

# Autumn 2

## Year 10 Triple B6 Preventing and treating disease and B7 Non-communicable diseases

### Aiming for Grade 4

### Extended Homework Assignment

Name: \_\_\_\_\_

Set: \_\_\_\_\_

### Instructions

A printed copy should be handed into your teacher.

The knowledge required to complete this assignment will be supported in class in lessons of the half term.



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## (TRIPLE) B6 Preventing and treating disease and B7 Non-communicable disease extended homework – Aiming for Grade 8

### Aims

The aim of this homework is to help you revise the main topics in this chapter. By the end of this homework you should know the differences between vaccination, antibiotics and painkillers. You should be able to explain how vaccination works and the stages involved in developing new drugs. You should also be able to describe how monoclonal antibodies are made and the advantages and disadvantages of using monoclonal antibodies.

### Learning outcomes

After completing this activity, you should be able to:

- explain the differences between vaccination / antibiotics and painkillers.
- explain how vaccination protects against disease.
- describe the stages of drug development.
- describe the production of monoclonal antibodies
- discuss the advantages and disadvantages of the development of monoclonal antibodies.
  
- Describe some examples of non-communicable diseases and their effects.
- Explain some of the risk factors for some non-communicable diseases.
- Explain some methods of prevention of some non-communicable diseases.

### Task

- 1** You will be completing a comic strip to describe how vaccination works. You can use the comic book template provided (last page) or create your own.
- 2 a** You will be producing a timeline to show the stages of drug development.
  - b** You will produce a to discuss the advantages and disadvantages of treatment using monoclonal antibodies.

### Questions/task output

- 1** You will be producing a comic strip to show how vaccination works.  
Remember to include:
  - A written explanation and drawings to show how vaccination works.
- 2 a** Create a timeline showing all the stages involved in the development of new drugs. Make sure you put the stages in the correct order and fully explain what happens in each.
- b** Create a summary poster explain monoclonal antibodies. Divide your page into three sections.
  - In the middle write a brief description of how monoclonal antibodies are made.
  - On one side write down all the advantages of using monoclonal antibodies.
  - On the other side write down all the disadvantages of using monoclonal antibodies.

### Task 3

You will be taking on the role of a GP and reviewing the profiles of six of your patients and giving them advice.

There are six patients each with different backgrounds. You will need to give advice to each patient.

In your doctor notes you will need to include the following things for each patient:

- What are the risk factors for each patient?
- What diseases/health problems are they at risk from?
- What are the short- and long-term effects of the potential health problems on the body?
- What actions should they take now and/or in the future to prevent the likelihood of health problems?
- Are there any positive lifestyle habits that the patient has? What are they and how can they help prevent the risk of disease?

### Patient profiles:

<p><b>Paul:</b></p> <ul style="list-style-type: none"><li>• Age 70</li><li>• Male</li><li>• Enjoys walking and gardening</li><li>• Has a meat-heavy diet</li><li>• Has the occasional pint of beer</li><li>• BMI in normal range</li></ul>	<p><b>Mary:</b></p> <ul style="list-style-type: none"><li>• Age 40</li><li>• Female</li><li>• Fitness instructor</li><li>• Vegan</li><li>• Has a glass of wine every day</li><li>• BMI is less than normal</li><li>• Mother has type 2 diabetes</li></ul>
<p><b>Ali:</b></p> <ul style="list-style-type: none"><li>• Age 30</li><li>• Male</li><li>• Rugby player</li><li>• BMI above average</li><li>• Drinks heavily after a match</li><li>• Has a meat heavy diet</li></ul>	<p><b>Yasmin:</b></p> <ul style="list-style-type: none"><li>• Age 19</li><li>• Female</li><li>• Student who cycles to college</li><li>• Smokes 3–5 cigarettes a day</li><li>• Rarely drinks</li><li>• BMI in normal range</li></ul>
<p><b>Juan:</b></p> <ul style="list-style-type: none"><li>• Age 25</li><li>• Male</li><li>• Enjoys clubbing and pubbing</li><li>• BMI is less than normal</li><li>• Smokes 10 cigarettes a day</li><li>• Drinks heavily at the weekends</li></ul>	<p><b>Emma:</b></p> <ul style="list-style-type: none"><li>• Age 60</li><li>• Female</li><li>• Works in an office</li><li>• Loves junk food</li><li>• BMI is above average</li><li>• Does not drink any alcohol</li><li>• Parents had cardiovascular disease</li></ul>
