



This ELT is all about health and safety in the workshop and classroom.  
Answer the **Star Question** for a praise stamp.



1.) What is this machine called? \_\_\_\_\_

2.) Before using the machine name three things that you must do first to make sure that you are safe?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3.) What are these? \_\_\_\_\_

4.) Why do we have to wear them when doing practical work?

\_\_\_\_\_  
\_\_\_\_\_

4.) What is this? \_\_\_\_\_

5.) Where should we put it when we have finished soldering?

\_\_\_\_\_

6.) What should you do if you burn yourself when soldering?

\_\_\_\_\_



**Star Question**

What voltage is the household mains electricity supply?



\_\_\_\_\_

Name: \_\_\_\_\_



Technology Group: \_\_\_\_\_



In the boxes, write what you think the tools and equipment are.

Remember: Answer the **Star Question** for a praise stamp.



\_\_\_\_\_



\_\_\_\_\_



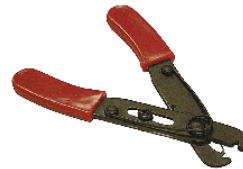
\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



**Star Question**  
What is this tool called?



\_\_\_\_\_

Name: \_\_\_\_\_

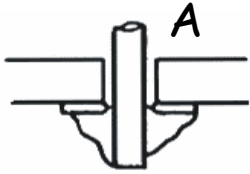


Technology Group: \_\_\_\_\_

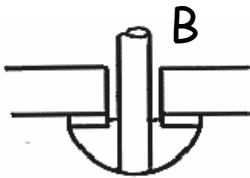


The pictures below show four circuit boards with components soldered in by four different students.

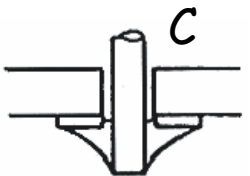
Remember: Answer the **Star Question** for a praise stamp.



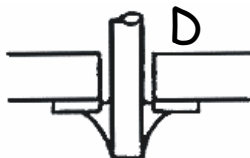
1.) One of the soldered joints shown is perfect. Pick which one you think it is and draw it neatly in the box.



2.) Picture D shows a circuit where too **little** solder has been used. Draw a picture of the one that you think has too **much**.



3.) One of the pictures shows a joint where the soldering iron has been left on for too long. Draw which one you think it is.



### Star Question

Solder used to be made from an alloy of two different metals, one that was poisonous. What are the two metals?

\_\_\_\_\_ & \_\_\_\_\_

Name: \_\_\_\_\_

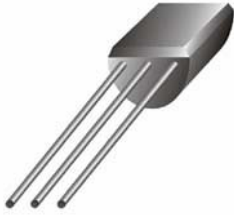


Technology Group: \_\_\_\_\_



Electronic components are the bits and pieces that make circuits work.

Remember: Answer the **Star Question** for a praise stamp.



1.) A transistor can be used as an electronic \_\_\_\_\_.

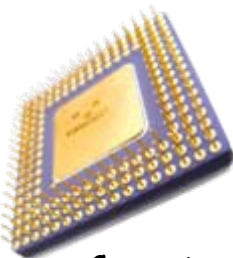
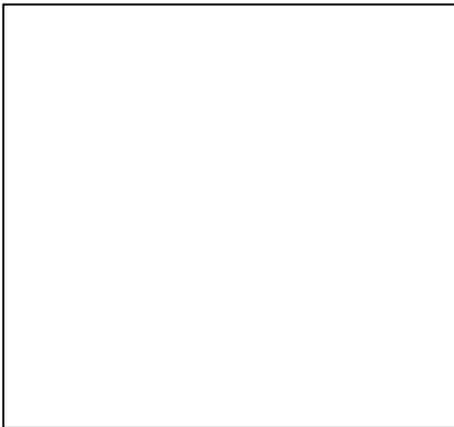


2.) A transistor has \_\_\_\_\_ legs that stick out of the bottom. These are fastened on to a circuit board using a \_\_\_\_\_ iron.

3.) Transistor are sensitive components and are damaged by \_\_\_\_\_. We therefore have to make sure we don't hold the soldering iron on for too long.

4.) There are three types of component - inputs, outputs and processes. A switch is an input but a buzzer is an \_\_\_\_\_.

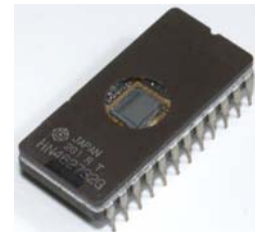
5.) Draw a neat picture of a **Resistor** in the box on the left.



### Star Question

Computer chips and many other electronic components are made out a really common material. So common that sand on the beach is made of it! What is it called?

\_\_\_\_\_



Name: \_\_\_\_\_



Technology Group: \_\_\_\_\_

# Extended Learning Task 5

## Resistant Materials



This is all about the properties of materials that we can use.

Remember: Answer the **Star Question** for a praise stamp.



1.) The plastic we are using as the case to our circuit is made from a type of plastic called HIP. It is a type of plastic that \_\_\_\_\_ when it gets hot and \_\_\_\_\_ when it cools down. Plastics that work like this are called \_\_\_\_\_.

Possible words: Hardens, Weaken, Softens, Burns, Thermosetting plastics, Thermoplastics.

2.) The plastic we are making the front of our game out of is called \_\_\_\_\_. It is a plastic that softens when it gets warm, so it is a \_\_\_\_\_.

Possible words: Acrylic, Foamex, HIP, Thermoplastic, Thermosetting Plastic.



3.) Plastics are usually made from oil. When they are thrown away they will not rot away like wood or paper. What do you think the problems are of this? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4.) Some plastics can be recycled in to new products. Why is this a good idea? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



### Star Question

PVC is a type of plastic that we use a lot in school. What does PVC stand for?

\_\_\_\_\_

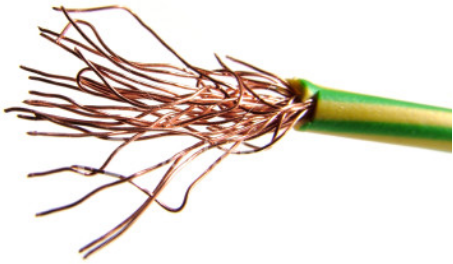
Name: \_\_\_\_\_



Technology Group: \_\_\_\_\_



This ELT is all about conductors and insulators.  
Remember: Answer the **Star Question** for a praise stamp.



1.) The metal used in electrical wires and cables is usually made out of \_\_\_\_\_. This metal is a very good \_\_\_\_\_ of electricity. The coating on wire is a type of plastic called \_\_\_\_\_. This is used because it is a good \_\_\_\_\_.

Possible words: Aluminium, Copper, steel, nylon, PVC, acrylic, insulator, conductor.

2.) Silver is an even better conductor than the one usually used in cables. We don't use it though because\_\_\_\_\_.



3.) A conductor is a material that allows electricity to flow through it. An insulator though is a material that \_\_\_\_\_

4.) Electricity pylons have insulators made out of ceramic (just like a toilet!) Dry wood is an insulator but why couldn't we use it instead? \_\_\_\_\_

\_\_\_\_\_



### Star Question

You may have noticed different coloured fire extinguishers in buildings. The red ones contain water and cannot be used on electrical fires. Black fire extinguishers can be used, what do they contain?

\_\_\_\_\_

Name: \_\_\_\_\_



Technology Group: \_\_\_\_\_