

Solutions

2.1

: *Panthera leo*, with genus capitalised and epithet lower case.: both words italicised; accept appropriate handwritten underlining when answering by hand.

2.2

: Felidae.: lion and tiger share *Panthera*.

2.3

: genus is a broader classification level.: it can contain multiple species.: the supplied *Panthera leo* and *Panthera tigris* are different binomial species names.

2.4

: family before genus.: genus before species.: a family contains genera or a genus contains species; use the supplied cats as an example.

3.1

each: a different genus can occur within the shared Felidae family; one visible trait does not establish complete relatedness; similar appearance can have more than one explanation; classification can use multiple inherited and molecular features; a card key separates supplied visible traits for identification; those branches do not prove evolutionary order.

3.2

Local analytic rubric, 8 ×: state shared family; identify *Panthera* grouping; identify different species; correct lion name case; include italic convention; retain *Felis* within family; reject one-trait ancestry proof; distinguish identification key from evolutionary history; coherent truthful 80–110 word response. Example: “The supplied table places lions, tigers and domestic cats in the family Felidae. Lions and tigers share the genus *Panthera* but have different species names: *Panthera leo* and *Panthera tigris*. The lion’s name needs a capitalised genus, lower-case epithet and italics for both words in print. A domestic cat belongs to the genus *Felis* within the same family. One visible feature, such as stripes, does not by itself establish which animals are most closely related. The separate plant-card key helps identify supplied traits; its branch order is not evidence of the order of evolution.”