

 PROJECT #2 PROPOSAL

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**Team Name: Hot Stuff**

**Part A: Project Ideas & Objectives**

* **portable self-heating Coffee Cup**
* **3d-Printed exterior layer**
* **Battery operated**
* **detachable base**
* **Vinyl Decals**
* **Miniature heating unit (Induction)**
* **Possible lighting**

**Part B: Electronic Resources (Make sure hyperlinks are active!)**

**Tinkercad-** [**https://www.tinkercad.com/**](https://www.tinkercad.com/)

**Mini Heater design-** [**https://www.youtube.com/watch?v=mBwFhHR0gdQ**](https://www.youtube.com/watch?v=mBwFhHR0gdQ)

**Vinyl cutter help-** [**https://vinylcuttingmachines.net/vinyl-cutting-101-everything-you-need-to-know-about-craft-cutters/**](https://vinylcuttingmachines.net/vinyl-cutting-101-everything-you-need-to-know-about-craft-cutters/)

**General 3d Printing/Vinyl/Lighting help-** [**http://mvhs.nbed.nb.ca/other/mvhs-make?page=2**](http://mvhs.nbed.nb.ca/other/mvhs-make?page=2)

**Induction Heater Unit-** [**https://www.banggood.com/5V-12V-ZVS-Induction-Heating-Power-Supply-Module-With-Coil-p-1015637.html?rmmds=search&cur\_warehouse=CN**](https://www.banggood.com/5V-12V-ZVS-Induction-Heating-Power-Supply-Module-With-Coil-p-1015637.html?rmmds=search&cur_warehouse=CN)

**Induction Heater Tutorials-** [**https://www.youtube.com/watch?v=HvgM0awet9I**](https://www.youtube.com/watch?v=HvgM0awet9I)

[**https://www.youtube.com/watch?v=\_v5Hg2zfLjs**](https://www.youtube.com/watch?v=_v5Hg2zfLjs)

[**https://www.youtube.com/watch?v=UJ-1p6Bdz1E**](https://www.youtube.com/watch?v=UJ-1p6Bdz1E)

**Vinyl mug tutorial-** [**https://www.youtube.com/watch?v=Irz7q45Dw2g**](https://www.youtube.com/watch?v=Irz7q45Dw2g)

**Soldering tutorial-** [**https://www.youtube.com/watch?v=Qps9woUGkvI**](https://www.youtube.com/watch?v=Qps9woUGkvI)

**Part C: Materials & Designs**

* **Copper wire (2-3 feet)**
* **2 feet of electrical wire**
* **9 volt or D batteries**
* **Single walled stainless steel mug (small)**
* **3D Printer/filament**
* **Coffee**
* **Mini- Led lighting**
* **Switch**
* **Vinyl Cutter/Vinyl**
* **mini induction heater and coil**

**Design Ideas**

**Our two design ideas, the only difference being whether or not to put coils up the whole length of the cup or not. Induction unit will be added to the base of the mug for heating.**

