BTEC Level 2 Health & Social Care

Unit 7: Anatomy and Physiology

Student name: …………………………………………………………..

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**LO1 - Know the organisation of the human body**

Scenario:

You have been asked to produce an information pack that could be given to patients at your local surgery to promote health and well-being by understanding how the body works.

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| Unit 7  P1 identify the organisation of the human body and the position of the main body organs. |

Task 1:

Use the diagram on A3 paper to create a chart showing where the main body organs are located:

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| --- | --- | --- |
| Heart | Lungs | Liver |
| Pancreas | Intestines | Stomach |
| Kidneys | Bladder | Brain |
| Ovaries/ Testes | Uterus |  |

You may wish to do separate diagrams of the female/ male reproductive organs.

Task 2:

Add information about the function of each organ.

You can either:

Write on coloured paper and stick the function of each organ onto your diagram, or

Write about each organ separately.

White book = pages 107 - 110

Black & Pink = pages 147 - 151

Blue & Orange ……. 190 - 191

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**LO2 - Understand the structure, function and interrelationship of major body systems**

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| Unit 7  P2  Illustrate the structure and function of two major body systems and how they interrelate. |

Task 3:

Choose two of the major body systems that can cause patients at the surgery concern. For example 1) the heart and heart disease and 2) the respiratory system and asthma.

Describe their structure and function using diagrams diagrams.

Example:

|  |  |
| --- | --- |
| Cardiovascular System | White book = page 111 Blue & Orange book 192 - 193  Black & Pink = page 152/3 |
| Respiratory System | White book = page 111-112 Blue & Orange book 194 - 195  Black & Pink = page 153 |

Other body systems you may choose are:

|  |  |
| --- | --- |
| Endocrine | Digestive |
| Reproductive | Nervous |
| Musculoskeletal | Excretory |

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| Unit 7  M1 Discuss, for each system, how its structure helps it to carry out its functions |

Task 4:

Choose two of the body systems and explain their structure in relation to how they work and the job they do in the body.

For example, if you choose to study the respiratory system you could explain how the surfaces of the air sacs or alveoli are structured in order to allow the exchange of gases to occur efficiently.

White book page 111

Blue & Orange 206 - 209

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| Unit 7  D1 explain how the two systems of the body interrelate to maintain homeostatis |

Task 5:

Explain how two systems of the body work together/ interrelate to perform a named function, to help patients see the body as a whole and help them understand how their body works.

For example, if you choose the cardiovascular system and the respiratory system you could explain how they both function to maintain homeostasis of the internal environment by delivering oxygenated blood to living cells.

Homeostatis - Black & Pink Book, pages 156/157/158

Blue & Orange 207

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**LO3 - Be able to carry out routine body measurements and observations of body systems**

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| Unit 7  P3 carry out routine measurements and observations used to monitor these two body systems |

Task 6:

Also in your information pack describe the main measurements and health indicators related to the two systems you have chosen. A GP or clinic nurse will carry out these basic tests as the first indicators that the body systems are healthy. Sometimes patients are concerned about these tests as the equipment may seem frightening.

For example for the cardiovascular and respiratory systems you might describe:

|  |  |
| --- | --- |
| **Body temperature** | White book = page 117/8 Black & Pink Bk - 162  Blue & Orange Bk 210,211,212,213 |
| **Pulse** | White book = 118 Black & Pink Bk - 161  Blue & Orange Bk 210 -213 |
| **Blood Pressure** | White book =118 Black & Pink - 161  Blue & Orange Bk - 210-213 |
| **Peak Flow** | White book = 119/10 Black & Pink Bk - 163  Blue & Orange Bk 213 |
| **Breathing rate** | White book = 119 Black & Pink Bk - 163  Blue & Orange Bk 213 |

If you chose the cardiovascular and respiratory system you could describe how the measurement of the pulse rate and blood pressure could show the cardiovascular system was working and how the breathing rate and pea flow can be used to demonstrate the condition of the respiratory system.

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**LO4 - Know the effects of malfunctions on body systems**

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| Unit 7  P4 outline a common malfunction in each of the two major body systems described |
| P5 identify potential risk factors for each of the two malfunctions |

Task 7:

**You must identify a malfunction and give risk factors for each body system.**

a) Identify a malfunction that may occur for each of the two body systems you have chosen

and described.

b) Give information on the relevant risk factors that might lead to further problems with

each system.

For example: if you investigated the cardiovascular system you could describe coronary heart disease as a malfunction and go onto identify the risk factors that contribute to this condition.

Blue and Orange book, pages 224 -225 Black & Pink Book, pages 166 -171

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**LO4 - Know the effects of malfunctions on body systems**

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| Unit 7  M2 Describe how the presence of the malfunction might affect routine measurements and  observations of each body system |

Task 8:

Include in your descriptions of measurements of health:-

The normal ranges for each measurement

Explain how values/ measurements found outside the ‘normal range’ are indications of ill health and problems in both of the systems you are investigating.

For example:

If you have chosen to describe the measurement of blood pressure for the cardiovascular system you would demonstrate that the normally expected range for this for a healthy young adult is close to 110/75 mm Hg and for an older person, close to 130/ 140 over

90/100 mm Hg. If a measurement is taken that shows an increased value it might indicate

That the patient/ service user has an increased possibility of a heart attack or stroke.

Blue & Orange book, pages 218/19, 220

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**LO5 - Know routine care given to individuals with body malfunctions**

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| **Unit 7**  **P6 identify the routine care that should be given to patients/ service users with the two**  **malfunctions** |

**Task 9:**

**Identify the care that should be given to patients/ service users for each of the two malfunctions you have identified.**

**For example, if you have if you have investigated coronary heart disease as a malfunction of the cardiovascular system, you would go on to explain that when heart disease is diagnosed, a patient will, generally be given advice about necessary lifestyle changes that will lower the risk of a heart attack:-**

**Weight loss diets, exercise, giving up smoking and relaxation techniques.**

**Medication may also be prescribed for high levels of cholesterol or high blood pressure.**

**You might also describe any relevant nursing care that might be needed, such as, reduction of pressure on the skin of patients if they need bed rest.**

**Black & Pink Book, pages 172-173**

Blue & Orange book, pages 226-227

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**LO5 - Know routine care given to individuals with body malfunctions**

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| Unit 7  M3 Describe the routine care the patients/ service users receive for each malfunction |

Task 10:

Describe why this care needs to be given, how it helps to prevent malfunction of the two body systems.

Blue & Orange book, pages 224-228

Black and Pink Book, pages 172-175

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| Unit 7  D2 Explain how the routine care given for each malfunction affects the body systems |

Task 11:

Explain how the care given eases the symptoms of the malfunction, for example, how the medication given for a heart attack may prevent clots forming in the blood or blood flows more easily.

Blue & Orange book, pages 224-228

Black and Pink Book, pages 172-175