Exceptional Closure Work Pack

Year 10

In addition, work can be completed on SPARX Maths, SPARX Reader and SPARX Science.

English – revise An Inspector Calls

Part 1: Quick Knowledge Check

- Who wrote *An Inspector Calls*?
- In what year is the play set?
- When was it first performed?
- Name three members of the Birling family:
  -
  -
  -
- Who is Eva Smith / Daisy Renton?

English – revise An Inspector Calls

Part 2: Character Focus

Fill in the table with key ideas about each character:

Character	Key Traits	What do they learn?
Mr Birling		
Mrs Birling		
Sheila		
Eric		
Inspector Goole		

English – revise An Inspector Calls

Part 4: Themes

Complete the sentences:

1.Responsibility:

Priestley shows that _____

2. Class:

The play suggests that wealthy people _____

3. Generation gap:

Younger characters _____

Older characters _____

4. Gender:

Women in the play are shown as _____

English – revise An Inspector Calls

Exam Practice

Question: How does Priestley present responsibility in *An Inspector Calls*?

Statement	**At the start of the play Priestley presents responsibility through…,**
Evidence	**This is demonstrated when he writes "_____"**
Inference	**From this, it can be inferred that…**
Zoom in	**Here, the writer's use of the [word/phrase "___"] indicates……. And …… It also suggests ……... However…**
Zoom out	**At the time in which the play was set / Priestley was / Priestley cared deeply about…**
Effect	**Here, the audience… Priestley may be highlighting… / warning / challenging / showing the audience ……**

Maths

Substitution and Formulae Revision

(a)	(b)	(c)	(d)
$y = x^2 + 2x$ Find the value of y when $x = 5$	$b = a^3 - 5a$ Find the value of b when $a = 3$	$w = 2d^2 + 5d$ Find the value of w when $d = -4$	$y = 3x^3 + 5x^2 - 6$ Find the value of y when $x = -2$
(e)	**(f)**	**(g)**	**(h)**
$d = 3a + 5b$ Find d when $a = 7$ and $b = -2$	$t = p^2 + pq$ Find t when $p = -6$ and $q = 2$	$f = \frac{2d + e^2}{de}$ Find f when $d = 5$ and $e = -2$	$y = \frac{3}{4}ab^2$ Find y when $a = 5$ and $b = -0.5$
(i)	**(j)**	**(k)**	**(l)**
Make b the subject of $a = 4b - 7$	Make x the subject of $y = x^2 + 5$	Make d the subject of $e = \frac{c + d}{5}$	Make a the subject of $x = 2a^2 - cd$
(m)		**(n)**	
Make x the subject of the formula $y = \frac{x}{x-3}$		Make a the subject of the formula $b = \frac{5-2a}{3a+2}$	

Maths

Linear Simultaneous Equations Revision			
(a)	**(b)**	**(c)**	**(d)**
Solve $2x + 3y = 14$ $x + 3y = 10$	Solve $5x + 2y = 37$ $3x - 2y = 3$	Solve $x + 4y = 17$ $3x + 4y = 19$	Solve $2x + y = 4$ $3x + 2y = 5$
(e)	**(f)**	**(g)**	**(h)**
Solve $5x - y = 36$ $x + 3y = 4$	Solve $7x + 4y = 6$ $3x + 2y = 4$	Solve $6x - y = 4$ $2x - 4y = 5$	Solve $4x + 2y = 19$ $x + 3y = 16$
(i)	**(j)**	**(k)**	**(l)**
Solve $2x - 3y = 20$ $3x + 5y = 11$	4 burgers and 2 sausages costs £4.70. 3 burgers and 5 sausages costs £5.80. Find the cost of one burger and one sausage.	The sum of two numbers is 10.3. The difference between two numbers is 2.84. Find the two numbers.	Find the coordinates of the point where the lines $2x + 3y = 21$ and $3x - y = 4$ meet.

Science – Chemistry of the Atmosphere

Read the passage below and then answer the questions.

Chemistry of the Atmosphere

The atmosphere is the layer of gases surrounding the Earth. It is approximately 78% nitrogen, 21% oxygen, and 1% argon, with small amounts of carbon dioxide, water vapour, and noble gases. The atmosphere has changed significantly over billions of years.

Early Atmosphere:

When the Earth first formed about 4.6 billion years ago, the early atmosphere was dominated by **volcanic activity**, releasing mostly **carbon dioxide (CO_2), water vapour, and nitrogen**. There was very little oxygen. As the Earth cooled, water vapour condensed to form the oceans. CO_2 dissolved in seawater and was deposited as carbonate rocks.

Oxygen and Photosynthesis:

About 2.7 billion years ago, **photosynthetic organisms** such as algae and cyanobacteria evolved and began producing oxygen. The equation for photosynthesis is:

$6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6O_2$

Over millions of years, oxygen levels rose, allowing complex life to evolve. Ozone (O_3) also formed, absorbing harmful ultraviolet radiation from the Sun.

Greenhouse Gases and Climate:

Greenhouse gases such as **CO_2, methane (CH_4), and water vapour** trap heat re-radiated from Earth's surface. Without the greenhouse effect, Earth would be too cold for life. However, increasing concentrations of greenhouse gases — from burning fossil fuels, deforestation, and agriculture — are enhancing the effect, causing **global climate change**.

Carbon Footprint and Reducing Emissions:

A **carbon footprint** is the total amount of greenhouse gases, especially CO_2, released by a person, organisation, or product. Ways to reduce it include using renewable energy, improving energy efficiency, carbon capture and storage, and protecting forests.

1. Write a definition of the atmosphere.
2. State the approximate percentage composition of today's atmosphere.
3. Describe the composition of the early atmosphere.
4. Explain how oceans formed and how CO_2 levels decreased.
5. Name the organisms responsible for producing oxygen in the early atmosphere.
6. Write the word equation for photosynthesis.
7. Explain how the ozone layer formed and why it is important.
8. What is the greenhouse effect? Name three greenhouse gases.
9. Explain why the greenhouse effect is necessary for life on Earth.
10. Describe three human activities that increase greenhouse gas levels.
11. What is meant by 'carbon footprint'?
12. Explain the link between burning fossil fuels and global warming.
13. State two ways an individual can reduce their carbon footprint.
14. Suggest two large-scale strategies to reduce atmospheric CO_2.
15. Evaluate the argument that natural factors, not humans, are causing climate change.

Challenge!

Scientists have recorded a steady rise in atmospheric CO_2 since the Industrial Revolution. Using your knowledge of the carbon cycle and greenhouse gases, explain why this has occurred and describe two natural processes and two human activities that contribute to this rise. Then suggest how governments could use this data to justify climate policy.

Super Challenge!

The graph below shows global average temperature anomaly and CO_2 concentration over the last 150 years. Evaluate whether the data proves that human activity is the main cause of global warming. In your answer, consider correlation vs causation, the role of other greenhouse gases, natural climate cycles, and the precautionary principle. Use evidence to support your argument.

Science – read and answer the following questions

Photosynthesis is the process by which green plants make their own food using sunlight. This process takes place in the chloroplasts of plant cells, which contain a green pigment called chlorophyll. Chlorophyll absorbs light energy, mainly from the sun.

During photosynthesis, plants use carbon dioxide from the air and water from the soil. Using the energy absorbed by chlorophyll, these substances are converted into glucose and oxygen. The glucose is used by the plant for energy, growth, and storage, while the oxygen is released into the atmosphere as a waste product.

The word equation for photosynthesis is:

Carbon dioxide + water → glucose + oxygen

Several factors affect the rate of photosynthesis. Light intensity, carbon dioxide concentration, and temperature are the main limiting factors. If any of these are in low supply, the rate of photosynthesis will decrease. For example, in low light conditions, plants cannot photosynthesise quickly because there is not enough energy available.

This process is very important because it provides the oxygen we breathe and forms the base of most food chains.

- What is photosynthesis?
- Where in the cell does photosynthesis take place?
- What pigment absorbs light energy?
- Name the two raw materials needed for photosynthesis.
- What gas is released during photosynthesis?
- Why is chlorophyll important in photosynthesis?
- What happens to the glucose produced by the plant?
- Why is oxygen described as a waste product?
- Write the word equation for photosynthesis.
- What are the three limiting factors of photosynthesis?
- Explain why photosynthesis slows down at night.
- A plant is placed in a room with plenty of light but very little carbon dioxide.
- What will happen to the rate of photosynthesis? Why?
- Farmers sometimes increase carbon dioxide levels in greenhouses. Explain why.
- Why is photosynthesis important for life on Earth? Give two reasons.
- Suggest one way to increase the rate of photosynthesis in a plant.

History

Tasks:

1. Make a table like this, go through your timeline and write down every time one the key individuals does something that eventually leads to Hitler's appointment as Chancellor.
2. Challenge - Briefly explain which you think was most important and why.

Bruning	Hitler	Hindenburg	Von Schleicher	Von Papen
Mis-judged situation Banned SS and SA with a presidential decree believing he could control the right-wing parties. Was unable to stabilise the country made a number of unpopular tax increases.	Waited for the process to happen – didn't force his way in. Let people think they were in charge – that he was a "normal" politician. ***ACT NATURAL!*** Turned down vice-Chancellor, would only accept Chancellor.	Made poor appointments. Listened to von Papen that Hitler could be controlled. Disliked Hitler, but believed that the arrangement would be temporary.	Got Bruning sacked. Plotting behind Von Papen's back. Asked for a military dictatorship – because he lacked support. Was a big Failure as chancellor.	Joined forces with Hitler – thought he could control Hitler. Made Nazis part of the government for the first time in 1932. Was under the illusion he could control Hitler and that the arrangement would be temporary!

History

Question		Circle the correct answer		
1	What percentage of votes did the Nazis get in the 1930 election?	15%	18%	20%
2	Who was Chancellor in April 1932?	Bruning	Von Papen	Schleicher
3	In which year did Hindenburg's term of office run out?	1931	1932	1933
4	Why was there a second Presidential election in April 1932?	Hindenburg died so they had to elect a new president.	Hitler protested that the election was unfair.	No candidate had received more than 50% of the votes.
5	How did Hitler travel when campaigning in the spring of 1932?	By car	By aeroplane	By train
6	Which two organisations were banned by Bruning in 1932?	The SA and the SS	The Nazis and the Communists	The Red Front and the SA
7	What did Kurt von Schleicher do as a job?	A butcher in a luxury department store	A general in the army	A lawyer
8	What nickname was given to Hindenburg's government by decree?	The Cabinet of Barons	Hindenburg's Host	The Bad Barons
9	When did Hitler and the Nazis become part of the government of Germany?	January 1932	May 1932	November 1932
10	Did the number of Nazi seats in the November Reichstag elections rise, fall or stay the same?	Fall	Rise	Stay the same

History

Explain why there was increased support for the Nazis in the years 1919-32. (12 marks). You may use:
Hitler
Fear of communism

The Lean Years- The Nazi Party 1925-29

- Hitler re-launched the Nazi party on 27th Feb 1925 at Burgerbrau Keller, the scene of the failed Munich Putsch.
- 4000 people came to hear him speak and the hall was so full that 1000 others had to be turned away.
- Following this, Hitler began changing many aspects of the organisation of the Nazi Party in a bid to make it more efficient and ensure their rise.
- By 1929 the Nazi party was incredibly well organised, more of a machine than a group.
- It had 10,000 members and Hitler was extremely popular.
- However, many historians have described 1924-29 as the 'lean years' for the Nazi Party
- In the general elections of 1928 the Nazis:
  - Won only 12 seats
  - Polled only 810,000 votes (2.6% of the national vote)
  - Ended up being the eighth biggest Reichstag party
- Since 1923 inflation had eased, employment had increased and the public were better of
- This was largely due to the work of Gustav Stresemann, who was popular both in Germany and abroad.
- In 1925 Hindenburg, the well-respected 78 year old ex-field marshal of the German army, became president. His reputation restored confidence in the Weimar Republic.
- As a result of all of the above, voters supported the Weimar government and the moderate parties instead of voting for extremists like the Nazis.

The Munich Putsch 1923

- Under Hitler's leadership, the party grew steadily between 1921-1923. It organized strong-arm groups to protect its rallies and meetings. These groups drew their members from the Free Corps and other right-wing paramilitary organizations and were eventually organized into the Stormtroopers (SA).
- In 1923, inspired by surge in nationalist sentiment caused by the Crisis of the Ruhr, Hitler and his followers felt strong enough to attempt to seize control of the Bavarian state government.
- The Nazis believed that a successful Nazi putsch in Bavaria would trigger a nationwide right-wing uprising against democratic government.
- The putsch attempt began in a Munich beer hall on 8th November 1923 but failed almost immediately after it became apparent that local army commanders would not support the Nazi bid for power.
- On the morning of the 9th November, the SA staged a march through Munich in the hope of gaining the support of the people. The march led to a confrontation and gun fight with state police units in which sixteen Nazi supporters and four police officers were shot dead.
- Hitler was arrested on 11th November and in February 1924 he was placed on trial for high treason. Although found guilty, Hitler and his co-conspirators benefited from the sympathetic attitude of the Bavarian authorities toward the nationalist cause and received a sentence of only five years imprisonment.
- Hitler was incarcerated in Landsberg prison where he was permitted to live in relative comfort until he received a pardon after serving only eight months of his sentence. During his time in prison Hitler wrote the autobiographical 'My Struggle', a book which eventually became a manifesto for National Socialism.

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Use the information to make notes on why there was increased support for the Nazis.
Challenge – Which reason is the most important for the Nazis increasing support?