Year 8
Independent Learning Spring 1

Name: ____________________
Form: ____________________
Independent Learning Guidance

At Ark Boulton, we are dedicated to helping our young people to develop a love of learning and to providing students with the necessary skills and knowledge needed to reach the career of their choice. The daily independent learning programme at Ark Boulton will help to equip our students to develop vital study skills needed to be successful during their time at the Academy and beyond. Furthermore, all independent learning activities are based on knowledge retrieval from the previous year - a strategy which has been shown by numerous researchers to significantly improve student learning.

What does my child need to do to complete their independent learning?
This booklet has different 30-minute independent learning tasks for all subjects for the first half term. Every subject has created a different task each week to recall learning from the previous school year or topic. Students will be informed by their subject teachers as to which day their homework will need to be handed in. All tasks need to be completed in the back of their subject exercise books or on a task sheet which will then be glued in to the back of their books. It is the student’s responsibility to be organised and take their subject books home on the appropriate day of the week. The independent learning booklets can also be found on the school website for easy access to any tasks with internet links.

How do I support my child with their independent learning?
As well as supporting your child by providing a quiet space for them to complete their independent learning, please carry out a daily check on the quality of the work that your son/ daughter has produced and sign in the appropriate place. If you are in any doubt that the presentation or detail of the work is not up to standard, do not hesitate to advise your child to reattempt the task.

We thank you for your continued support regarding independent learning. Should you have any questions please feel free to contact your child’s Form Tutor or Achievement Leader.
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</table>
Art
**Art**

**Week 1**
Complete task 1 in your art booklet.

**TASK 1:** Shade using your pencil normally in the upright position.

Shade using the side of your pencil

Use directional shading to fill the shapes
Week 2
Complete task 2 in your art booklet.
Art

**Week 3**
Complete task 3 in your art booklet.

**TASK 3:** Use a full range of tone to copy this image.
Art

Week 4
Complete task 4 in your art booklet.

Task 4: Create a Cubist face. It must show the face from two or more angles. Use different shapes to make the face. Have simplified features (e.g. eyes, nose, mouth).
Week 5
Complete task 5 in your art booklet.
Art

Week 6
Complete task 6 in your art booklet.
Drama
**Week 1**

Give a definition of a still image, tableaux and thought track.

A still image is ...

A tableaux is ...

A thought track is ...

List what drama skills are used in a still image.

•
•
•
•
•

What technique do you use during a tableaux?

The drama technique used in a tableaux is ...

From what you learnt about scene 1 of Hamlet write a thought track of how Hamlet may be feeling or what he may be thinking when he first sees the ghost.

**Week 2**

What are three key moments of scene 1 of Hamlet?

•
•
•

What are two key moments which lead up to Hamlet seeing the ghost?

•
•

Write a **PRE** paragraph on how one of the characters is feeling.

**In scene one of Hamlet, Hamlet is feeling** ... *I know this because* ... *I would show that Hamlet is scared by using the drama skill* ... to show that Hamlet is feeling ...
Week 3

Which facial expressions are appropriate for scene one of Hamlet?

Write a list of at least 4:

•

•

•

Describe which body languages should be used during scene one of Hamlet.

One way in which I can use body language is ... This shows that my character is ...

Another way in which I can use body language is ... This is because my character feels ... and I want to show my audience that my character is ...

Week 4

Why do you use levels during your performance? What does it show?

We use levels in a performance because ... This show the audience who ...

What are proxemics and what do they show?

Proxemics is ... which represents the ... between characters.

Give at least two different examples of when you can use levels in your still image.

•

•

Give at least two different examples of when you can use levels in your still image.

•

•
Drama

Week 5

Write two PRE paragraphs which explain two different still images you have created, focussing on two different physical skills used in the still images.

In my first still image I play the role of ... During my first still image my character is feeling ... My character feels ... because they have just seen ... During my still image I will use the drama skill of ... to show the audience that my character is feeling ...

In my second still image I play the role of ... During my second still image my character is feeling ... My character feels ... because ... During my still image I will use another drama skill of ... to show the audience that my character is ...

What are the other physical skills used during a still image?

- 
- 
- 
- 

Week 6

Write three PREZEL paragraphs explaining the use of three different physical skills used in your still images which are used in your tableaux.

One physical skill used in one of my still images is ... This physical skill was used during the still image which shows ... This physical skill was used because ... This physical shows the audience ... The physical skill of ... was better to use than the physical skill of ... because ... If I were to improve this physical skill, I would do so by ... This would help the audience understand my character as ...

A different physical skill used in one of my still images is ... This physical skill was used during the still image which shows ... This physical skill was used because ... This physical shows the audience ... The physical skill of ... was better to use than the physical skill of ... because ... If I were to improve this physical skill, I would do so by ... This would help the audience understand my character as ...

Another physical skill used in one of my still images is ... This physical skill was used during the still image which shows ... This physical skill was used because ... This physical shows the audience ... The physical skill of ... was better to use than the physical skill of ... because ... If I were to improve this physical skill, I would do so by ... This would help the audience understand my character as ...
English Mastery
Week 1: A Midsummer Night’s Dream Multiple Choice Quiz.

Task: Turn to your homework booklet, page 1. Answer the multiple-choice quiz testing your memory of A Midsummer Night’s Dream. You must answer on the sheet. Then, write your PREZEL in the back of your English book. Your title must be “Week 1 Homework”

Week 2: Testing prior learning of What Great Looks Like

Task: Turn to your homework booklet, page 3. Read the What Great Looks like paragraph and answer the questions below it in the back of your books. These must be in full sentences. Your title must be “Week 2 Homework”

Week 3: Testing prior learning of What Great Looks Like

Task: Turn to your homework booklet, page 4. Read the What Great Looks like PREZEL paragraph and answer the questions below it in the back of your books. These must be in full sentences. Your title must be “Week 3 Homework”

Week 4: A Midsummer Night’s Dream Multiple Choice Quiz.

Task: Turn to your homework booklet, page 5. Answer the multiple-choice quiz testing your memory of A Midsummer Night’s Dream. You must answer on the sheet. Then, write your PREZEL in the back of your English book. Your title must be “Week 4 Homework”

Week 5: Testing prior learning of What Great Looks Like

Task: Turn to your homework booklet, page 7. Read the What Great Looks like PREZEL paragraph and answer the questions below it in the back of your books. These must be in full sentences. Your title must be “Week 5 Homework”

Week 6: Testing prior learning of What Great Looks Like

Task: Turn to your homework booklet, page 8. Read the What Great Looks like PREZEL paragraph and answer the questions below it in the back of your books. These must be in full sentences. Your title must be “Week 6 Homework”
# French

**Week 1**

### Quelques verbes en “er”

<table>
<thead>
<tr>
<th>Français</th>
<th>Anglais</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adorer</td>
<td>to love, adore</td>
</tr>
<tr>
<td>Aimer</td>
<td>to like</td>
</tr>
<tr>
<td>Arriver</td>
<td>to arrive</td>
</tr>
<tr>
<td>Chercher</td>
<td>to look for</td>
</tr>
<tr>
<td>Cliquer</td>
<td>to click</td>
</tr>
<tr>
<td>Détester</td>
<td>to hate</td>
</tr>
<tr>
<td>Écouter</td>
<td>to listen</td>
</tr>
<tr>
<td>Entrer</td>
<td>to enter, go in</td>
</tr>
<tr>
<td>Habiter</td>
<td>to live</td>
</tr>
<tr>
<td>Jouer</td>
<td>to play</td>
</tr>
<tr>
<td>Penser</td>
<td>to think</td>
</tr>
<tr>
<td>Regarder</td>
<td>to watch, look at</td>
</tr>
<tr>
<td>Rentrer</td>
<td>to return home</td>
</tr>
<tr>
<td>Rester</td>
<td>to stay</td>
</tr>
<tr>
<td>Surfer</td>
<td>to surf</td>
</tr>
<tr>
<td>Taper</td>
<td>to type</td>
</tr>
<tr>
<td>Téléphoner</td>
<td>to telephone</td>
</tr>
<tr>
<td>Travailler</td>
<td>to work</td>
</tr>
</tbody>
</table>

### En ville

<table>
<thead>
<tr>
<th>Français</th>
<th>Anglais</th>
</tr>
</thead>
<tbody>
<tr>
<td>Un café</td>
<td>cafe</td>
</tr>
<tr>
<td>Un hôtel</td>
<td>hotel</td>
</tr>
<tr>
<td>Un restaurant</td>
<td>restaurant</td>
</tr>
<tr>
<td>Un magasin</td>
<td>shop</td>
</tr>
<tr>
<td>Un marché</td>
<td>market</td>
</tr>
<tr>
<td>Un supermarché</td>
<td>supermarket</td>
</tr>
<tr>
<td>Un camping</td>
<td>campsite</td>
</tr>
<tr>
<td>Un hôtel de ville</td>
<td>town hall</td>
</tr>
<tr>
<td>Un musée</td>
<td>museum</td>
</tr>
<tr>
<td>Un cinéma</td>
<td>cinéma</td>
</tr>
<tr>
<td>Un théâtre</td>
<td>theatre</td>
</tr>
<tr>
<td>Un port</td>
<td>port</td>
</tr>
<tr>
<td>Un parc</td>
<td>park</td>
</tr>
<tr>
<td>Un parking</td>
<td>car park</td>
</tr>
<tr>
<td>Un jardin</td>
<td>garden</td>
</tr>
<tr>
<td>Un hôpital</td>
<td>hospital</td>
</tr>
<tr>
<td>Un office de tourisme</td>
<td>tourist information</td>
</tr>
<tr>
<td>Une rue</td>
<td>road, street</td>
</tr>
<tr>
<td>Une place</td>
<td>square</td>
</tr>
<tr>
<td>Une église</td>
<td>church</td>
</tr>
<tr>
<td>Une cathédrale</td>
<td>cathedral</td>
</tr>
<tr>
<td>Une auberge de jeunesse youth hostel</td>
<td></td>
</tr>
<tr>
<td>Une piscine</td>
<td>swimming pool</td>
</tr>
<tr>
<td>Une tour</td>
<td>tower</td>
</tr>
<tr>
<td>Une gare</td>
<td>railway station</td>
</tr>
<tr>
<td>Une école</td>
<td>school</td>
</tr>
<tr>
<td>Une banque</td>
<td>bank</td>
</tr>
<tr>
<td>Une poste</td>
<td>post office</td>
</tr>
</tbody>
</table>

### Prépositions

<table>
<thead>
<tr>
<th>Français</th>
<th>Anglais</th>
</tr>
</thead>
<tbody>
<tr>
<td>À</td>
<td>in, at, to</td>
</tr>
<tr>
<td>Dans</td>
<td>in</td>
</tr>
<tr>
<td>Sur</td>
<td>on</td>
</tr>
<tr>
<td>Sous</td>
<td>under</td>
</tr>
<tr>
<td>Entre</td>
<td>between</td>
</tr>
</tbody>
</table>

1. Learn the vocabulary and practice spellings.
2. Choose 5 of the most difficult words-Copy spelling and meaning 5 times in the grid.
# French

## Week 2

### Ma famille:

<table>
<thead>
<tr>
<th>Français</th>
<th>Anglais</th>
</tr>
</thead>
<tbody>
<tr>
<td>un frère</td>
<td>a brother</td>
</tr>
<tr>
<td>une sœur</td>
<td>a sister</td>
</tr>
<tr>
<td>un père</td>
<td>a dad</td>
</tr>
<tr>
<td>une mère</td>
<td>a mum</td>
</tr>
<tr>
<td>un beau-père</td>
<td>a step-dad</td>
</tr>
<tr>
<td>une belle-mère</td>
<td>a step-mum</td>
</tr>
<tr>
<td>un oncle</td>
<td>an uncle</td>
</tr>
<tr>
<td>une tante</td>
<td>an aunt</td>
</tr>
<tr>
<td>un cousin</td>
<td>a cousin (masculine)</td>
</tr>
<tr>
<td>une cousine</td>
<td>a cousin (feminine)</td>
</tr>
<tr>
<td>un grand-père</td>
<td>a grandfather</td>
</tr>
<tr>
<td>une grand-mère</td>
<td>a grandmother</td>
</tr>
<tr>
<td>mon</td>
<td>my (masculine)</td>
</tr>
<tr>
<td>ma</td>
<td>my (feminine)</td>
</tr>
<tr>
<td>mes</td>
<td>my (plural)</td>
</tr>
</tbody>
</table>

### Mes animaux

<table>
<thead>
<tr>
<th>Français</th>
<th>Anglais</th>
</tr>
</thead>
<tbody>
<tr>
<td>j'ai</td>
<td>I have</td>
</tr>
<tr>
<td>un cochon d'Inde</td>
<td>a guinea pig</td>
</tr>
<tr>
<td>un chat</td>
<td>a cat</td>
</tr>
<tr>
<td>un lapin</td>
<td>a rabbit</td>
</tr>
<tr>
<td>un chien</td>
<td>a dog</td>
</tr>
<tr>
<td>un poisson</td>
<td>a fish</td>
</tr>
<tr>
<td>un serpent</td>
<td>a snake</td>
</tr>
<tr>
<td>un oiseau</td>
<td>a bird</td>
</tr>
<tr>
<td>un hamster</td>
<td>a hamster</td>
</tr>
<tr>
<td>une souris</td>
<td>a mouse</td>
</tr>
<tr>
<td>une tortue</td>
<td>a tortoise</td>
</tr>
<tr>
<td>une araignée</td>
<td>a spider</td>
</tr>
<tr>
<td>je n'ai pas d'animal</td>
<td>I don't have a pet</td>
</tr>
<tr>
<td>je voudrais</td>
<td>I would like</td>
</tr>
</tbody>
</table>

### Les descriptions:

<table>
<thead>
<tr>
<th>Français</th>
<th>Anglais</th>
</tr>
</thead>
<tbody>
<tr>
<td>grand(e)</td>
<td>tall/big</td>
</tr>
<tr>
<td>petit(e)</td>
<td>small</td>
</tr>
<tr>
<td>de taille moyenne</td>
<td>medium height</td>
</tr>
<tr>
<td>mince</td>
<td>thin</td>
</tr>
<tr>
<td>gros(se)</td>
<td>fat</td>
</tr>
<tr>
<td>très</td>
<td>very</td>
</tr>
<tr>
<td>assez</td>
<td>quite</td>
</tr>
</tbody>
</table>

### Simple connectives:

Try to make your sentences longer by using these words:

- et = and
- aussi = also
- ou = or
- mais = but
2- Make a gap fill exercise with the french words (minimum 10 words)
Week 4:

<table>
<thead>
<tr>
<th>French</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>une maison individuelle</td>
<td>detached house</td>
</tr>
<tr>
<td>une maison jumelle</td>
<td>semi-detached</td>
</tr>
<tr>
<td>un appartement</td>
<td>flat</td>
</tr>
<tr>
<td>un immeuble</td>
<td>block of flats</td>
</tr>
<tr>
<td>une ferme</td>
<td>farm</td>
</tr>
<tr>
<td>au rez-de-chaussée</td>
<td>on the ground floor</td>
</tr>
<tr>
<td>au premier étage</td>
<td>on the first floor</td>
</tr>
<tr>
<td>au deuxième étage</td>
<td>on the second floor</td>
</tr>
<tr>
<td>au sous-sol</td>
<td>in the basement</td>
</tr>
<tr>
<td>au grenier</td>
<td>in the attic</td>
</tr>
</tbody>
</table>

Week 3:

<table>
<thead>
<tr>
<th>French</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>le salon</td>
<td>living-room</td>
</tr>
<tr>
<td>la cuisine</td>
<td>kitchen</td>
</tr>
<tr>
<td>l'entrée</td>
<td>entrance/hall</td>
</tr>
<tr>
<td>la salle à manger</td>
<td>dining room</td>
</tr>
<tr>
<td>la chambre</td>
<td>bedroom</td>
</tr>
<tr>
<td>la salle de bains</td>
<td>bathroom</td>
</tr>
<tr>
<td>la salle de jeux</td>
<td>games room</td>
</tr>
<tr>
<td>le bureau</td>
<td>office/study</td>
</tr>
<tr>
<td>le garage</td>
<td>garage</td>
</tr>
<tr>
<td>le jardin</td>
<td>garden</td>
</tr>
</tbody>
</table>

Week 5:

<table>
<thead>
<tr>
<th>French</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>devant</td>
<td>in front of</td>
</tr>
<tr>
<td>derrière</td>
<td>behind</td>
</tr>
<tr>
<td>sur</td>
<td>on</td>
</tr>
<tr>
<td>sous</td>
<td>under</td>
</tr>
<tr>
<td>dans</td>
<td>in</td>
</tr>
<tr>
<td>entre</td>
<td>between</td>
</tr>
<tr>
<td>en face de</td>
<td>opposite/facing</td>
</tr>
<tr>
<td>à gauche de</td>
<td>on the left of</td>
</tr>
<tr>
<td>à droite de</td>
<td>on the right of</td>
</tr>
</tbody>
</table>

Make a matching exercise for your partner to do in class.
French

Week 5:

1. Learn the spellings of the words above
2. Make one exercise for your partner-odd one out- minimum 6 lines of 5 words (from any topic that we have covered.)
Week 6:
Make a dictionary page of 20 French words from this booklet that you have learnt and draw a picture for each word. (You can use words from the past 5 weeks).
E.g.- une cravate: a tie (with a picture).
Geography

Week 1 – Why is the coast important?

1. Define (what do they mean) the following words:

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coast</td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td></td>
</tr>
<tr>
<td>Economic</td>
<td></td>
</tr>
</tbody>
</table>

2. Using the information, explain why the coast is important to people.

Write 3 x PRE paragraphs:
Point – One reason why...
Reference – For example....
Explain – This is because....

- Bournemouth is a large seaside town. It is popular with families.
- There are lots of opportunities to take part in water sports.
- There are safe, high quality beaches for children to use.
- Many local cafes, hotels and shops make lots of money from visiting tourists.
- There are lots of walking trails including the coast path.
1. Define (what do they mean) the following words:

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erosion</td>
<td></td>
</tr>
<tr>
<td>Transportation</td>
<td></td>
</tr>
<tr>
<td>Deposition</td>
<td></td>
</tr>
</tbody>
</table>

Coastal erosion is the removal of sediment and rocks by waves. There are three main types:

- **Hydraulic Power**
  - As waves crash against a cliff, air trapped in the cliff's cracks is compressed. The repeated force of pressure and release widens the cracks and breaks the rock apart.

- **Abrasion**
  - Sand, shingle and sediment are hurled against rocks by breaking waves. The rock is eventually worn down by this repeated rubbing and scraping.

- **Attrition**
  - Rocks and boulders transported by waves collide and break up into smaller pieces. This wears them down into smaller and more rounded fragments over time.

2. Using the information, explain two types of erosion found at the coast.

Write 3 x PRE paragraphs:
Point – One type of erosion is...
Reference – For example....
Explain – This is because....

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
Week 3 – Types of waves:

1. Define (what do they mean) the following words:

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swash</td>
<td></td>
</tr>
<tr>
<td>Backwash</td>
<td></td>
</tr>
<tr>
<td>Destructive wave</td>
<td></td>
</tr>
</tbody>
</table>

2. Using the information, explain the differences between constructive and destructive waves.

Write 3 x PRE paragraphs:
Point – One type of wave is...
Reference – For example....
Explain – This is because....

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________
Geography

Week 4 – Longshore drift:

1. Define (what do they mean) the following words:

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swash</td>
<td></td>
</tr>
<tr>
<td>Backwash</td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td></td>
</tr>
</tbody>
</table>

2. Using the information, explain how longshore drift transports sediment along the coast.

Write 2 x PRE paragraphs:

Point – Firstly...

Reference – For example....

Explain – This is because....
**Week 5 – Formation of a spit:**

1. Define (what do they mean) the following words:

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Longshore drift</td>
<td></td>
</tr>
<tr>
<td>Headland</td>
<td></td>
</tr>
<tr>
<td>Prevailing wind</td>
<td></td>
</tr>
</tbody>
</table>

2. Using the information, explain how spits form.

Write 3 x PRE paragraphs:

Point – Firstly...

Reference – For example....

Explain – This is because....

---

**Bars and Spits**

Spits are long stretches of sand or shingle that extend from the land. They form where the coastline suddenly changes shape (e.g. at river mouths or estuaries).

Sand and shingle are transported by longshore drift past the point where land ends. As the waves lose energy, material is deposited, forming a spit. Strong winds can cause the end of the spit to curve towards the land, creating a recurved end.

In the sheltered area behind the spit, vegetation can grow easily, and a salt marsh may form.

Bars form when a spit joins two headlands together, trapping the water in a lagoon behind it.
Week 6 – Formation of headlands and bays:

1. Define (what do they mean) the following words:

<table>
<thead>
<tr>
<th>Word</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistant rock</td>
<td></td>
</tr>
<tr>
<td>Headland</td>
<td></td>
</tr>
<tr>
<td>Bay</td>
<td></td>
</tr>
</tbody>
</table>

2. Using the information, explain how headlands and bays form.

Write 3 x PRE paragraphs:

Point – Firstly...
Reference – For example....
Explain – This is because....

_______________________________________________________________________________________________
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Health & Wellbeing
Week 1:

HIIT For Cardio

1. What does HIIT stand for?

_______________________________________________________________________________________
_______________________________________________________________________________________

2. How does HIIT develop cardiovascular endurance?

_______________________________________________________________________________________
_______________________________________________________________________________________
_______________________________________________________________________________________

3. How does HIIT help to burn calories?

_______________________________________________________________________________________
_______________________________________________________________________________________
_______________________________________________________________________________________

4. Devise a 20-minute HIIT session.

<table>
<thead>
<tr>
<th></th>
<th>Exercise</th>
<th>Time working</th>
<th>Time resting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Physical Challenge: Use your 20-minute HIIT session and complete with a family member.
Health & Wellbeing

Week 2:

1. Define the word strength.

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________

2. What is resistance training?

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________

3. How does resistance training develop strength?

_______________________________________________________________________________________________
_______________________________________________________________________________________________
_______________________________________________________________________________________________

4. Devise a 20-minute resistance training session.

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Repetitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
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<td>4</td>
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<td>5</td>
<td></td>
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<tr>
<td>6</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

Physical Challenge: Use your 20-minute resistance training session and complete with a family member.
Health & Wellbeing

Week 3:

1. Define the term muscular endurance.

____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________

2. What is Boxercise?

____________________________________________________________________________________________
____________________________________________________________________________________________

3. How does Boxercise develop muscular endurance?

____________________________________________________________________________________________
____________________________________________________________________________________________

4. Devise a 20-minute Boxercise session?

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Time working</th>
<th>Time resting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
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<tr>
<td>3</td>
<td></td>
<td></td>
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<td>4</td>
<td></td>
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<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Physical Challenge: Use your 20-minute Boxercise session and complete with a family member.
Health & Wellbeing

Week 4:

1. What are the five sections of the eat well guide and their function?

<table>
<thead>
<tr>
<th>Section</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Put the food you ate yesterday in to each section of the eat well guide?

<table>
<thead>
<tr>
<th>Section</th>
<th>Food I ate yesterday</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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</tbody>
</table>

3. How could you maintain a healthy balanced diet?

____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________
____________________________________________________________________________________________

Physical Challenge: Find a 20-minute yoga routine and complete with a family member.
Week 5:

1. Define the term cardiovascular endurance.

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

2. How does cardiovascular endurance demonstrate your fitness level?

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

3. How does running improve your cardiovascular endurance?

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

4. How else could you improve your cardiovascular endurance, why would this help?

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

Physical Challenge: Identify a running route and complete a 20-minute run with a family member.
Health & Wellbeing

Week 6:

You have now completed a half term of Health and wellbeing lessons. How healthy do you think you are? Write a simple report using evidence from the fitness tests you have done and your own experience. Ensure you explain how your diet and physical activity are important to ensure you have a healthy lifestyle. Write about the things that you do during the week that help ensure you are healthy. What things will you do to ensure you live a healthy lifestyle?
Week 1:

Read the paragraph(s) below then answer the comprehension questions in full sentences in your book.

Why was Elizabeth’s religious settlement seen as the ‘middle ground’?

Prior to Elizabeth’s reign the English Church had been through an intense period of change. Though the Church of England hadn’t changed very much under Henry, Edward VI’s Protestant views had left their mark on all churches in England. Edward’s Church of England had stripped the churches of decorations, statues and decadence. Church services were delivered in English and the Common Book of Prayer was a compulsory aspect of English Christianity. Under Edward the English Reformation was complete.

However, when Mary I came to the throne, she immediately began to reverse the Reformation. Repealing the Act of Supremacy and returning the English Church to Rome. Under Mary’s reign all the decadence and Catholicism returned to the English Church and England was again a Catholic Country.

Elizabeth’s religious settlement was seen as the ‘middle ground’ because she compromised. The English population was a mix of both Protestants and Catholics, Elizabeth did not wish to ‘make windows into men’s souls’ she therefore established a Church that was Protestant in doctrine, but Catholic in appearance. The Common Book of Prayer was returned, Catholic mass was banned. However, Bishops were retained, priests could wear their traditional vestments, and church decorations were permitted. Elizabeth also turned a blind eye to Catholics that practised in private. This meant that both Catholics and Protestants were to some extent appeased and the English Church became a mixture of Protestantism and Catholicism which still remains to this day.

1. What happened to churches during Edward’s reign?
2. What did Mary do when she came to the throne?
3. Why was Elizabeth’s religious settlement known as the ‘middle ground’ or middle way?
4. Give examples of what Elizabeth did to the Church
5. What effect did this have on the character of the Church of England?
Why was the Elizabethan Age significant?

The Elizabethan Age was significant because of its impact on the current Church of England. Elizabeth's religious settlement created a church that was Protestant in doctrine but Catholic in appearance. This is significant because typically Protestant churches that came about from the reformation are simple and the priests wore plain clothes. Whereas, many Anglican Churches are still richly decorated with the clergy wearing traditional vestments. Had England continued with the form of Protestantism encouraged by Edward VI the Anglican Church may have closely resembled the Puritan churches of Scotland. This demonstrates that Elizabeth’s religious settlement had a significant and lasting effect on the Anglican Church.

1. Why was the Elizabethan Age significant?
2. What might have happened to the Church of England if England had continued with Edward’s form of Protestantism?
3. What does the word ‘significant’ mean?
Week 3:

Read the paragraph(s) below then answer the comprehension questions in full sentences in your book

Explain why the Spanish Armada was a failure

One reason the Spanish Armada was a failure was because the English Navy devised a tactical masterstroke. They filled eight ships with gunpowder and tar, creating hellburners. In the middle of the night, these were set on course for the Spanish ships anchored at Calais. The Spanish commanders awoke to see the burning ships speeding towards them and panicked. They cut their anchors and were scattered along the channel. Consequently, the Spanish lost their powerful crescent formation and were easy to attack.

Another reason why the Spanish Armada failed was due to the inexperienced commander of the Spanish fleet. Medina Sidonia had very little sailing experience which meant that he wasn’t very good at devising naval tactics. Consequently, he made several navigational errors during the Armada. This led to the Armada being blown off course towards Scotland. This was a significant factor in the failure of the Armada.

The final reason that the Spanish Armada failed was due to the bad luck. By chance the Spanish fleet got caught in a storm in the north of Ireland. 60 Spanish ships were wrecked in the storm and 11,000 soldiers died. This was the final blow that allowed the British to defeat the Spanish Armada.

1. What was the ‘tactical masterstroke’ the English devised?
2. How did the Spanish react when they saw the hellburners?
3. Why did this make the Spanish easier to attack?
4. What role did Medina Sidonia play in the failure of the Spanish Armada?
5. What was the final reason that the Armada failed?
How and why did Elizabeth’s attitude towards Black Africans change throughout her reign?

Elizabeth had a positive attitude towards the Black African Cimaroons who had helped Sir Francis Drake defeat the Spanish. This is shown in the elaborate jewel that she presented to Drake that is decorated with a picture of an African man. This is a remarkable piece of jewellery which bears witness to the respect that Elizabeth had for the Cimaroonian effort. Consequently, it can be said that Elizabeth had a positive attitude towards Black Africans.

However, Elizabeth’s attitude toward Black Africans changed when England went through a period of failed harvests. The failed harvests led to a significant period of hunger, disease, poverty and vagrancy. During this time Elizabeth decided to scapegoat the Blackmoores living in England. She explained that there were ‘too many’ Blackmoores and that they must be ‘sent forth from this land’. In 1601 she claimed that the Blackmoores were using all the resources needed for the rest of the English population. Elizabeth’s orders against black people were an attempt to blame them for wider social issues.

1. Which group of people did Elizabeth have a positive attitude towards?
2. How do we know about this?
3. When did Elizabeth’s attitude change?
4. What does the word ‘scapegoat’ mean? (look it up if you are unsure)
5. Why did Elizabeth scapegoat Blackmoores?
Describe how merchants competed to trade globally.

In Medieval Europe, merchants bought products including silk and spices from faraway lands such as India and China. However, European merchants never actually visited these places as they were so far away. Therefore, these goods came into Europe via the Silk Road, which was a general route across central Asia, through the Islamic world, through Asia Minor to Constantinople, across the Mediterranean to Italy. This meant that by the time it reached Europe these goods were extremely expensive.

Many European merchants competed to trade globally however, they were unable to get around Africa in order to trade directly in the East. However, in 1497 the Portuguese explorer Vasco da Gama was successful in leading a merchant fleet to Calicut in India.

In the years that followed, Portuguese sailors established a permanent trading post in Calicut, and terrorised the Muslim merchants who had previously dominated the Indian Ocean trade. A new age of trade, colonies and empire was being born of Europe.

1. What sort of products did medieval English merchants buy that came from other countries?
2. How did the merchants acquire these goods even though they never visited those countries?
3. What was the route of the Silk Road?
4. What was the name of the Portuguese explorer who led a merchant fleet all the way to India?
5. Why was this important for global trade?
Week 6:

Read the paragraph(s) below then answer the comprehension questions in full sentences in your book.

How did exploration change Europe?

The mapmaker, Martin Waldseemüller, named the New World "America," after the Italian Amerigo Vespucci, who had explored the coastline of South America and was the first to realize that it was a separate continent, not part of Asia. Columbus wasn't the first explorer to "discover" America.

In 1492, Columbus sailed the blue; and was, for a time, considered to be the first European to set foot on the Americas. And then came evidence that Viking explorers, led by Leif Ericson, had beaten him to it by some five centuries. Early archaeological uncertainty resulted in a minor controversy over which explorer was first, but the story was yet to thicken. Along came authors who suggested that Chinese admiral Zheng He had also beaten Columbus, though only by a few years (not European, but since he came by boat and not by the Bering Strait land bridge, we'll let him enter the contest). And then, someone discovered petroglyphs in West Virginia that seemed to indicate that 6th-century Irish navigator St. Brendan had beaten everyone to the continent. Finally, this wrestling mass of Spaniards, Italians, Vikings, Chinese and Irish were joined by Muslims, when researchers presented both archaeological and documentary evidence that West African Muslims were in fact first to the New World.

Following the exploration of the New World explorers such as Christopher Columbus introduced many new products to Europe. Spain became very wealthy, as they received a continual supply of gold and silver for their South American colonies. As well as precious metals, the discovery of the New World brought many new foods such as tomatoes, potatoes, chocolate and luxuries such as tobacco. Portugal and Spain would dominate overseas trade for most of the 16th century, building the world's first truly global empires.

1. Who is the continent of America named after?
2. List the five contenders for the prize of ‘who discovered America first’.
3. What effect did the ‘discovery’ of the New World by Europeans have on Europe?
4. Who dominated overseas trade for the 16th century?
5. Which country dominated overseas trade from the 17th to 20th centuries (it doesn’t tell you in the passage – think about it)?
Week 1 – Units

Question 1: Convert the following lengths into centimetres (cm)

(a) 4 m  (b) 9 m  (c) 12 m  (d) 59 m

Question 2: Convert the following lengths into metres (m)

(a) 300 cm  (b) 700 cm  (c) 900 cm  (d) 1400 cm

Question 3: Convert the following lengths into centimetres (cm)

(a) 60 mm  (b) 30 mm  (c) 65 mm  (d) 87 mm

Question 4: Convert the following lengths into millimetres (mm)

(a) 2 cm  (b) 6 cm  (c) 4.5 cm  (d) 9.2 cm

Question 5: Convert the following lengths into metres (m)

(a) 4 km  (b) 9 km  (c) 13 km  (d) 28 km

Question 6: Convert the following lengths into kilometres (km)

(a) 6000 m  (b) 2000 m  (c) 5500 m  (d) 6400 m

Question 7: Convert the following lengths

(a) 2 m into mm  (b) 8 m into mm  (c) 6500 mm into m

(d) 9000 mm into m  (e) 48000 cm into km  (f) 9250000 cm into km

Question 8: Convert the following into grams

(a) 2 kg  (b) 7 kg  (c) 19 kg  (d) 20 kg

Question 9: Convert the following into kilograms

(a) 7000 g  (b) 3000 g  (c) 12000 g  (d) 40000 g

Question 10: Convert the following into kilograms

(a) 5 tonnes  (b) 8 tonnes  (c) 15 tonnes  (d) 0.6 tonnes

Question 11: Convert the following into millilitres

(a) 2 litres  (b) 6 litres  (c) 24 litres  (d) 1.8 litres
Maths

Week 2 – Angles

Question 1: Write down the sizes of the lettered angles.

(a) \[ 112^\circ \]
(b) \[ 75^\circ \]
(c) \[ 150^\circ \]
(d) \[ 99^\circ \]
(e) \[ 74^\circ \]
(f) \[ 123^\circ \]

Question 2:

(a) Which angle is corresponding to angle c?
(b) Which angle is alternate to angle d?
(c) Which angle is corresponding to angle h?
(d) Which angle is vertically opposite to angle a?
(e) Which angle is alternate to angle e?
(f) Which angle is co-interior with angle c?
(g) Which angle is vertically opposite to angle h?
(h) Which angle is co-interior with angle e?
(i) Which angle is corresponding to angle a?
(j) Which angle is vertically opposite to angle g?
Maths

Week 3 – Triangles

1. Name each triangle.

(a) ![Triangle A]  
(b) ![Triangle B]  
(c) ![Triangle C]  
(d) ![Triangle D]  
(e) ![Triangle E]  
(f) ![Triangle F]

2. Draw each of these triangles.

- Draw a right angle triangle
- Draw an isosceles triangle
- Draw a scalene triangle
- Draw an equilateral triangle

3. Daniel has drawn a triangle with sides of length 5cm, 5cm and 8cm. What type of triangle has Daniel drawn?

4. Charlotte has drawn a triangle with angles of 60°, 60° and 60°. What type of triangle has she drawn?

5. Is each statement below TRUE or FALSE?

   (a) Scalene triangles have 3 lines of symmetry
   (b) Isosceles triangles have 1 line of symmetry
   (c) A right angle triangle can have a line symmetry
Maths

Week 4 – Quadrilaterals

1. What is a quadrilateral?

2. Name the following quadrilaterals.

(a) [Diagram of a diamond]
(b) [Diagram of a parallelogram]
(c) [Diagram of a square]
(d) [Diagram of a trapezium]
(e) [Diagram of a rhombus]
(f) [Diagram of a parallelogram]

3. Draw the following quadrilaterals.

(a) A kite  
(b) A rectangle  
(c) A square  
(d) A parallelogram

(e) A trapezium  
(f) A rhombus  
(g) An arrowhead/A delta

4. Draw all the lines of symmetry in the quadrilaterals you have drawn in question 3.

5. Answer the questions below.

Which quadrilaterals have only one pair of equal length sides?

Which quadrilaterals have two pairs of equal length sides?

Which quadrilaterals have four equal length sides?

Which quadrilaterals have two pairs of parallel sides?

Which quadrilaterals have one pair of parallel sides?

Which quadrilaterals have diagonals of equal length?
Maths

Week 5 – Symmetry

1. Draw in all the lines of symmetry in the shapes below.

2. For each road sign, draw in and state the number of lines of symmetry and state the order of rotational symmetry.

   ![Road signs](image)

   - Lines of symmetry: ______
   - Rotational symmetry order: ______

   - Lines of symmetry: ______
   - Rotational symmetry order: ______

   - Lines of symmetry: ______
   - Rotational symmetry order: ______

   - Lines of symmetry: ______
   - Rotational symmetry order: ______
Maths

Week 6 – Tessellation

1. Tessellate the regular hexagon below. You should draw at least 8 shapes.

2. Tessellate the trapezium below by rotating it. You should draw at least 8 shapes.

3. Tessellate the kite below by rotating it. You should draw at least 8 shapes.
Religious Studies
Week 1: Courage

1. Define the word courage.
2. Who in religious history has shown courage and why?

Week 2: Anne Frank

1. Who is Anne Frank?
2. How did she show courage?

Week 3: World War 2

1. How did people show courage during WW2?
2. Why was courage important to them?

Week 4: Survivors of the Holocaust

1. Research a survivor of the Holocaust.
2. Write down key facts about that person.

Week 5: Write a letter to a survivor

1. Write a letter to a survivor (Jed) from the Holocaust using the writing frame below:

   Dear Jed,

   I am writing to you to commend you for the courage you have shown during the War.
   We learnt...
   I felt...
   It is important to show courage because...

   Yours faithfully,

Week 6

What has the Holocaust taught you?
Science
Science

Week 1:

Q1. The diagram below shows Jo hanging on a trapeze (swing) in a circus.

(a) (i) Which arrow, A, B, C or D, shows the direction of Jo’s weight? ........... 1 mark

(ii) Which arrow, A, B, C or D, shows the direction of the force of the rope on Jo? ........... 1 mark

(b) Sara swings towards Jo. Sara lets go of her trapeze and Jo catches her.

(i) What happens to the downward force on the rope of Jo’s trapeze? Tick the correct box.

<table>
<thead>
<tr>
<th>increases</th>
<th>decreases</th>
<th>stays the same</th>
<th>there is no force</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 mark

(ii) Explain your answer.

............................................................................................................................................................

1 mark

(c) Jo lets go of the trapeze and both Sara and Jo fall into a safety net below them.

What happens to the downward force on the rope when Jo lets go?

............................................................................................................................................................

1 mark
Q2. (a) Tasha puts a small block of wood on a smooth surface.

She puts different forces on the block. The diagrams below show the size and direction of these forces. Will each block move to the left, to the right or stay still? Tick the correct box in each row.

<table>
<thead>
<tr>
<th>forces on block</th>
<th>moves to the left</th>
<th>moves to the right</th>
<th>stays still</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(ii)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iii)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(iv)</td>
<td></td>
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</tbody>
</table>

(b) (i) Which piece of equipment should Tasha use to measure the forces on the block? Tick the correct box.
(ii) Give the name of the equipment used to measure force.

Q3. Sally pulls a sledge in the snow.

(a) (i) Draw an arrow on the rope to show the direction of the force of the rope on the sledge.
Label the arrow \( R \).

(ii) Draw an arrow on the diagram to show the direction of the force of gravity on the sledge.
Label the arrow \( G \).

(b) Force \( F \) is the friction between the sledge and the snow. Sally then pulled the sledge over a concrete path.
Friction is less on snow than on concrete.
Give the reason for this.

---------------------------------------------------------------------------------------------------------------------------------------

1 mark
maximum 3 marks
**Science**

**Week 2:**

**Q1.** The drawings in parts (a), (b) and (c) show two teams of pupils in a tug-of-war. There is a ribbon tied to the middle of the rope.

(a) The sizes and directions of the forces of each team are shown.

![Diagram of forces](image1)

The ribbon stays above point X on the ground. Give the reason for this.

..........................................................................................................................
..........................................................................................................................

1 mark

(b) The teams then pull with the forces shown below. Draw an arrow on the rope to show the direction in which the ribbon will move.

![Diagram of forces](image2)

..........................................................................................................................

1 mark

(c) Later, the ribbon was to the left of point X as shown below.

![Diagram of forces](image3)

Why did the ribbon move towards the left?

..........................................................................................................................
..........................................................................................................................

1 mark
(d) Team A practices by pulling a rope tied to a tree.

![Image of a tree with a rope being pulled](image)

The team pulls with a force of 1200 N but the tree does **not** move. What is the force of the tree on the rope? Tick the correct box.

- zero
- less than 1200 N
- 1200 N
- more than 1200 N

(e) The pupils do **not** slip because there is a force between their shoes and the ground. What is the name of this force?

...............................................................

1 mark

**Q2.** The drawing shows a snow-buggy being pulled by a sail. The buggy rests on three skis on the snow.

![Image of a snow-buggy](image)

(a) The drawing shows four forces that act when the snow-buggy is moving. Draw a line from each force in the list below to the correct letter from the diagram. Draw only **three** lines.

<table>
<thead>
<tr>
<th>force</th>
<th>letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>the weight of the buggy</td>
<td>A</td>
</tr>
<tr>
<td>the force pulling the buggy along</td>
<td>B</td>
</tr>
<tr>
<td>the friction between the skis and the snow</td>
<td>C</td>
</tr>
<tr>
<td>the friction between the skis and the snow</td>
<td>D</td>
</tr>
</tbody>
</table>

(b) A scientist travelled 80 kilometres (km) each day in the buggy.

How many kilometres did he travel in 10 days?  .......... km

1 mark
(c) The buggy carried the scientist, food and equipment for the journey. The table shows how the total mass changed.

<table>
<thead>
<tr>
<th>mass of buggy, scientist, food and equipment</th>
<th>total mass at start of journey (kg)</th>
<th>total mass at end of journey (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>295</td>
<td>130</td>
</tr>
</tbody>
</table>

The buggy sank deeper into the snow at the start of the journey than at the end. Why did it sink deeper at the start? Use the table to help you.
.................................................................................................................................................................................
.................................................................................................................................................................................................................................................................................................................
................................................................................................................................................................................................................................................................................................................. 1 mark

(d) The buggy rests on three skis instead of three wheels. Why are skis better than wheels for travelling on snow?
.................................................................................................................................................................................................................................................................................................................
................................................................................................................................................................................................................................................................................................................. 1 mark

(e) When a bigger sail is used, the buggy goes faster. How does a bigger sail help the buggy to go faster?
.................................................................................................................................................................................................................................................................................................................
.................................................................................................................................................................................................................................................................................................................
................................................................................................................................................................................................................................................................................................................. 1 mark

Q3. The diagram shows four forces acting on a plane in flight.

(a) Which arrow represents air resistance? Give the letter. ............
......................................................................................................................................................................................................................................................................................................................... 1 mark

(b) (i) When the plane is flying at a constant height, which two forces must be balanced? Give the letters. 
.................................................................................................................................................................................................................................................................................................................
................................................................................................................................................................................................................................................................................................................. 1 mark
(ii) When the plane is flying at a constant speed in the direction shown, which two forces must be balanced? Give the letters.

............. and ............

1 mark

(c) (i) Just before take-off, the plane is speeding up along the ground. Which statement is true? Tick the correct box.

Force B is zero.

Force B is greater than force D.

Force D is equal to force B.

Force D is greater than force B.

1 mark

(ii) Which statement is true about the plane just as it leaves the ground? Tick the correct box.

Force C is zero.

Force C is greater than force A.

Force A is equal to force C.

Force A is greater than force C.

1 mark

Q4. The drawing below shows an astronaut in space. He has four small jets attached to his space suit. These jets produce forces on the astronaut in the directions A, B, C and D.
(a) The drawing below shows the size and direction of four forces acting on the astronaut.

In which direction, A, B, C or D, will the astronaut move? Give the letter. .............. 1 mark

(b) The drawing below shows the size and direction of four different forces acting on the astronaut.

What will happen to the astronaut when the jets produce these four forces?

Explain your answer.

.............................................................................................................................................. 1 mark
**Science**

**Week 3:**

Q1. (a) Nicola is trying out her new roller blades. Robert is pulling her along with a rope. Arrows A, B, C and D show the directions of four forces acting on Nicola.

(i) Which arrow shows the direction of the force of gravity on Nicola? Give the letter. .......................... 1 mark

(ii) Which arrow shows the direction of the force of the rope on Nicola? Give the letter. .......................... 1 mark

(b) Robert pulls Nicola at a steady speed of 2 metres per second. How far will Nicola travel in 10 seconds?

.......................... metres .......................... 1 mark

(c) Nicola lets go of the rope and she slows down. Gravity still acts on Nicola. Give the name of one other force still acting on Nicola after she lets go of the rope.

.............................................................. .......................... 1 mark

Q2. The drawing shows a very old set of scales. It can be used to check the weights of silver coins.

(a) Rema puts a silver coin in pan X. There is nothing in pan Y. In which direction does pan X move?

.............................................................. .......................... 1 mark
(b) The table shows the weights of five silver coins.

<table>
<thead>
<tr>
<th>Silver coin</th>
<th>weight in mN</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>106</td>
</tr>
<tr>
<td>B</td>
<td>112</td>
</tr>
<tr>
<td>C</td>
<td>98</td>
</tr>
<tr>
<td>D</td>
<td>112</td>
</tr>
<tr>
<td>E</td>
<td>120</td>
</tr>
</tbody>
</table>

Rema puts one coin in each pan of the scales. Which two coins will make the scales balance? Give the letters.

 .......... and ............

1 mark

(c) Coin A is placed in pan X, and coin C is placed in pan Y. In which direction does pan X move?

.................................

1 mark

(d) In another experiment, coin B is placed in pan X, and one of the other coins is placed in pan Y. Pan X goes up.

Which coin is in pan Y? Give the letter.

.........

1 mark

(e) Rema knows the weights of the five silver coins in the table. She also has a gold coin. Explain how she could use the coins and the scales to find the approximate weight of the gold coin.

........................................................................................................

........................................................................................................

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........................................................................................................

........................................................................................................

2 marks
Q3. Tom tries on four types of footwear in a sports shop.

(a) (i) When Tom tries on the footwear, which one sinks into the carpet the most?

(ii) When Tom tries on the footwear, what is the same for each type of footwear? Tick the correct box.

- the area of the footwear
- Tom's weight on the footwear
- the material of the footwear
- the weight of the footwear
(b) The drawing below shows a snowshoe.

How do snowshoes help people to walk in deep snow?

1 mark

(c) Choose the correct word from the list to complete the sentence below.

air resistance  friction  gravity  magnetism

When Tom is ice skating the force of ...........................................

between the skate and the ice is less than when he is walking on a carpet.

1 mark

Q4. Anil sits on a mat at the top of a helter-skelter and then slides down a chute around the outside.

(a) (i) Name two of the forces acting on Anil as he slides from point A to point B.

1. ..............................................................

2. ..............................................................

2 marks

(ii) As Anil slides from point A to point B, the forces acting on him are balanced.

Describe Anil's speed when the forces acting on him are balanced.

...........................................................................................................................................
(b) Anil goes back for a second go. This time he sits on a smooth cushion instead of a mat.

He goes much faster on the cushion. Give the reason for this.

.................................................................................................................................................. 1 mark

(c) On his third go Anil lies back on the cushion with his arms by his side.

What happens to his speed? Give the reason for your answer.

..................................................................................................................................................
..................................................................................................................................................
..................................................................................................................................................

.................................................................................................................................................. 2 marks
Maximum 6 marks
Week 4:

Q1. This is Jamie having an X-ray of his arm. The drawing below shows the X-ray photograph.

(a) Complete the sentence. The parts of Jamie’s arm which show up on the X-ray are made of ..................................................

(b) What did the X-ray photograph show had happened to Jamie’s arm?

.......................................................................................................................

.......................................................................................................................

1 mark

(c) Jamie drew the following diagram of parts of his arm.

(i) On the diagram, draw a line from the letter J to a joint in the arm.

1 mark

(ii) Why are joints needed in the arm?

.......................................................................................................................

.......................................................................................................................

1 mark

(iii) The parts which contract to move the arm do not show up on an X-ray. What are these parts called? Tick the correct box.

- blood vessels
- glands
- muscles
- skin

1 mark
Q2. (a) The animals drawn below all have backbones.

(i) What word describes animals with a backbone?
............................................................................................................. 1 mark

(ii) There are five groups of animals with a backbone. Only four groups are shown above. Give the name of the missing group.
............................................................................................................. 1 mark

(b) The drawing below shows the human backbone. It is made up of a number of small bones.

Why is it an advantage that the backbone is made up of small bones rather than one long bone?
........................................................................................................................................ 1 mark

(c) The drawing below shows two small bones from the backbone.

Between the small bones there is a material called cartilage. Cartilage is softer than bone. Give one advantage of having a softer material between the bones.
........................................................................................................................................
........................................................................................................................................
(d) The diagram below shows the bones and two muscles of an arm.

![Diagram showing bones and muscles of an arm]

The biceps and triceps are muscles which raise and lower the forearm. What happens to the biceps and triceps to raise the forearm?

the biceps ........................................................

the triceps ........................................................

1 mark

Q3. Nancy is a dancer.

![Image of Nancy dancing]

(a) When Nancy dances her arms and legs are moved by pairs of antagonistic muscles.

How do antagonistic muscle pairs work? Tick the correct box.

- Both muscles contract at the same time. [ ]
- One muscle is big and the other is small. [ ]
- As one muscle contracts, the other relaxes. [ ]
- One muscle is strong and the other is weak. [ ]
Both muscles relax at the same time.  

(b) As Nancy dances her breathing changes because she needs more oxygen. The graph below shows how the volume of air in her lungs changes when she dances.

From the graph, give two ways her breathing changes when she dances.

1. ......................................................................................................................... 1 mark

2. ......................................................................................................................... 1 mark

(c) Nancy’s muscle cells produce carbon dioxide as she dances.

Which of the following shows how the carbon dioxide is removed from Nancy’s body?
Tick the correct box.

- muscle cells → bloodstream → windpipe → lungs → nose

- muscle cells → windpipe → lungs → bloodstream → nose

- muscle cells → bloodstream → lungs → windpipe → nose

- muscle cells → windpipe → bloodstream → lungs → nose 1 mark
Q4. The diagram below shows bones and muscles of the human arm. The biceps and triceps are muscles that contract to move the bones of the lower arm.

(b) Ligaments hold bones together at a joint. Ligaments can stretch. Why must ligaments be able to stretch?

...........................................................................................................................................................................
...........................................................................................................................................................................
...........................................................................................................................................................................
1 mark

(c) The diagram below shows an elbow joint.

...........................................................................................................................................................................
...........................................................................................................................................................................
...........................................................................................................................................................................
1 mark

(i) The ends of the bones at a joint are covered by a layer of smooth material called cartilage. There is also a fluid in the joint. Why are cartilage and fluid needed in a joint?

...........................................................................................................................................................................
...........................................................................................................................................................................
...........................................................................................................................................................................
1 mark

(ii) In the joint shown below, some of the cartilage has broken off.

Suggest one way this damage will affect the joint.

...........................................................................................................................................................................
...........................................................................................................................................................................
...........................................................................................................................................................................
1 mark
Science

Week 5:

Q1. (a) Air is a mixture of gases. The pie chart represents the percentages of different gases in air. On the line by each section of the pie chart, write the name of the correct gas. Two have been done for you.

2 marks

(b) On a cold day, droplets of water form on a cold window. Explain how these droplets form.

2 marks

(c) The word equation below represents a process taking place in the cells of the human body.

\[ \text{glucose} + \text{oxygen} \rightarrow \text{carbon dioxide} + \text{water} \]

(i) What process does this word equation represent?

1 mark

(ii) As a result of this process, the proportions of oxygen and carbon dioxide in air breathed in and air breathed out change. Which one of the statements below is true? Tick the correct box.

- Air breathed out has less carbon dioxide and more oxygen than air breathed in. [ ]
- Air breathed out has less carbon dioxide and less oxygen than air breathed in. [ ]
- Air breathed out has more carbon dioxide and less oxygen than air breathed in. [ ]
- Air breathed out has more carbon dioxide and more oxygen than air breathed in. [ ]

1 mark
Q2. (a) Jasmine was trying to find out how much air she breathed out in one breath. She poured water into a bell-jar and placed it upside down in a trough of water. The bell-jar had a scale marked in cm$^3$.

Before Jasmine breathed into the bell-jar

![Diagram of bell-jar before breathing]

After Jasmine breathed into the bell-jar

![Diagram of bell-jar after breathing]

(i) How much air did Jasmine breathe out?

............................................. cm$^3$

1 mark

(ii) Air contains carbon dioxide, nitrogen, noble gases, oxygen and water vapour.

Give three differences between the composition of the air Jasmine breathed in and the air she breathed out.

Compared to the air she breathed in, the air she breathed out contained:

1. .......................................................... .......................................................... .......................................................... ..........................................................

2. .......................................................... .......................................................... .......................................................... ..........................................................

3. .......................................................... .......................................................... .......................................................... ..........................................................

3 marks
(b) In the diagram below, tube A connects the lungs to the mouth. Part B is a part of the lung where gas exchange takes place.

(i) On the diagram, write the names of tube A and part B.

(ii) In the wall of tube A there are 'rings' of a stiff material called cartilage. Suggest one function of the 'rings' of cartilage.

2 marks

(c) Diagram 2 below shows one alveolus and its blood supply.

(i) Look at diagram 2, above. Gas A enters the blood from the alveolus. Gas B leaves the blood and enters the alveolus. What are the names of gases A and B?

gas A ..............................................

gas B ..............................................

1 mark
(b) (i) What is the function of the amniotic fluid around the baby?

........................................................................................................... 1 mark

(ii) As a baby is born, it is pushed out of the mother's body.

Look at the diagram above.

What happens in the wall of the uterus to push the baby out?

........................................................................................................... 1 mark

(c) How does a baby get oxygen from its mother while it is inside its mother's uterus?

........................................................................................................... 1 mark

(d) Diagram 2 shows a section through the mother's lungs.

![Diagram of the lungs with labels: bronchus, trachea (windpipe), bronchiole, alveolus]

Look at diagram 2.

From which labelled part is oxygen absorbed into the blood?

................................................................. 1 mark

maximum 5 marks
Q1. (a) The drawings below show three objects made from copper. Draw a line from each object to the reason for using copper for that object. Draw only three lines.

<table>
<thead>
<tr>
<th>object made from copper</th>
<th>reason for using copper</th>
</tr>
</thead>
<tbody>
<tr>
<td>base of a saucepan</td>
<td>It does not rust.</td>
</tr>
<tr>
<td>coin</td>
<td>It is a good conductor of electricity.</td>
</tr>
<tr>
<td>wires in a cable</td>
<td>It is not magnetic.</td>
</tr>
</tbody>
</table>

3 marks
(b) Brass is a mixture of copper and zinc. Some keys are made from brass.

Why is brass more suitable than copper for a key? Tick the two correct boxes.

- Brass does not bend as easily as copper. [ ]
- Brass is a paler colour than copper. [ ]
- Brass is harder than copper. [ ]
- Brass is not as shiny as copper. [ ]
- Brass is not such a good conductor of electricity as copper. [ ]
- Brass is not such a good conductor of heat as copper. [ ]

2 marks

(c) Zinc melts at 420°C. Copper melts at 1085°C. A scientist heated a mixture of pieces of zinc and pieces of copper to 600°C in a dish. What would be in the dish at 600°C?

- Liquid zinc and liquid copper [ ]
- Liquid zinc and solid copper [ ]
- Solid zinc and liquid copper [ ]
- Solid zinc and solid copper [ ]

1 mark

Q2. (a) The table below shows information about five elements.

<table>
<thead>
<tr>
<th>element</th>
<th>melting point (°C)</th>
<th>boiling point (°C)</th>
<th>conducts electricity</th>
<th>colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>-7</td>
<td>59</td>
<td>no</td>
<td>brown</td>
</tr>
<tr>
<td>B</td>
<td>-218</td>
<td>-183</td>
<td>no</td>
<td>colourless</td>
</tr>
<tr>
<td>C</td>
<td>1535</td>
<td>2750</td>
<td>yes</td>
<td>silvery</td>
</tr>
<tr>
<td>D</td>
<td>113</td>
<td>445</td>
<td>no</td>
<td>yellow</td>
</tr>
<tr>
<td>E</td>
<td>1083</td>
<td>2567</td>
<td>yes</td>
<td>orange</td>
</tr>
</tbody>
</table>

(i) Which two of these elements are likely to be metals? Write the letters.

........................................ and ........................................

1 mark
(i) Which element in the table is liquid at room temperature? Write the letter. ......................... 1 mark

(b) What is the chemical symbol for copper? Tick the correct box.

Cr Cu C Co Ca

1 mark

(c) How many atoms of iron and oxygen are there shown in the formulas for FeO and Fe₂O₃?

Complete the table below.

<table>
<thead>
<tr>
<th>compound</th>
<th>number of atoms of iron</th>
<th>number of atoms of oxygen</th>
</tr>
</thead>
<tbody>
<tr>
<td>FeO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fe₂O₃</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2 marks

Q3.

Gold, iron and magnesium are elements which conduct electricity.

Sulphur and phosphorus are elements which do not conduct electricity.

When iron and sulphur are heated together, they react to form a new substance called iron sulphide.

(a) From the substances named above, give:

(i) the name of a metal;

........................................................................................................................................ 1 mark

(ii) the name of an element which is a non-metal;

........................................................................................................................................ 1 mark

(iii) the name of an element which will rust;

........................................................................................................................................ 1 mark

(iv) the name of a compound.

........................................................................................................................................ 1 mark
(b) When magnesium and sulphur are heated together, they react. Write the name of the compound which is formed when magnesium reacts with sulphur.

..................................................................................................................................................... 1 mark

Q4. A teacher mixed iron filings with sulphur on a metal tray. She heated the mixture in a fume cupboard. Sulphur is yellow. Iron filings are grey.

![Image of mixture of iron filings and sulphur](image)

The mixture glowed very brightly. The teacher turned off the bunsen burner. The glow spread through the mixture. When the mixture cooled, a black solid called iron sulphide was left.

(a) From this information, give one way you can tell that a chemical reaction took place.

.....................................................................................................................................................

..................................................................................................................................................... 1 mark

(b) What type of substance is each of the chemicals involved in this reaction? Choose from:

- metallic element
- mixture
- non-metallic element
- compound

iron .................................................................

sulphur ............................................................

iron sulphide ..................................................

..................................................................................................................................................... 2 marks

(c) Raj held a magnet near to each of the three chemicals. By each chemical in the table, write yes or no to show if the chemical was magnetic.

One has been done for you.

<table>
<thead>
<tr>
<th>chemical</th>
<th>Was the chemical magnetic?</th>
</tr>
</thead>
<tbody>
<tr>
<td>sulphur</td>
<td></td>
</tr>
<tr>
<td>iron</td>
<td></td>
</tr>
<tr>
<td>iron sulphide</td>
<td>no</td>
</tr>
</tbody>
</table>

..................................................................................................................................................... 1 mark
(d) (i) When iron is heated with sulphur, iron sulphide is formed. Give the name of the solid formed when zinc is heated with sulphur.

........................................................................................................................................

(ii) Some fossil fuels contain sulphur. When fuels burn, sulphur reacts with oxygen.

Complete the word equation for this reaction.

\[
\text{sulphur} + \text{oxygen} \rightarrow \quad \text{..........................................................................................}
\]

2 marks

maximum 6 marks