Unit 2 Data

- 1A: 60.6
- 3A: 81.1
- 4A: 55
- 2B: 60.7
- 3B: 73.7
- 4B: 73.8
The Theory of Evolution
Eliminating Misconceptions

• Evolution does not state we as humans come from Apes.
  – Evolution DOES state we share a common ancestor with apes.
  – Around 90-99% DNA shared with primates.

• **Individuals do not evolve, populations evolve.**
Eliminating Misconceptions

• Evolution is not immediate; some scientists argue evolution takes around one-million years to occur.

• Evolution a theory or law?

<table>
<thead>
<tr>
<th>Theories</th>
<th>Laws</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why something happens</td>
<td>What will happen</td>
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<tr>
<td>Explanation of nature</td>
<td>Predictable outcomes</td>
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<tr>
<td>Based on evidence</td>
<td>Based on evidence</td>
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<td>Example: Atomic Theory</td>
<td>Example: Newton's Laws</td>
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Evolution - the observation that organisms including plants, animals, bacteria, and even molds change over time - depends on theory for an explanation.
Darwin’s Theory of Evolution
Natural Selection

- Simple $\rightarrow$ Complex
- Occurs through random genetic mutations.
- Favorable mutations are preserved as it aids survival.
- Favorable genes passed onto future generations.

Lamarck: Acquired traits
Mutation creates variation

Unfavorable mutations selected against

Reproduction and mutation occur

Favorable mutations more likely to survive

... and reproduce
Other Examples
Survival of the Fittest

- Genes are seen either “fit” or “unfit”.
- Fit genes promotes survival.
- Unfit decreases chances of survival.

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Case Study: The “Common American”
The "Common American" Caused by:

1. Increasing interracial marriages.
Discussion Ideas:

1. Advantages/Disadvantages of “average” race?