

## Carbon Fiber

### Where does it come from?

- About 90 per cent of carbon fibers produced are made from polyacrylonitrile
- The precursor is drawn into long strands or fibers and then heated to a very high temperature without allowing it to come in contact with oxygen.



### What are the Applications & Uses?

Carbon Fiber is used :

- In bikes
- Weaves
- Protective gear
- Phone cases
- cars



### What are the properties of this material?

- Stiff - can maintain its shape
- Strong - can withstand force, pressure or wear
- Light - can be carried around or worn easily
- High Chemical Resistance - can withstand the effects of most chemicals
- High temperature tolerance - does not melt or freeze too easily



### Choose one product made from this material & explain why it is used in this object?

- Light and can be worn without discomfort
- Chemical resistance allows to be cleaned with water
- Can absorb large amounts of damage due to strength





### CBA 1 Evaluation

#### Research & Analysis (The origin of the Material):

Do you think you found out all the relevant information about where the material came from? *Yes, I think I have found enough information about the origin of the Material.*

How did you get on researching the material's origin? *I found it a bit difficult in the first half an hour, but afterwards, it got a bit easier.*

Highlight a few areas where you can improve your investigation? *I think I could have improved by adding a few extra points of information.*

#### Properties & Applications of the Material:

Were you successful at finding out about the properties? *Yes, I think I found out about the properties was a simple task.*

Explain how you found out about the properties? *I found out about the properties by researching it on the internet.*

Highlight where you can improve on these sections of the task? *I think I could have improved by adding a few more pictures and a few more points for the applications.*

Were you happy with the way the properties section turned out? *Yes, I was happy with how the properties section turned out.*

How would you rate your investigation of the applications? *I think I did well with my investigation of the applications and I would rate it 7/10.*

**Properties & Applications of the Material:**

How did you get on researching the material's uses? I found it quite easy to research the uses for the given material (carbon fiber).

Highlight where you can improve on these sections of the task? I could improve by further explaining the use of the material in the applications section.

**Chosen Product**

Do you think the product you chose was appropriate? Yes, I think the product I chose was appropriate because it explains why the material is used in the product.

Did you provide detailed information on why the product needs the material to work? Yes, I think I provided detailed information on why the product needs the material to work.

What new skills did you learn in this task? I learned a few new techniques to researching, inserting screenshots and borders, and I learned to leave links to the websites where I source my images from.

What aspects of the task went well? I think the research went well for all of the sections.

What aspects of the task could have went better? I think I could have overall added more images.

Did you find the task good for your learning? Yes, I found the task good for my learning.

Did you find the task enjoyable? Yes, I found the task enjoyable.

## Teacher Annotations

The research method used was appropriate and showed a good level of analysis when researching the material.

The Classroom-Based Assessment did show some awareness of engineering principles where carbon fiber is used as an engineering material

There was a brief level of evaluation evident in responses.

The Classroom-Based Assessment was well presented with good use of images.

## Overall Judgement

In line with expectations

