

### What is going on ?

Copper is a good conductor of heat. It quickly conducts away the heat. So the paper does not attain its charring point easily, on the other hand wood is a bad conductor of heat and is unable to conduct away the heat. So the paper quickly reaches its charring point and is charred.



## CONDUCTIVITY OF MATERIALS USING COPPER & WOOD CYLINDER

**TARANG SCIENTIFIC INSTRUMENTS**

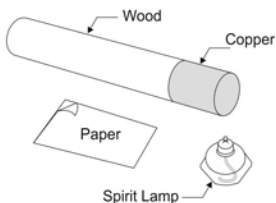
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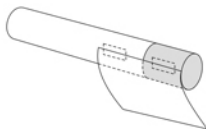
A paper wrapped on a copper rod does not burn, whereas a paper wrapped on a wooden rod burns when held over a flame.

**Assembly:** Consists of a copper cylinder of diameter 25mm and length 30mm. This copper cylinder is screwed tightly into the wood cylinder of the same diameter but of length 120 mm. Some sample paper pieces are supplied along with the cylinder. Spirit lamp and cello tape are required to perform the experiment.

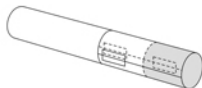


#### To do and Observe :

**Step 1 :** Fix the paper using cello tape piece to the copper and wood cylinder such that the paper covers part of the copper and part of wood as shown in the diagram.



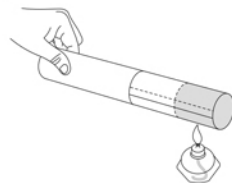
**Step 2 :** Then wrap this paper around the cylinder and fix it again using cello tape (as shown in diagram).



#### Step 3: Glow spirit lamp.

**Step 4:** Now hold the assembly over the flame such that the paper which covers copper rod is exposed to the flame.

Hold it for some time. What you observe ? Does paper gets charred or not ? Why ?



**Step 5:** Then expose the paper which covers wooden rod to the flame. Hold it for some time. What do you observe ? Does paper get charred now ? Why ?

