TASK

Read the New Scientist article: “It’s Super Carbon” and completed a brief article analysis,
using the questions provided.

Research the different carbon allotropes (Graphite, Graphene, Diamond, Bucky balls, Carbon nanotubes) and types of nanotechnology (E.g. Nanomedicine, nanomaterials, Nano
electronics, Molecular nanotechnology, environmental nanotechnology, consumer nanotechnology). Use the information to answer the questions. You must use at least three
appropriate websites/texts/articles/etc. and they must be referenced correctly. Use your own
words where you can and always acknowledge the original author. (Don’t use technical words unless you know what they mean.)

Complete an in-class validation to test your understanding of the research you have done
and your understanding of the properties of different carbon allotropes and nanotechnology.

“It’s Super Carbon” Article Analysis Questions

What are the sources of the author’s information?(1 mark)

Who published this document?(1 mark)

Is the publisher a “reputable source”? Justify your answer.(2 marks)

Is the document objective or subjective? Explain using examples e.g. Does the author acknowledge other viewpoints, avoid emotive words and generalizations, and support statements with evidence?(3 marks)

Rate the document in terms of its usefulness as a resource for other students in your class.
Write a statement to explain the reasoning for your rating.(2 marks)

Summarize the main ideas in the document using words or a concept map.(5 marks)

What are the broader implications (for science and society) of the information found in the

article?(4 marks)

Part 2: Allotrope and Nanomaterials Research Questions.
What is nanotechnology?(2 marks)

Why is nanotechnology important in our modern society?(2 marks)

Choose two types of nanotechnology from the given list.
-Describe the positive and negative impacts these technologies have on our lives.(8 marks)
-What are the future prospects/potentials of these technologies?(4 marks)

Define the term “allotrope”(1 mark)

Choose two types of carbon allotrope from the given list.

-List the chemical and physical properties of each.(4 marks)
-Describe two uses of each allotrope.(4 marks)
-For each use described, explain how the material can be used in this way by referring to the
relevant property of the material (e.g. hardness, electrical conductivity, etc.) and the bonding
structure of the material which gives it this property.(8 marks)

Reference list/Bibliography(3 marks)