



This document illustrates a single item from a TRIADS Test in a sequence of screenshots from the Authorware piece. The new shell has been designed to provide a consistent interface for the test taker, with all of the screen elements appearing in predictable locations irrespective of the style of question. The screen has been divided so that the approx. 1/3 width to the left always contains a tabbed area containing text and/or images and hyperlinks corresponding to Question/Tutorial/Feedback. This is revealed initially upon encountering the question with the remaining 2/3 of the window empty. Clicking a 'Continue' button reveals the Question Display Area in the right-most 2/3 of the screen. Having completed the actions called for by the question, the test-taker then submits the answer. This is recorded on the server and the next question is revealed in the same manner.

The example here is a Move Label item from a test given in Spring 2005 to students at Birkbeck in a 1st-year cell biology module.

Q14. Mutations.  
Examine the EXAMPLE: a wild-type (non-mutant) mRNA is matched to its translated amino acid sequence.

**Example**  
Non-mutant sequence

AUG - AAG - GGC - UAA  
Met - Lys - Gly - Stop

Click Continue and arrange the labels in the manner of the example to illustrate the indicated types of mutation.

Click Continue to view the question  
Move pointer to label - drag to position.  
Select [Submit] to finish

Continue

Test Date 10 February 2005      Molecular Cell Biology 2005: Week 6      2

### Anatomy of the New TRIADS Shell (1 of 3)

[http://www.bbk.ac.uk/olaaf/events/olaaf\\_conf2.html](http://www.bbk.ac.uk/olaaf/events/olaaf_conf2.html)

Upon appearance of the item, a tabbed Question/Tutorial/Feedback Area is revealed in the upper left third of the window area. Clicking a tab brings forward its content, which may include text, images, and hyperlinks. The content of each tabbed area resides in an html file formatted by a cascading style sheet. These can be easily edited even after the Authorware piece has been published. Non-selectable options (in this case, Tutorial and Feedback) are greyed out; in any case, the Feedback tab is never active until after a question has been attempted. This example is from a summative test, so neither Tutorial nor Feedback material is available.

Below the tabbed area is an Information Box that contains context-sensitive instructions to the test-taker.

Clicking 'Continue' in the lower right corner brings up the Question Display Area, as shown on the next page.

The screenshot shows the TRIADS interface for a question titled 'Q14. Mutations'. The interface is divided into several sections:

- Question Tab:** Contains the question text: 'Examine the EXAMPLE: a wild-type (non-mutant) mRNA is matched to its translated amino acid sequence.' Below this is an 'Example Non-mutant sequence' showing 'AUG - AAG - GGC - UAA' and 'Met - Lys - Gly - Stop'.
- Instructions:** 'Click Continue and arrange the labels in the manner of the example to illustrate the indicated types of mutation.' Below this is a 'Swap Area' with two 'SWAP AREA' buttons.
- Labels:** A list of labels to be moved: AUG-UAG-GGC-UAA, Met - Stop, Met - Gly - Stop, AUG-AAA-GGC-UAA, Met - Lys - Ala - Asp, AUG-GGC-UAA, Met - Lys - Gly - Stop, AUG - AAG - GCU - AAU, AUG-AAC-GGC-UAA, and Met - Asn - Gly - Stop.
- Answer Slots:** Two slots for the answer: 'Base-pair insertion/deletion' (with a sub-section for 'Frameshift missense') and 'No frameshift'.
- Footer:** 'Test Date 10 February 2005', 'Molecular Cell Biology 2005: Week 6', and '3'.

### Anatomy of the New TRIADS Shell (2 of 3)

[http://www.bbk.ac.uk/olaaf/events/olaaf\\_conf2.html](http://www.bbk.ac.uk/olaaf/events/olaaf_conf2.html)

Having clicked 'Continue', the test-taker now sees the Question Display Area. This contains, at the top, a command or query to be acted upon; below this is a space containing the question itself. In this case, the question is of the 'Move Label' variety: the test-taker must move the correct labels (arranged under the heading 'labels') to their corresponding answer slots (the grey rectangular areas, to the right).

Once any label has been moved into an answer slot, a "Submit" button (currently not showing) will appear in the lower right corner--the same position as seen in page 1 for the 'Continue' button.

The next page shows all of the correct labels moved into their answer slots.

The screenshot shows the TRIADS Shell interface for a question titled "Q14. Mutations." The question text reads: "Examine the EXAMPLE: a wild-type (non-mutant) mRNA is matched to its translated amino acid sequence." Below this, an example shows the mRNA sequence "AUG - AAG - GGC - UAA" and its corresponding amino acid sequence "Met - Lys - Gly - Stop". The user is instructed to click "Continue" and arrange labels to illustrate different types of mutations. The interface features a "Labels" section with several draggable items: "AUG-UAG-GGC-UAA" (Met - Stop), "AUG-AAA-GGC-UAA", "Met - Lys - Gly - Stop", "AUG-AAC-GGC-UAA", and "Met - Asn - Gly - Stop". There are also "Swap Area" buttons. Three target boxes are provided: "Base-pair insertion/deletion", "Frameshift missense" (containing "AUG - AAG - GCU - AAU" and "Met - Lys - Ala - Asp"), and "No frameshift" (containing "AUG-GGC-UAA" and "Met - Gly - Stop"). A "Submit" button is at the bottom right. The footer shows "Test Date 10 February 2005", "Molecular Cell Biology 2005: Week 6", and the page number "4".

### Anatomy of the New TRIADS Shell (3 of 3)

[http://www.bbk.ac.uk/olaaf/events/olaaf\\_conf2.html](http://www.bbk.ac.uk/olaaf/events/olaaf_conf2.html)

Here, the item has been completed and is ready for submission. Clicking 'Submit' will trigger the appearance of a confirmation dialog: the test-taker will be asked if they are sure they wish to submit the answer. If 'No' is selected, the item will re-set: all the answer slots will clear and the labels will re-assemble in their original positions. If 'Yes' is selected, the item will be submitted and the next question in the sequence will appear.