# Amoeba Sisters Video Recap - DNA, Chromosomes, Genes, and Traits: An Intro to Heredity

The vocab below builds a foundation for understanding heredity! Complete the table using your own words and creativity.

<table>
<thead>
<tr>
<th>Name</th>
<th>Illustrate!</th>
<th>Explain it in Your Own Words</th>
<th>What’s its Significance? (Why does it Matter?)</th>
<th>Real Life Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA</td>
<td>1.</td>
<td>2.</td>
<td>3.</td>
<td>DNA found in the body cell of a snake</td>
</tr>
<tr>
<td>Chromosome</td>
<td>4.</td>
<td>5.</td>
<td>Chromosomes allow the large amount of DNA to be compacted. One reason this is significant is in cell division as it makes it much easier for the cells to put these units into the new cells.</td>
<td>6.</td>
</tr>
<tr>
<td>Gene</td>
<td>7.</td>
<td>8.</td>
<td>9.</td>
<td>One of many genes that can code for a protein involved in eye pigment</td>
</tr>
<tr>
<td>Trait</td>
<td>10.</td>
<td>11.</td>
<td>12.</td>
<td>13.</td>
</tr>
</tbody>
</table>

14. For the diagram at right, please label the following words on the diagram. (A) Deoxyribose (sugar), (B) Phosphate, and (C) Nitrogenous Base.

15. Based on the definition, how many nucleotides do you see in this diagram? ____

16. What are the four different types of bases in DNA and how do they pair?

17. When studying heredity, what is the relationship of DNA bases and traits?
18. Explain what this image represents regarding where your entire DNA code can be found.

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____________________________________________________________________________

19. Apply Your Understanding
Spike is not a clone of his father. He inherited DNA from both of his parents.
Chromosomes are condensed units of DNA. If Spike has 36 chromosomes, you would expect that Spike would have inherited ______ chromosomes from his mother and ______ chromosomes from his father.

20. How did you determine the chromosome numbers and how does that relate to heredity?
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

21. As mentioned in the video, the environment can also affect an organism’s traits. The example of nourishment was used in the case for Spike, as this could affect his growth and size. This can also occur in humans. UV light was not mentioned in the video. How could UV light potentially affect an organism’s trait? Provide one example.

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____________________________________________________________________________
____________________________________________________________________________

22. Recap the Vocab
Identify some of the vocabulary you worked with by labeling them on this illustration:

DNA
Gene
Chromosome
Nucleotide
Phosphate
Deoxyribose (sugar)
Nitrogenous Base