

# Affinity Diagram

Regarding the Replacement Bottle Cap

## Cost

Material cost  
per gram

cost to rent  
a 3D printer

total cost of  
producing the  
cap

cost of  
potential  
mass  
production?

## Materials

what kind of  
filament

durability of  
the plastic?

is the plastic  
food safe?

environmental  
impact of the  
plastic

## Design

colors and  
textures

dimensions  
and  
tolerances

engraving in  
the plastic?

ergonomics

## Performance

can it handle  
pressure

wear and tear  
over time

resistance to  
leaks or spills?

heat  
resistance?

## 3D Printing

which side to  
print up?

sanding and  
smoothing on  
the cap?

printing time  
and efficiency

printing  
precision