

# Common Misconceptions

Biology

The errors that appear in almost every student answer.

*The claim, and the correction.*

| Misconception                                | Correction                                      |
|----------------------------------------------|-------------------------------------------------|
| <b>Organisms adapt during their lifetime</b> | Populations change across generations           |
| <b>Evolution has a goal</b>                  | No foresight, no direction                      |
| <b>Humans evolved from monkeys</b>           | Shared ancestor, not descent                    |
| <b>'Just a theory'</b>                       | A scientific theory is an explanatory framework |
| <b>More evolved species</b>                  | No species is more evolved                      |
| <b>Individuals evolve</b>                    | Only populations do                             |
| <b>Traits arise because they are needed</b>  | Variation is random; selection is not           |

The random part is mutation. Selection is the opposite of random — that distinction resolves most objections.