Comparison of Topics covered by Assessments

**Assessment of Basic Chemistry Concepts**

Analysis of the original Assessment of Basic Chemistry Concepts (ABCC) showed that one quarter of the test focuses on the concept of Law of Conservation of Mass, a topic that is covered in the first couple of weeks. Other topics such as structures and bonding are not tested in the current concept test; the test wouldn’t accurately depict the successes in these areas.

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| Topic Covered | Number of Questions |
| Mass and Change | 9 |
| Phase Change | 2 |
| Stoichiometry | 1 |
| Energy Flow (Endo/Exo) | 1 |
| Density | 3 |
| Temperature and heat | 4 |
| Total Number of Questions | 20 |

**EMCCi**

The new concept inventory (EMCCi) was developed to ensure as broad a range of assessment as possible, while still giving meaningful insight. The course was broken down and it was determined that there were 10 main topics covered in the semester. The majority of questions were selected from previous concept tests to ensure that they were fully vetted, however it was necessary to write a couple of new questions.

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| Topic Covered | Number of Questions |
| Mass and Change | 4 |
| Phase Change | 2 |
| Stoichiometry | 2 |
| Energy Flow (Endo/Exo) | 1 |
| Density | 4 |
| Temperature and heat | 4 |
| Bonding and Shapes | 2 |
| Acids and Bases | 2 |
| Rearranging Atoms | 1 |
| Kinetic Molecular Theory | 2 |
| Total Number of Questions | 24 |