

COVID HOMEWORK

'QUARANTINEAVESARY 2021'



Me in March: I'm gonna get so fit in quarantine

Me now: I need a second phone charger so I don't have to walk to the other room when my phone's dying



Independent Home Work - Priorities

Updated for
January
2021

SI	S2	S3	N4	N5	H	AH
<u>FOCUS ON CORE SUBJECTS</u>	<u>FOCUS ON CORE SUBJECTS</u>	<u>WEBSITE DESIGN (SEE TEAMS)</u>	<u>PONG GAME (SEE TEAMS)</u>	<u>REVISION PRIORITIES (RED SHEET, SEE TEAMS)</u>	<u>REVISION PRIORITIES (RED SHEET, SEE TEAMS)</u>	<u>PROFESSIONAL PROJECT</u>
	<u>IDEA</u>	<u>IDEA</u>	<u>PYTHON CHALLENGE S</u>	<u>PROGRAMMING PYTHON / HTML / CSS / SQL</u>	<u>PROGRAMMING PYTHON / HTML / CSS / SQL</u>	<u>WEEKLY THEORY TASKS</u>
			<u>IDEA</u>	<u>PAST PAPERS</u>	<u>PAST PAPERS</u>	<u>REVISION FOR PRELIM</u>

BGE

1. Focus on your core subjects set work first.
2. If you have time, remember to log into [IDEA.org.uk](https://www.idea.org.uk) with your credentials including your school email address (check your Glow), and if necessary reset your password using the 'Forgot Password' tool.



Plan around 1-2 hours per week for Computing Science.

Ideally you will use a computer to log in as coding is much easier with a proper keyboard, but work should also be possible on tablets, phones, netbooks, consoles etc. Remember you can plug in a keyboard into your console or tablet to help. Ask parents for support and feel free to contact me with issues.

1. Log into your **Teams** via **Glow**
2. Follow instructions on completing weekly tasks found in **Assignments** and your **Class Notebook**.



```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta charset="UTF-8">
5 <title>Title goes here</title>
6 </head>
7 <body>
8
9 </body>
10 </html>
```

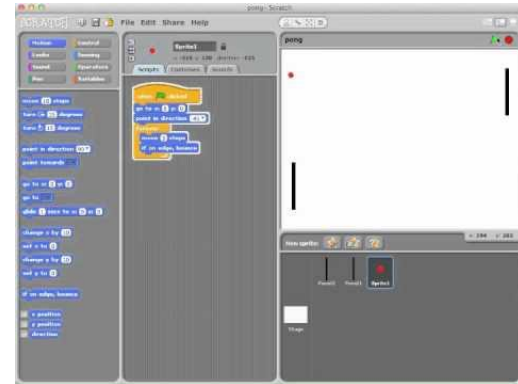
SENIOR

PHASE

Plan around 2-3 hours per week (minimum!) for Computing Science.

Ideally you will use a computer to log in as coding is much easier with a proper keyboard, but work should also be possible on tablets, phones, netbooks, consoles etc. Remember you can plug in a keyboard into your console or tablet to help. Ask parents for support and feel free to contact me with issues.

1. Log into your **Teams** via **Glow**
2. Follow instructions on completing weekly tasks found in **Assignments** and your **Class Notebook**.



Task 1

Pseudocode

(Around 25% of marks from paper 2 come from pseudocode related questions)

Have a look through the [following slides](#) which highlight potential pitfalls in Exam Paper 2, centring around Algorithms (especially pseudocode)

Try the ESQ on slide 14 and then the challenges of the link below
[OCR Pseudocode Challenges](#)

Microsoft Teams Challenges

Visit Microsoft Teams regularly for revision tasks to be completed and handed in..

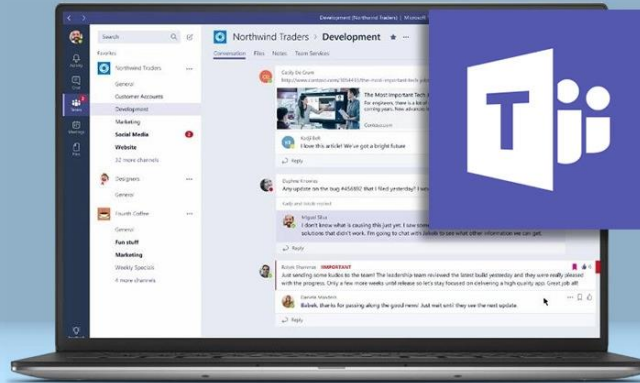
Task 2

Need a P.E.E.?

So many of you struggle with properly answering PEE questions. If the question uses the phrase DESCRIBE or EXPLAIN or other high functioning verb such as COMPARE, ANALYSE, DISCUSS or 'with reference to the code.

Using SQA past papers choose 5 questions worth 2 or 3 marks to attempt. Use P.E.E to answer and aim to score all of the marks.

When complete, use the mark scheme to see how you did



Resources

Bitesize: [Revision](#)

Computational thinking, algorithms and programming:
[Edpuzzle resources](#)

[Past Papers](#)

Coggle.it

SQL Zoo

CodeAcademy

CodeCombat

National5computing.co.uk/sql

Your main focus (3hrs/wk of your time) is completing your project.

1. Revisit the **milestones we have already agreed** prior to Xmas, complete them all and move on to the next sections.
2. Work on **Development of your project**, get your code working and touch base with me with any problems.
3. **Weekly updates** with me as to your progress on your project, phone (schedule a time with me), email, teams.

Each week I will include a theory element to complete (2hrs/wk of your time), the weekly challenges are set on MS Teams and handed in via Class Notebook.

Week 1

Research and report on Bubble Sort and Insertion Sort

Week 2

Code either a Bubble Sort or Insertion Sort using a standard algorithm

Week 3

Writing multiple lines of SQL data to a table in PHP

Week 4

SQL CREATE and DROP revision, introduce HAVING.

Project

Soft deadline – 5th of April
Hard deadline – TBC

SOAMES'

CHALLENGE

Simulators/models give understanding of a virus to make predictions.

Read: <https://www.poynter.org/reporting-editing/2020/how-a-blockbuster-washington-post-story-made-social-distancing-easy-to-understand/>

1. Using your choice of either Scratch (S3/N4), Small Basic(S3/N4), or Python PyGame (N4, N5, Higher, Adv Higher).
2. Get a ball bouncing around the screen
3. Randomly generate one ball a RED colour and many others BLACK.
4. If RED ball touches BLACK then it should turn BLACK to RED
5. After a period of time RED should turn GREEN and no longer infect others.

