IUPUI Assessment Institute

Creating a Tool to Measure Student Learning of Food-Energy-Water Concepts

**Participant Worksheet**

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| **Assessment Tools** evaluate learning and target particular knowledge or skills.  Here is a link to some common assessment tools used in the Geosciences: <https://serc.carleton.edu/NAGTWorkshops/assess/types.html> |

1. What challenges do you face when assessing your students’ learning?

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| **Concept inventories** test student knowledge of a core set of concepts.  Read more about concept inventories here: <https://arxiv.org/ftp/arxiv/papers/1404/1404.6500.pdf>  See a list of concept inventories here: <https://www.nisthub.org/concept-inventories> |

2. Identify important core concepts in YOUR discipline.

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| **Student Preconceptions** inform their understanding of course concepts, and can be very persistent, even after lessons explaining concepts differently. |

3. Identify what concepts students struggle to learn and/or concepts about which students have inaccurate pre-existing knowledge.

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| What makes a good **concept inventory** question?   * Simple and accessible language * Universal phenomena to frame questions * Asking about each connection of interest separately |

4. Brainstorm a concept inventory style question for your own discipline or one that you work with often. What preconceptions might you see in student responses?