

## Writing Content Learning Objectives for POGIL Activities

POGIL activities have specific content learning objectives. Content learning objectives are statements of what students will be able to “do” as a result of completing the activity. Authors should focus on these goals when writing a classroom activity. The following are some example statements detailing various content objectives.

- Students can identify the components of the learning cycle in a POGIL activity. *A Guided Exploration of POGIL*
- Students can articulate that the number of protons determines the identity of an atom or ion, that this quantity is labeled “atomic number”, and that this number is indicated as the whole number under each element symbol in the periodic table. *ChemActivity 1*
- Students can describe in words and in a diagram how the valves in the heart control the one-way flow of blood. *Circulatory System Activity*
- Students can provide a verbal and diagrammatic description of credit default swaps (CDS) and can articulate how an unregulated speculative CDS market contributed to the 2008 banking crisis. *EconActivity*

An effective activity can have either a single learning goal or multiple learning goals. However, from experience, we have discovered that activities written to achieve more than three content objectives will overwhelm students in terms of their cognitive processing and take longer than the typical class time of 40 or 50 minutes. Hence, an activity designed for use in a typical one-hour class meeting will normally have no more than three content learning objectives.

Language is important when writing these statements. The word “understand” is not an appropriate verb in a content learning objective statement, because it does not indicate what the student is able to “do.” An appropriate alternative is to write the statement to reflect the student’s actions when demonstrating the understanding. For example:

- Students understand the concept of “sunk costs.” *(Incorrect)*
- Students can provide a written definition of “sunk costs” and can provide at least two examples of personal experiences or situations in which this concept might be appropriately applied. *(Correct)*

While an instructor may or may not choose to explicitly state the content learning objectives within the activity, clearly written goals must be included in supplemental teachers' materials and are required upon application for activity feedback from The POGIL Project.