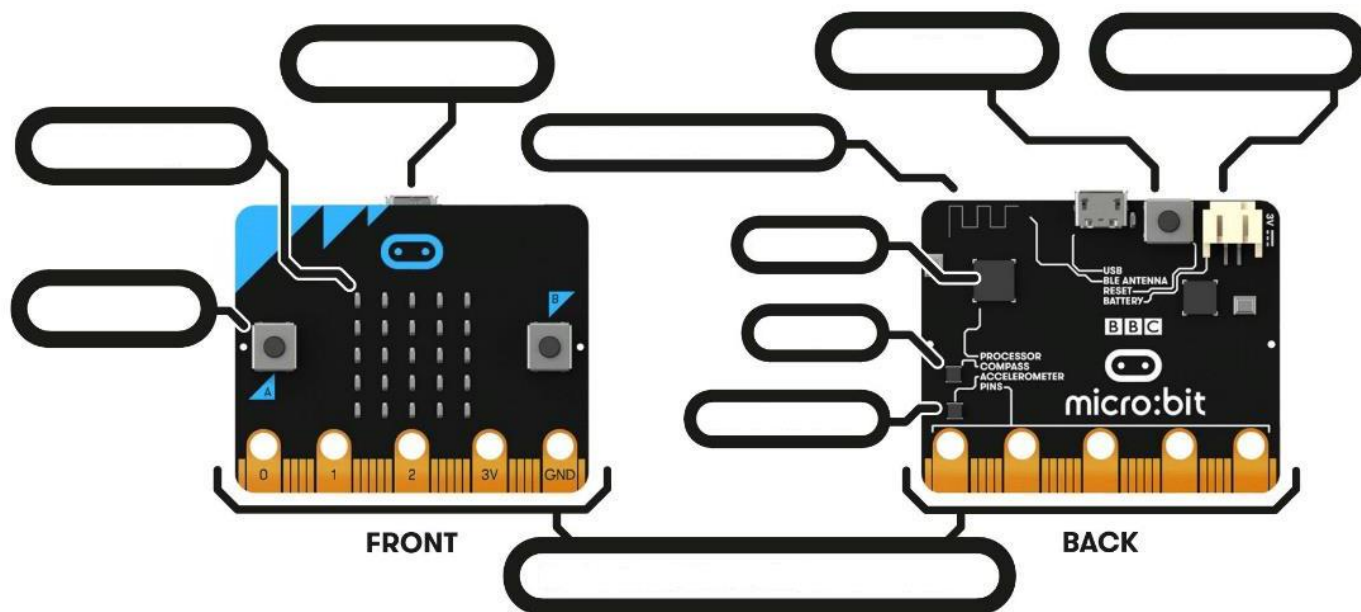
Success criteria:

- To be able to successfully label the different parts of the Micro:bit.

Assessment method:

- Peer assessment.

Task: Label the diagram below to explain what the components are:



Task 6: Week 6 – Labelling a program

Due: Week 7 Date: _____

Success criteria:

- To be able to decide what a Micro: bit program will do.

Assessment method:

- Teacher assessment.

Task: Explain what this program would do overall. Extension – label each block of code to explain what each one does.

```
forever
  set degrees to compass heading (°)
  if degrees < 45
  do
  show string " N "
  else if degrees < 135
  do
  show string " E "
  else if degrees < 225
  do
  show string " S "
  else
  show string " W "
```

Task 7: Week 7 – Revision Time

Due: Week 8 **Date:** _____

Success criteria:

- **Using your knowledge organiser to help; create a mind map of all the topics we have covered in this unit.**

Assessment method:

- **Assessed through the end of unit assessment**