# Triangulating chemistry

July 2017: *Education in Chemistry*

**Empirical/Macroscopic Representations**

**Theoretical/Molecular/Atomic Representations**

**Communicative/Symbolic Representations**

**Concept/Event/Phenomenon**

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What is happening to atoms, molecules and electrons in the matter I am studying or thinking about?

How can I visualise the events at the molecular/atomic level?

How can I make sense of what I can’t see?

How can I communicate with others about what I observe and about the data I collect?

How can I communicate with people about events occurring at the molecular/atomic level that I cannot see?

Experiments and experiences, qualitative and quantitative data, observations

Guiding questions: What can I observe?” What data can I collect?

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