Instructor's guide

I am using this activity as the very first content in `https://paradigms.oregonstate.edu/courses/ph423`. See Naming and Classifying Thermodynamic Variables for a list of earlier versions of this prompt. The idea is to familiarize students with what sorts of properties are considered in thermodynamics.

The key to this particular activity is that we then discuss which are intensive and which are extensive without yet defining those terms. The idea is that by drinking half of the glass of water we make concrete the "doubling the size" that is often discussed when talking about intensive and extensive properties. This also guides us to the set of properties that are used in bulk thermodynamics, since those properties are either intensive or extensive.

We will be spending this course studying thermodynamics, which is the branch of physics that deals with the physical properties of matter and the laws that govern the properties of matter. Today we will be discussing what *kinds* of properties matter can have.

Imagine pouring yourself a cup of water. Then in your small groups brainstorm a list of all the properties that particular blob of water might have. Please limit yourselves to properties of the *water itself*, omitting any properties of the cup or the room around you.

Drinking half If you drink half of your glass of water (feel free to do so), how will each of your properties change for the water that remains in the glass?