Worksheet- Modern Materials

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| Kevlar  Name 2 products Kevlar is used for.  ----------------- ----------------------  How much stronger than steel is Kevlar?  --------------  Name 2 properties of Kevlar  ---------------- ------------------------ | Carbon fibres  Why are Carbon fibres used to make racing cars?  ----------------------------------------------------------------------------------------------------------  Circle the correct properties of Carbon fibre  Absorbent rigid flexible  strong flameproof Flammable  Name 2 other products often made from Carbon fibres.  ----------------- -------------------------- | GRP (Glass reinforced plastics)  What is GRP?  ---------------------------------------------------  What is GRP resistant to?  ------------------- ------------------------  Name 3 products often made from GRP  ----------------- ----------------- -------------- |
| Phase changing materials  What are Phase changing materials?  --------------------------------------------------------------------------------------------------------------------------------------------------------------  Name 3 products often made from these materials.  ----------------------- -------------------------  ------------------------------------- | Nomex  What is Nomex?  -----------------------------------------------------  What properties make it suitable for racing car driver’s clothes?  -----------------------------------------------------  ---------------------------------------------------- | Geotextiles  What does the term “civil engineering” mean?  -----------------------------------------------------  -----------------------------------------------------  What is geotextiles used for  -----------------------------------------------------  ----------------------------------------------------  Name a property that makes it suitable for this? ----------------------------------------- |

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| LCD (Liquid crystal display)  Fill the blanks.  LCD’s can ------- or allow light to pass through, depending on the amount of --------------------  applied.  Why is LCD better for portable electronic appliances?  -----------------------------------------------  ---------------------------------------------- | Rhovyl as an antibacterial fibre.  What is Rhovyl?  ---------------------------------------------------  ---------------------------------------------------  What products is it used for?  ----------------- -------------------------  ------------------ ---------------------------- | Breathable materials  What does “breathable” material mean?  ---------------------------------------------------  --------------------------------------------------  What does breathable materials do with sweat?  ----------------------------------------------------  Give an example of a breathable material  ----------------------------------- |
| UV protective clothing  Fill in the blanks  Pre-treated with ----------------- ingredients during manufacture to enhance their effectiveness. (-------------- dioxide)  What products is it used for?  ---------------------------------- --------------------------  ---------------------------------------------- | http://maximmart.com/images/what-is-microfiber.jpgMicrofibres  What is the technical definition of a microfibre?  -----------------------------------------------  Name 3 properties  -------------- ------------- ---------------  What are they commonly used for?  -------------- -------------- --------------- | Why does the structure of Kevlar make it so strong?  --------------------------------------------------------------------  Why might GRP be used in a product, rather than carbon fibre?  -------------------------------------------------------------------------  What happens when your body temperature increases and cools, when wearing phase changing materials?  ----------------------------------------------------------------------  --------------------------------------------------------------------- |