Q4B Concept Inventories

Listed below are the Concept Inventories that are being developed by various members of the Q4B team. For information regarding specific inventories, click on the links to read the rationale behind development, how many questions have been – or will be – developed, the anticipated development timeframe until the inventory is ready for use, and any other inventory-specific information such as important teaching notes/guides.

We encourage interested instructors from tertiary institutions to get in touch with team members to obtain concept inventories for use in their classes; in all cases, we ask instructors to send messages to the individuals who have worked on the inventories in which they are interested. Messages can be sent via secure forms on the People page.

Validated Concept Inventories (for which complete packages can be provided)

1: Biological Experimental Design Concept Inventory (BEDCI)
2: Meiosis
3: Population Dynamics
4: Speciation
5: Statistical Reasoning in Biology Concept Inventory (SRBCI)
6: Transcription and Translation
7: Experimental Design (First Year Undergraduate Level)
8: Experimental Design (Third/Fourth Year Undergraduate Level)

Concept Inventories in Development (for which complete packages will soon be available)

1: Adaptation
2: Animal Development

Guidelines for Use

We understand that different protocols, course goals, and teaching styles dictate the way any teaching tools are used in different institutions across the globe. However, the Q4B team have put together a short list of guidelines and requests that we ask all instructors to follow when using one of our inventories. These guidelines are explained in more detail in the complete concept inventory packages that can be downloaded once you have contacted relevant Q4B team members about gaining access to them.

In brief, we ask that you:

1a: Do not make concept questions available electronically (on course websites, student service centers etc.), or print them on paper.
1b: Follow specific, validated timing guidelines provided with each inventory to help achieve systematic deployment.

2: Do not give specific feedback about individual questions to individual students, or classes, following deployment of a concept inventory. We do, however, encourage instructors to give summary feedback to the whole class, detailing the concepts students scored relatively poorly on, as well as suggesting reading material and/or further quizzes that will help them address areas of conceptual weakness.

3: Provide us with some feedback on whether our inventories were useful; we would love to hear suggestions for improvement and to know how students performed on the recommended pre- and post-course deployments of these inventories.

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