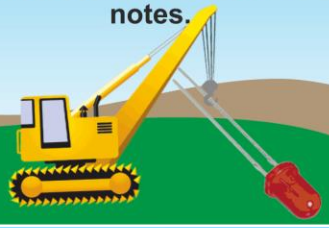
ANSWER THE QUESTIONS WITH SKETCHES AND NOTES. CLICK ON EACH 'CRANE' FOR HELPFUL LINKS.

PREPARING PRINTED CIRCUIT BOARDS (PCBs) AND SOLDERING KNOWLEDGE MAP AND EXERCISES

1. WHAT IS A PRINTED CIRCUIT BOARD (PCB)? WHAT IS ITS PURPOSE? Include an image of a PCB.

2. CIRCUIT DESIGNS ARE DRAWN ON 'ELECTRONICS / CIRCUIT AND PCB SIMULATION SOFTWARE. WHAT ARE THE ADVANTAGES OF USING THIS TYPE OF SOFTWARE?

3. DESCRIBE THE STAGES INVOLVED IN: PREPARING A SOLDERING IRON, PCB AND COMPONENTS, READY FOR SOLDERING. Include sketches and notes.

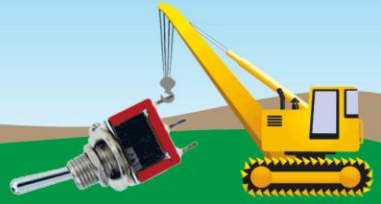


4. WHAT IS SOLDER? DESCRIBE AND SKETCH THE SOLDERING PROCESS. Include notes and labels.

8. INDUSTRIAL WASTE FROM THE MANUFACTURE OF PCBs, IS DANGEROUS. EXPLAIN THE PROBLEM. Paste warning symbols that are found on PCB chemicals.

7. PCBs CAN BE MANUFACTURED BY A CNC MACHINE. DESCRIBE THIS PROCESS. Include an image of a CNC machine capable of this work.

6. HOW IS SOLDERING CARRIED OUT IN INDUSTRY, FOR MASS PRODUCTION? Include notes and sketches.



5. DESCRIBE AND SKETCH (or paste an image) OF A GOOD AND POORLY SOLDERED JOINT.

EXTENSION WORK

9. CIRCUIT DESIGNS / LAYOUTS CAN BE TESTED USING 'BREADBOARDS'. WHAT ARE THESE? Include an image of a breadboard, set out with components.

10. EXPLAIN / DESCRIBE, THE DESIGN AND MANUFACTURE OF A PRINTED CIRCUIT BOARD. Include sketches and notes. Click on the four cranes for helpful links.