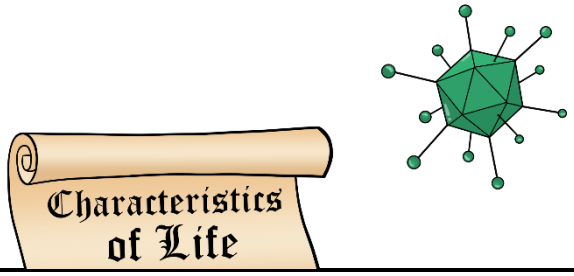
Amoeba Sisters | Video Recap

NAME: _____

Amoeba Sisters Video Recap: *Viruses*

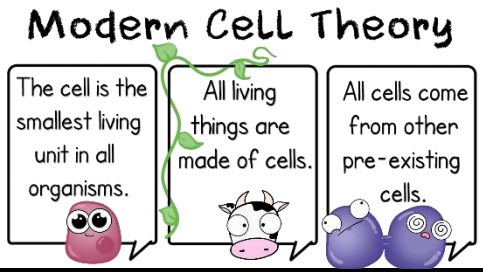
1. Are viruses considered to be living organisms? Why or why not?

No, they lack many characteristics of life: not made of cells, can't reproduce without a host



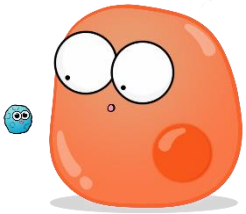
2. Are viruses considered to be cells? Would they be included in these cell theory statements?

No they are not considered cells, so none of the statements of cell theory apply.



3. Compare and contrast a **virus** to a **cell**. What would be some differences? What are some similarities?

Viruses and cells both have genetic material. Both can reproduce, but the cell can do so on its own while the virus needs a host. Viruses have specialized structure for replication, such as special enzymes and an outer envelope.



Determine whether the following statements are TRUE or FALSE by applying what you have learned. If false, you will be asked to explain why.

4. F Viruses can be treated with **antibiotics**.

If false, why? *[If true, leave blank]* Antibiotics only work on bacteria

5. T Viruses are smaller than the **hosts** they infect.

If false, why? *[If true, leave blank]* _____

6. F Viruses are **prokaryotes**.

If false, why? *[If true, leave blank]* It's not a cell

Determine whether the following statements are TRUE or FALSE by applying what you have learned. If false, you will be asked to explain why.

7. T Virus structure includes **biomolecules** such as **proteins** and **nucleic acids**.

If false, why? *[If true, leave blank]* _____

8. T Viruses require a **host** to **reproduce**.

If false, why? *[If true, leave blank]* _____

9. F Viruses *only* target **animals** (including humans).

If false, why? *[If true, leave blank]* They can also infect ants, plants, bacteria...any other living organism!

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10. Viruses come in many different **structures**. What would these different virus structures likely have in common? What might be different?

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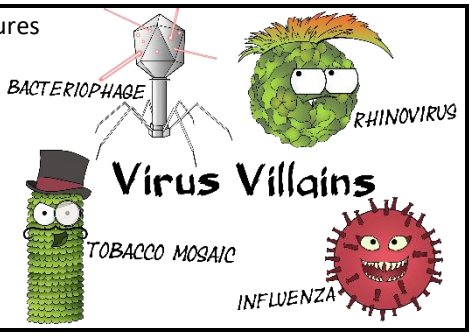

The Lytic Cycle

*It is time to focus on how viruses reproduce by exploring the **lytic cycle**! For the following question numbers, illustrate the scenario described to show the virus and host cell.*

The virus <u>attaches</u> to the host cell.	11.	**The virus <u>inserts</u> its genetic material into the host cell (or the virus itself may be taken inside the cell where its genetic material will be used by the host).**	12.
Based on the viral genetic instructions, the host <u>manufactures</u> and <u>assembles</u> copies of the virus.	13.	**The newly formed viruses can <u>lyse</u> the host cell and now infect new host cells.**	14.

The Lysogenic Cycle

*15. Can you relate this illustration to how the **lysogenic** cycle would be different from the **lytic** cycle?*

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