It is common to use balloons in a Geometry course to demonstrate the properties of spherical geometries. However, it can also be useful for the students to build the spherical space themselves, rather than just blow up a balloon. This talk will consider a different tactile model for spherical geometry, as well as an equivalent for hyperbolic geometry. We will also discuss how you can incorporate building these models in class before the formal introduction of the non-Euclidean geometry, as well as what advantages the students get from this process. (Received September 21, 2018)