Independent Home Work - Priorities

S1	S2	S3	N4	N5	H	AH
BUSINESS MANAGEMENT TASKS	BUSINESS MANAGEMENT TASKS	PYTHON	HTML & CSS	REVISION PRIORITIES (RED SHEET)	REVISION PRIORITIES (RED SHEET)	PROFESSIONAL PROJECT
			PYTHON	PROGRAMMING PYTHON / HTML / CSS / SQL	PROGRAMMING PYTHON / HTML / CSS / SQL	
		IDEA	IDEA	PAST PAPERS	PAST PAPERS	

FAQS

N5 Student - I've completed my coursework, do I need to do it again?

Mr Soames – Nope, you did a great job already and we sent it off to the SQA for marking.

Consider the coursework part of your grade 'in the bank'.

Focus on Python ready for Higher.

Higher Student - My coursework isn't finished, what should I do?

Mr Soames – Firstly, don't panic! The SQA have issued a statement regarding your coursework, it will now only form part of a teacher's judgement of your grade. Read the statement at here : sqa.org.uk/sqa/93658.html

You should carry on working on coursework from home. Email me!

All students - I'm concerned I could have done better in my grades. I didn't take my prelims seriously enough. What can I do to improve my mark?

Mr Soames – All teachers are now tasked with building evidence to support their predicted grade. You can help by providing high quality work as evidence that supports a better predicted grade. Could you recomplete a piece of work you were unhappy with? Work on your 'feel the pain'? Complete supporting work?

BGE

Task 1

Tesco sends security warning to 600,000 Clubcard holders

Facebook's Twitter and Instagram accounts hacked

Answer the following questions:
1. What are cyber attacks?
2. What impact do these cyber attacks have on these businesses?
3. What should customers do if they have been affected by these cyber attacks?

Task 2

Online surge of support for bullied book lover

Cyberbullying: How is it different from face-to-face bullying?

Answer the following questions:
1. What is cyber bullying?
2. How is cyberbullying different to face to face bullying?
3. How should you report cyberbullying? Identify 3 ways

Task 3

Look at this re-touched photo of Beyonce.

Answer the following questions;
1. What software has been used to make the second image?
2. What is your opinion on the edited photo?
3. Do you believe editing of photos for use in magazines is justified?

Use this photo editor to experiment with graphic design- https://pixlr.com/editor/

Task 4

This picture shows the difference between Bitmap and Vector images.

Answer the following questions;
1. What is the difference between a vector and a bitmap image?
2. What can you do to a vector image which you cannot to a bitmap?
3. Draw your own bitmap image of a famous landmark in the UK e.g. The Angel of the North

Task 5

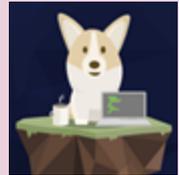You are currently completing a unit where you are going to make an app about Ultraman!

You will be making a quiz about your Ultraman story using Blockly.

https://blockly.games/ - try out how to code on Blockly!

Task 6

Sign up to iDEA

Use your school email address to create your iDEA account.
eg. 16joebloggs@burnsidecollege.org.uk

Learn to code with iDEA! The Inspiring Digital Enterprise Award, known as iDEA is an international programme that helps you develop digital, enterprise and employability skills through our series of online challenges, including coding.

S2 - Computing

Task 1

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Task 2
Create

Using the link above, follow the PacMan tutorial to create a PacMan game OR make your own game!

PacMan Guide

Task 3

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Task 5

You are currently learning about how to create digital posters to advertise products and services. At the moment you are producing promotional material for a musical.

Create a hand drawn or digital poster which could be used to advertises our amazing new school uniform on the screens in the school pavilions!
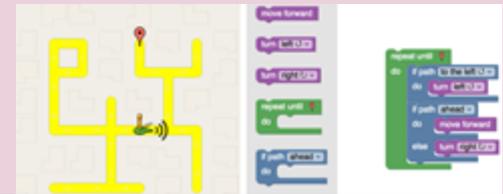
Task 6

Remember when you made your own app on AppShed last year?
Why don't you refresh your programming skills so you are ready for Computer Science in Year 9!
https://blockly.games/

COMPLETE ALL TASKS ON THE BLANK DOC IN WORD ON GLOW OR ON PAPER

TASK 1

Amazon to create more than 1,000 jobs at first North East fulfilment centre

Click here for article Help

Recommend 2 ways Amazon could use to advertise the 100 new roles to attract new staff - give reasons for your answer

Challenge: would the methods you suggest be appropriate for warehouse staff and senior managers?

TASK 3

Watch the following video from an Amazon centre

Assess the positive and negative impacts of Amazon using advanced technology in their fulfilment centres

Challenge: how could using advanced technology give Amazon a competitive advantage?

TASK 5

Amazon to create more than 1,000 jobs at first North East fulfilment centre

Click here for article

Recommend 2 ways Amazon could use to motivate their warehouse staff - give reasons for your answer

Challenge: which methods would be least appropriate for Amazon to use?

TASK 2

Hard Rock Cafe all set to open on Newcastle Quayside in 2020

Click here for the article Help

Evaluate whether on the job training would be suitable for the role of Chef at Hard Rock Cafe

Challenge: recommend more suitable methods of training that would be appropriate to train the new Chef's at Hard Rock Cafe

TASK 4

Read the text attached about just in time ordering

Recommend whether just in time ordering is suitable for Hard Rock Cafe

Challenge: research and use the term 'perishable' in your work. Does this change your opinion? Which is the most appropriate option? Frozen or fresh?!

TASK 6

Read the following text to remind you of ownership types

Recommend a suitable form of business ownership for Hard Rock Cafe - with reasons for your answer.

Challenge: Evaluate reasons why the other options are not suitable for the new restaurant.

Task 1

Python Programming Challenges!

https://repl.it/languages/python3

Using the online Python IDE Repl.IT, see how many of these Python Programming challenges you can complete!
Python Challenges

Don't forget to file and make a copy and document your successful programs!

Task 3

Program computer games in Python!
CodeCombat is a game-based computer science program where you use real Python code to control your characters in real time.

https://codecombat.com/
Join our Code Combat team with the following
Class Code: PowerStarSnow

Task 5

Python for beginners
WithCode takes you through the basics of Python programming including inputs and outputs, syntax errors, variable etc.

Task 2

Will an increase in remote working lead to more cyber attacks?

Answer the following questions;
1. What do we mean by the term "remote working"?
2. Discuss the potential threats that remote working may pose to computer systems and networks?
3. What can be done to reduce the threats?

Task 4

DDOS attack ruins Xmas for gamers!
Xbox live and Playstation attack

Explain how a DDOS attack works to bring down a network and the issues that it can cause.

Challenge: Recommend 2 ways in which Sony could protect themselves against other DDOS attacks

Task 6

The Science Behind the Hacks: From Anonymous to Lizard Squad

https://forensicoutreach.com/library/the-science-behind-the-hacks-from-anonymous-to-lizard-squad/

Discuss what makes the hacking group "Anonymous" different to other hacking groups such as "Lizard Squad"

Task 1
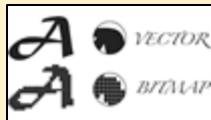
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Task 3

DDOS attack ruins Xmas for gamers!

Xbox live and Playstation attack: Christmas ruined for millions of gamers

Explain how a DDOS attack works to bring down a network and the issues that it can cause.

Challenge: Recommend 2 ways in which Sony could protect themselves against other DDOS attacks

Task 4

You are currently working from home and **cloud computing** is making that possible.

Create a fact sheet on google slides identifying the following;
- Benefits of cloud computing
- Drawbacks of cloud computing
- how cloud computing can be used to improve businesses communication and collaboration
(you could use your own experience of working from home currently to identify issues)

Task 5

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Task 6

Databases

Answer the following questions;
1. What is a field?
2. What is a record?
3. What is the difference between data and information?
4. Create a database on google sheets to help you plan your school work from home

Fields could include; matter of urgency, incomplete/complete, time it will take etc. and records should be the subjects you are working on at home.
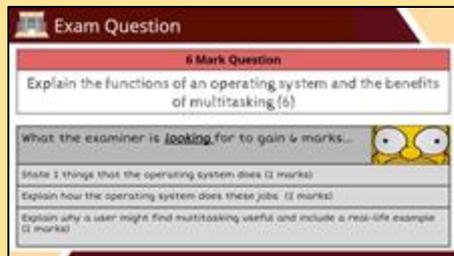
SENIOR PHASE

Task 1- Theory

Software: Operating Systems
Read through the slides about Operating Systems then answer the EQ on slide #13:

Task 3- Theory

Software: Utility Software
Read through the slides about Utility Software then, complete the tasks on slides 2 & 8 before answering the following EQ (mark scheme linked on slides):

> Ali wants to know which utility programs he will need to keep his computer secure and running smoothly.
> Discuss the utility programs Ali will need, justifying why he needs them.

Task 5- Theory

Software: Applications & Proprietary vs Open Source
Read through the slides about Application software, then complete the task on slide 3 and EQ on slide 5

Task 2- Python

Python Programming Challenges!
https://repl.it/languages/python3

Using the online Python IDE Repl.IT, see how many of these Python Programming challenges you can complete!
Python Challenges

Don't forget to file and make a copy and document your successful programs!

Task 4- Beyond

DDOS attack ruins Xmas for gamers!
Xbox live and Playstation attack
Explain how a DDOS attack works to bring down a network and the issues that it can cause.

Challenge: Recommend 2 ways in which Sony could protect themselves against other DDOS attacks

Task 6- Beyond

The Science Behind the Hacks: From Anonymous to Lizard Squad
https://forensicoutreach.com/library/the-science-behind-the-hacks-from-anonymous-to-lizard-squad/

Discuss what makes the hacking group "Anonymous" different to other hacking groups such as "Lizard Squad"

Any questions?   Email Mr Soames: denis.soames@glow.orkneyschools.org.uk

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 EQ on slide 14 and then the challenges of the link below
OCR Pseudocode Challenges

Task 2
Error Handling
Spot the errors in the programs and check your answers on slides 9-14. Have a go at answering the following exam question:

> Darren encountered a number of errors whilst running his program. These errors could have been prevented.
>
> Analyse the implications of poor error handling.

Task 3
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

Task 4
Exam Command Word- Discuss
Even though the computer devices they own still work, people often want to buy the most up-to date models, such as the latest smartphone.

Explain *the impact of people wanting to upgrade to the latest smartphone.*   (5)

In your answer you might consider the impact on:
- *Stakeholders, technology, ethical issues, environmental issues*

Resources

Bitesize: Revision

Computational thinking, algorithms and programming:
Edpuzzle resources

Past Papers

Coggle.it

SQL Zoo

CodeAcademy

CodeCombat

National5computing.co.uk/sql

Any questions?   Email Mr Soames: denis.soames@glow.orkneyschools.org.uk

Complete professional project:

- RS - Inputs and Outputs
- Test Plan
- Complete interface design
- Program – data structure design
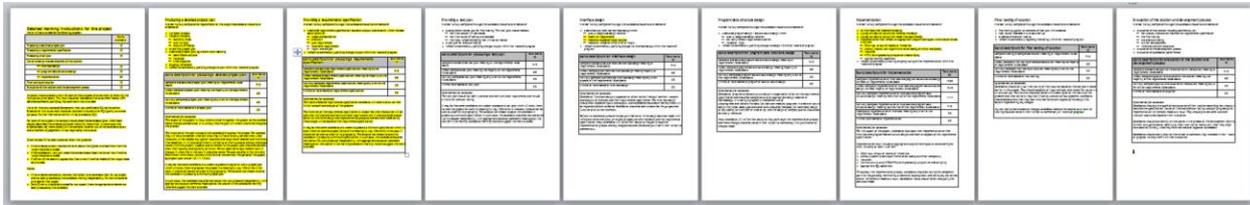- Complete development
- Final testing
- Evaluation

Week 1
Week 2
Week 3
Week 4
SUBMIT Soft deadline – 17the April Hard deadline - 23rd April

Friday 27th March 8:45 - 2pm

Coursework intervention day available to any pupil with outstanding Computing Science coursework. All pupils will be socially distanced and able to receive their allocated time allocation to complete coursework. Any symptomatic student should make alternative arrangement with Mr Soames.

Currently cancelled

SOAMES' CHALLENGE

Simulators help people understand a problem and predict its future.

Read:

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

1. Using Python (N4 using Scratch) research how to install Pygame.

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