

GCSE

BIOLOGY A

Biology A Unit 3 Ideas in Context plus B7

Pre - release Material

To be opened immediately

For issue to candidates on or after

DATE MARCH YEAR

H **A223/02**

This version is for HIGHER tier candidates who will be entered for A223/02.

Sufficient time should be allowed for study of the material in the classroom.

INSTRUCTIONS TO CANDIDATES

- Take the article and read it through carefully. Spend time looking up any technical terms or phrases you do not understand. You are **not** required to do more research of your own on this topic.
- For the examination you will be given a fresh copy of this article, together with the question paper. You will not be able to take this original copy into the examination with you.

This Pre-release paper consists of 2 printed pages.

Is 'Bird Flu' coming our way?

What is bird flu?

Bird flu was thought only to infect birds until the first human cases were seen in Hong Kong in 1997.

Humans can catch the disease through close contact with live infected birds.

Flu produces symptoms are similar to other types of flu such as fever, sore throats and coughs.

The World Health Organization said that, by the end of January 2005, there had been 55 confirmed cases of bird flu and 42 deaths in Asia.

There are signs that bird flu can be passed from person to person.

In Thailand a girl who had the disease may have passed the virus to her mother. They both died. The girl's aunt, who was also infected, survived the virus.

Fortunately the normal virus only seems to pass to close relatives and spreads no further.

The Government plan for bird flu

In a normal year between 12 000 and 18 000 people die in Britain from normal flu.

The British government have started preparing for an epidemic of modified bird flu.

They have produced a plan to buy 14.6 million courses of an antiviral drug called Tamiflu.

Experts say that the government should order supplies of the vaccine against the normal bird flu that is present in Asia.

Of course this might not work against a modified bird flu virus.

Another difficulty at the moment is that the main vaccine factory in Britain has been having problems.

It was closed for a while because microorganisms were contaminating the vaccine.

Animal-rights protesters have also been targeting the factory.

How bird flu vaccine is made

Bird flu virus is first weakened



It is then grown on hens' eggs



Genetic material from the virus is extracted and mixed with genetic material from other known strains.



The vaccine is then tested on animals



Human testing then takes place

How serious is the threat?

death rate %	number of people who will die in Britain		
	if 10% are infected	if 25% are infected	if 50% are infected
1.0	56 700	141 800	283 700
1.5	85 100	212 800	425 500
2.0	141 800	354 600	709 300