

Summer Independent Learning

Subject/Group	BTEC Extended Diploma in Health and Social Care (Y12-Y13)
Topics	Anatomy and Physiology Research Methods Physiological Disorders
Timescale	15 – 24 hours
To be completed by	This work must be completed and handed in to your subject teacher on the first day of term

SECTION 1: ANATOMY AND PHYSIOLOGY

TASK 1 (A1 CELLS):

A1 How cells work

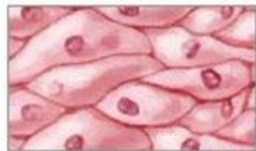
- The function and structure of cells, including membrane, nucleus, ribosomes, rough and smooth endoplasmic reticulum, mitochondria, centrioles, lysosomes and Golgi apparatus.

Create an A4 poster, labelling all parts of the cell (shown above). Make sure you explain the function and structure of each part of the cell.

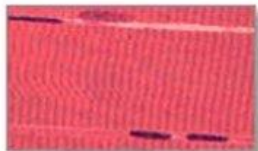
TASK 2 (A2 TISSUES): Tissues are groups of similar cells carrying out specific functions. In this unit, we will look at:



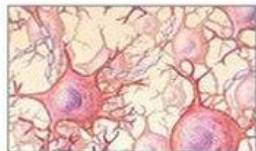
Connective tissue



Epithelial tissue



Muscle tissue



Nervous tissue

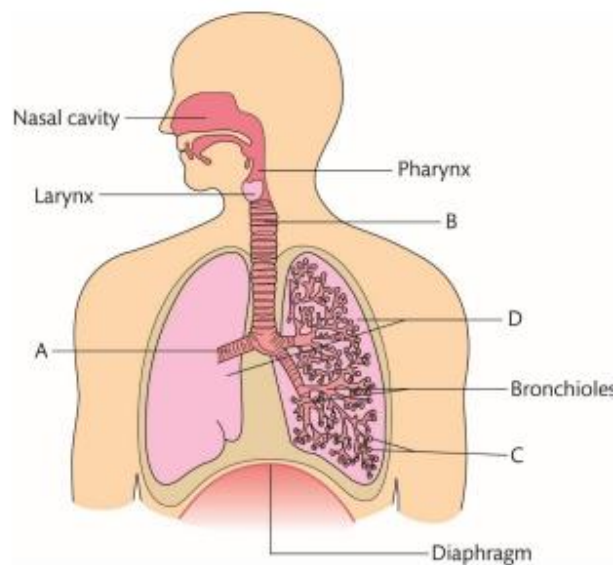
For each type of tissue, you need to explain the function and structure, then identify where it is located in the body. You can present this in a table or as a report.

TASK 3 (A3 BODY ORGANS): Produce an A3 mind map, identifying all the following body organs: Heart, lungs, brain, stomach, liver, pancreas, duodenum, ileum, colon, kidneys, bladder, ovaries/testes, uterus, and skin.

You need to include a picture of the organ, the structure and the function of each.

TASK 4 (B3 RESPIRATORY SYSTEM):

The respiratory system allows oxygen in the air to enter the body, and to be taken up by cells and tissues. The respiratory system also eliminates carbon dioxide from the body.



PART 1: Which letters on the diagram show the following parts of the body?

Bronchi: _____

Lungs: _____

Trachea: _____

Alveoli: _____

PART 2: Produce a table to explain the structure and function of the following parts of the respiratory system: Trachea, bronchi, lungs, bronchial tree, and alveoli.

PART 3: Describe how the tissue in the nose is adapted to its function (refer to the characteristics of ciliated epithelial tissue that prevent the entry of foreign bodies into the respiratory system, and that warm and moisten air).

PART 4: Explain the role of the intercostal muscles and the diaphragm in the process of inspiration and expiration.

PART 5: Watch the following video: <https://www.youtube.com/watch?v=57byXpOUpSU>. Using the space provided below, draw a diagram showing the process of 'Gaseous exchange' and 'Diffusion'

SECTION 2: RESEARCH METHODS

Background/Context

There are many reasons why research is carried out into contemporary health and social care issues, for example to explore the effect of diet on health and wellbeing or the provision and impact of addiction centres in the local community.

As a health and social care professional you will need to understand the purpose of research, how it is carried out and the importance of research for improving the wellbeing of those using health and social care services.

This is an externally assessed unit made up of types of issues where research is carried out in the health and social care sector, research methods in health and social care and carrying out and reviewing relevant secondary research into a contemporary health and social care issues.

Don't forget to use your Health and Social Care textbooks and other resources to help you complete this work.

Unit 4 is found in the BTEC Health and Social Care Student Book 2.

There are TWO parts to this work. BOTH parts are mandatory.

1. A variety of activities aimed at developing your understanding of enquiries into research.
2. Research document to read and analyse.

PART ONE

A1 – Purpose of Research

The purpose of research is to find out information or gain knowledge. Research is a systematic or orderly procedure that explores issues to establish facts or reach new conclusions.

Activity 1

There are FOUR key purposes of research in health and social care. **What are they?**

1	
2	
3	
4	

Activity 2

Using reputable websites, identify TWO examples of research that have been carried out in health and social care within the last five years.

	Name of research projects, the web links and a summary of the research conducted
Health	<u>Research article 1</u> Title of research project: URL link: Summary of the research that has been conducted:

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Activity 3

As part of your learning, you need to have a clear understanding of the key terms used within this Unit.

Define the following key terms used in research.

Command verb/key terms	Definition/Explanation
Article	
Issue	
Health and social care practice	
Research methods	
Qualitative research	
Quantitative research	
Primary research	

Secondary research	
Ethical issue	
Literature review	

Activity 4

Research involves the collection of data. Data can be numerical, or it can be descriptive. Numerical data can be statistically analysed whereas descriptive data cannot be measured. There are several methods used to collect the data. In the table below are examples of the commonly used research methods.

There are several research methods which you need to know about.

Below is a table which includes most the research methods you will come across in Unit 4.

- Define each research method
- Identify ONE strength and ONE weakness for EACH research method

Research methods	Strengths	Weakness
Observations Definition:		
Interviews Definition:		
Focus Groups Definition:		
Experiments Definition:		
Surveys Definition:		
Questionnaires Definition:		
Case studies Definition:		

PART TWO – READING TASK

Read the two articles and complete a SQ3R worksheet (see next page) for each article.

Article 1: <https://www.wypartnership.co.uk/application/files/4316/0284/3010/bame-review-report-summary.pdf>

Article 2: <https://workforce.wypartnership.co.uk/application/files/5316/4555/4180/WYHCP - People Plan - Workforce Strategy 2021-2025 Public summary.pdf>

SQ3R

SURVEY • QUESTION • READ • RECITE • REVIEW

Name: _____

Date: _____

1. SURVEY

Answer the following questions before reading the text.

-What is topic of the text?

-What is the title of the text?

-Notice any subtitles, headings, or chapters. How is the text organized?

-Describe a picture or graphic included in the text.

3. READ

Look for the answers to your three questions as you actively read the text. It is important to take the time to re-read any sections or portions of the text that are unclear.

4. RECITE

Write a short summary of the text in your own words.

2. QUESTION

Before you start reading, write three questions you have about the text.

1 _____

2 _____

3 _____

5. REVIEW

Answer each question you generated before reading the text.

1 _____

2 _____

3 _____

SQ3R

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SECTION 3: PHYSIOLOGICAL DISORDERS

The human body is a complex machine performing a multitude of functions every day. Like any machine it can malfunction, possibly as the result of an inherent genetic error, an infection or as a consequence of lifestyle choices, occupations or environmental exposure to harmful agents. Or, as a result of the natural ageing process, the body systems simply become worn out. These malfunctions can be referred to as physiological disorders.

E.g. diabetes, Alzheimer's disease, osteoporosis, asthma and coronary heart disease.

Motor Neurone Disease (MND)

MND is the short term for motor neurone disease, which affects the nerves known as motor neurones. These nerves are found in the brain and spinal cord, and they help tell your muscles what to do.

If you have MND, this means your movement will be affected and you are likely to get a wide range of symptoms. Select from the following for basic facts about the disease.

<https://www.youtube.com/watch?v=tq0MO2x31NA>

Rob Burrows



The documentary follows Rob Burrow as he shows the same spirit in his fight against motor neurone disease as made him a hugely admired rugby league star.

His family and friends, including former teammates Kevin Sinfield and Barrie McDermott, also give their insight into this remarkable man. Burrow was prompted to raise awareness for research into the condition after meeting former Scotland rugby union legend and fellow motor neurone disease sufferer Doddie Weir.

<https://www.youtube.com/watch?v=y-y014GAhKo>

TASK 1: FACT FILE

Produce a fact file on Motor Neurone Disease (MND) to include the information below:

- Diagnosis
- Carers and Care Settings
- Impact
- Benefits

You can choose how to present your work e.g. a leaflet, a booklet, a PowerPoint or Sway presentation.

Remember to **reference** your work correctly.

Diagnosis	Explain what methods/procedures are used to investigate and diagnose MND (How does a doctor find out that the person is suffering from MND?)
Carers and Care Settings	Explain which carers/professionals will be involved with someone who has MND and explain their roles Explain the settings service users with MND will be in how these settings support service users
Impact	What is the impact of MND on the service user? (think P.I.E.S) E.g. Physical impact – what happens to the body? Find evidence to support your points)
Benefits	What are the benefits of different investigations when diagnosing MND? What are the benefits of the different treatment options for MND? Which investigations/diagnostic procedures/treatments would you use for MND and why?

TASK 2: TREATMENT PLAN

Example of a treatment plan:

https://www.imperial.nhs.uk/-/media/website/patient-information-leaflets/cancer-services/oesophago-gastric-cancer/my-treatment-plan-booklet---oesophago-gastric-service.pdf?rev=27982bd21bdb47d987aba8d795a378bf&sc_lang=en#:~:text=This%20booklet%20is%20designed%20to,you%20can%20carry%20with%20you.

A treatment plan specifies your health care and support needs and outlines how the service providers will meet your requirements.

Produce a treatment plan for Motor Neurone Disease (MND) to include the information on the following slides:

- Assessment of care needs
- Factors
- Recommendations
- Advantages and disadvantages of different treatment options

You can choose how to present your work e.g. a table, a report, a booklet.

Remember to **reference** your work correctly.

At the start of the treatment plan include some personal information e.g. name, date of birth and the name of GP.

Assessment of care needs	What does the service user need support with? Does the service user have any individual needs? E.g. culture, religion, disability What are the goals of the treatment? What are the treatment options and who will provide this?
Factors	What factors do you need to consider to be able to meet the needs of the service user? (Are there any barriers to their care?)
Recommendations	Explain how this plan meets the needs and preferences of the service user. Explain how any barriers can be overcome.
Advantages and disadvantages	Explain the advantages and the disadvantages of the suggested treatment options.

Checklist

Have you:

- Produced a fact file for MND?
- Produced a treatment plan for MND?
- Referenced your work correctly?

If you have difficulty in accessing IT resources to produce this work, you may complete it by hand, making sure you write clearly and neatly.

Make sure you have put your name on all sheets of paper.