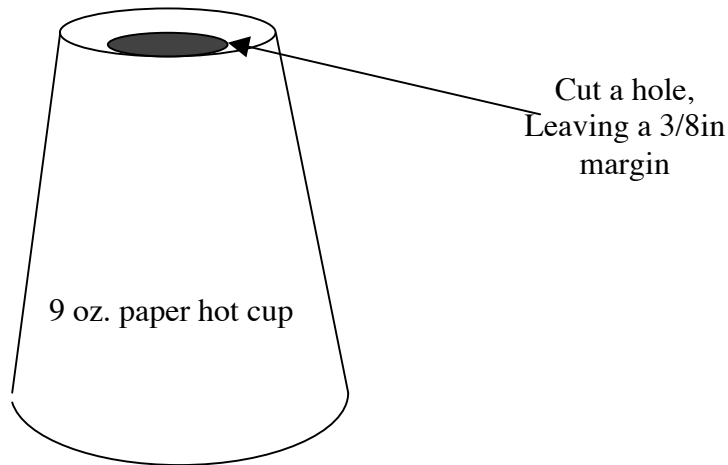


Paper Cup Microscope G: 1?-5

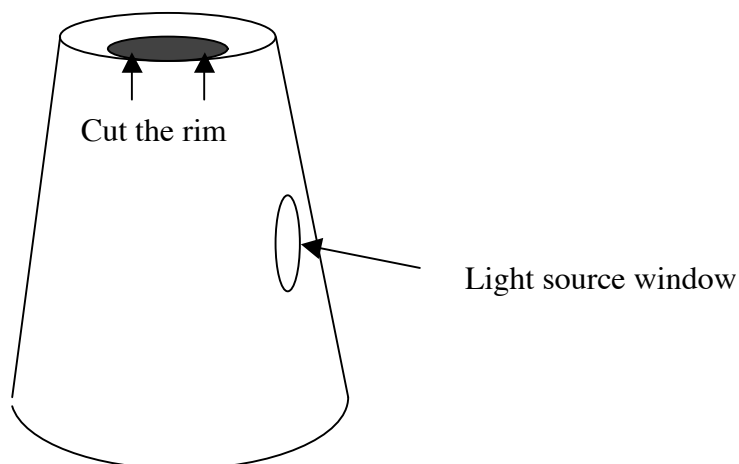
Supplies: 9oz. Hot/cold paper cup, 'dual' 2" diameter acrylic mini lens (3x/6x), scissors, light source

This microscope costs under a dollar, and gives excellent results for young scientists. The cup provides a set and stable focal distance and limits the field of observation to avoid providing too much information to sketch or describe. The microscope can be modified to use an external light source like a penlight (recommended).

First, a viewing hole must be cut into the bottom of the cup. An adult could use an exacto knife, but students can try poking a hole in the middle with a sharp pencil. Scissors are used to 'nibble' cut a circle in the bottom of the cup. I recommend leaving a margin of about .5 cm or 3/8inch for strength.

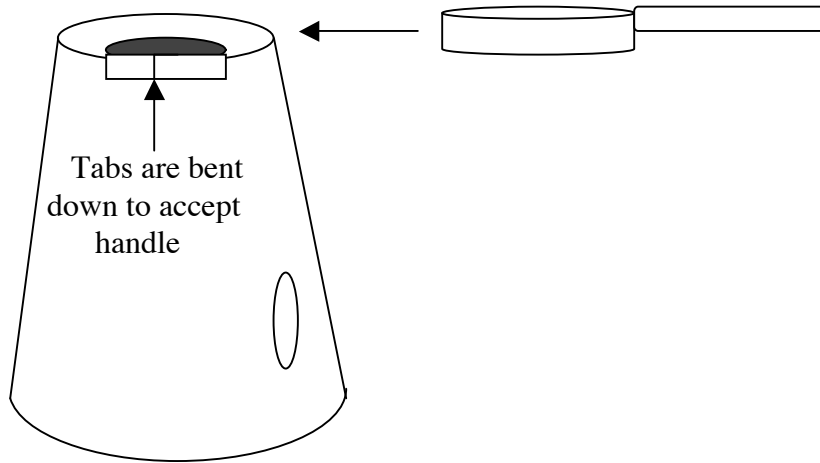


Two cuts must be made in the rim of the bottom of the cup, about 2.7cm (1 and 1/4 in) apart. A third cut between them will make fitting the lens easier.



A 'window' may be cut into the side of the cup to the right of the rim cuts.

Fold the tabs back where the rim has been cut. This will allow the handle of the mini lens to fit flush with the bottom of the cup. The handle will stick out, but this is OK. You can use a bit of transparent tape to secure the lens on the cup.



The light source hole can be covered with transparent tape to diffuse light or left open. If you use the 'mini-lite penlight', you only need to poke a small hole in the side for the light source.

These are inexpensive enough to provide one for each student. You can use the 'microscopic observation sheet' in the appendix for student journals.

A sample observation exercise is included in this packet.