

Name \_\_\_\_\_ Period \_\_\_\_\_ Assignment # \_\_\_\_\_

## BBC Our Secret Universe: The Hidden Life of the Cell

<http://burkesci.weebly.com/lectures.html> and Scroll down to

The Hidden Life of the Cell

[http://www.dailymotion.com/video/x3e8k3s\\_the-hidden-life-of-the-cell\\_school](http://www.dailymotion.com/video/x3e8k3s_the-hidden-life-of-the-cell_school)

### **How the adenovirus invades cells (other viral types act using different mechanisms)**

- 1) What is the difference between the DNA in a heart cell and a liver cell? (2:57)
  - a. Explain how your answer is possible (3:08)
  
- 2) What are the molecules referred to as the workers of a cell called? (3:17)
  
- 3) How do things in a cell know where to go to do their job? (4:15)
  
- 4) What is a gene? (5:52)
  
- 5) What happens to faulty or worn out proteins? (7:47)
  - a. Explain how this occurs (7:58)

6) Explain how viruses get into cells (15:10-17:34)

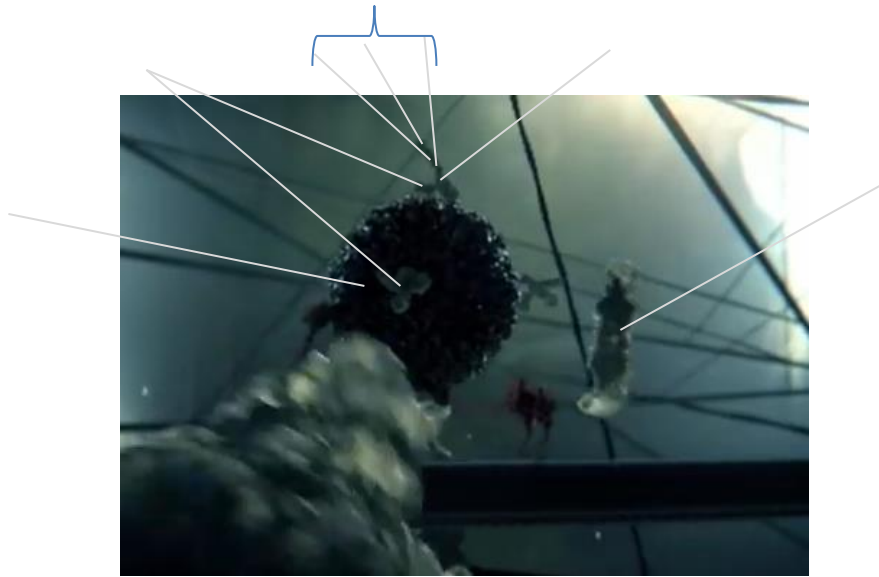
7) Explain why viruses are not considered alive and why this is a difficult question to answer (18:40-19:25)

8) What are 2 ways that antibodies prevent viruses from taking over cells (21:30-22:00)

9) What is the evolutionary origin of mitochondria? (23:30)

10) What must happen for a virus to make it to the nucleus? (25:35)

11) Label the picture below with the following: virus, antibodies, defense protein, tagging proteins, and proteasome (30:45)



12) Explain how viruses are recognized and destroyed using the following words and phrases: antibody, defense protein, tagging protein, and proteasome

13) How does the virus get the cell's DNA copying machines to make copies of its DNA? (39:30)

14) What do the ribosomes do? (40:40)

15) How does a cell communicate that it has been taken over by a virus? (43:00)

16) How do viruses "know" how to invade our cells? (44:50)

17) Where do antibodies specific for a particular virus or other pathogen come from? (51:30)

18) What happens to a virus once it has been “tagged” by an antibody? (51:45)

19) How does your immune system “learn” to recognize a virus that it has been infected by in the past? (52:45)

# Frontline: Vaccine Wars

<https://www.youtube.com/watch?v=VPOrnU3ImxI>

Vaccine Wars

or go to <http://burkesci.weebly.com/lectures.html> and scroll down to

Write 3 facts, observations, insights, etc. that you found interesting and **explain why you found each interesting** for each time segment below

1) Minutes 1-10

I.

II.

III.

2) Minutes 11-20

I.

II.

III.

3) Minutes 21-30

I.

II.

III.

4) Minutes 31-40

I.

II.

III.

5) Minutes 41-51

I.

II.

III.

6) What is your opinion about the safety and efficacy of vaccines? Support your opinion with specifics from the documentary. Your response must be a minimum of 75 words.