



## *Assignment 2*

### *The perfect solids*

*This homework assignment is a little different from all of the others! Here you'll develop a visualization of the five perfect solids by actually constructing paper models of them. The sheets following this page provide a guide for you to accomplish this.*

Solids are three dimensional objects. It was discovered in ancient times that only a small set of "perfect" solids exists. We have since discovered that these shapes form the buildings blocks of three-dimensional space, and the basis for many things in architecture, chemistry, and atomic physics! These are named the **Platonic Solids** since they were first documented by Plato in his work *Timeaus* between 427 BCE and 347 BCE.

All five of the Platonic solids (and only these) meet these rules, which make them "perfect":

- A given solid looks the same from any corner point.
- For a given solid, each face is of the same shape.
- For a given solid, every edge and every angle is identical.

These solids and related geometrical concepts are discussed in your assigned reading #2. After completing that reading, detach the sheet that follow from this workbook. Cut out the shapes as indicated and construct a three-dimensional model of each of the five perfect solids. To do this, you'll label each flat cutout with your name and the name of the solid that the cutout will fold up to form. Fold up each solid and fasten the joining edges with cellophane tape. Put all five solids into a small bag and submit the constructed solids for grading by the established deadline.

