*ATAR Chemistry – Unit 1 & 2, TA Fisher 2019+*

 **ATAR Chemistry 11** **Research Assignment**

**Task 6: Nanoparticle Research – Validation Quiz**

Name:

Score: /40

1. A set of detailed notes submitted, including references: [6]
2. What is a nanoparticle? [1]

1. Describe the role of nanoparticles in each of the following contexts:
2. **Domestic use**
   * 1. **Sun screen**
     2. State the type of nanoparticles used: [1]

* + 1. How are the nanoparticles manufactured (made) ? [1]

* + 1. Explain how the nanoparticles improve the sunscreen compared to a sunscreen without nanoparticles? Include an explanation as to why this is advantageous? [4]

* + 1. Discuss whether there are any disadvantages of nanoparticles in a sunscreen? Consider environmental or health effects. [1]

1. **Medical**
   * 1. State the application: [1]

* + 1. State the type of nanoparticles used in the application: [1]

* + 1. Explain how the nanoparticles improve the application compared to the application without nanoparticles? Include an explanation as to why this is advantageous? (If it is a brand new application explain why it is useful and its advantages) [4]

* + 1. Discuss whether there are any disadvantages of nanoparticles in the application? You could consider environmental or health effects or technological issues. [1]

1. **Technology**
   * 1. State the application: [1]

* + 1. State the type of nanoparticles used in the application: [1]

* + 1. Explain how the nanoparticles are manufactured (made) ? [1]

* + 1. Explain how the nanoparticles improve the application compared to the application without nanoparticles? Include an explanation as to why this is advantageous? (If it is a brand new application explain why it is useful and its advantages) [4]

* + 1. Discuss whether there are any disadvantages of nanoparticles in the application? Consider environmental or health effects, or technological issues. [1]

1. Your position on Nanoparticles:
   1. Do you think nanoparticles should be used for some, all or none of the above applications?

*(You are entitled to your opinion but you must be able to give three valid reasons, based on your research, why you have this opinion. Don’t just quote the three applications and say they are useful)*

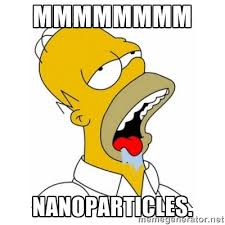
* 1. Give three reasons for your opinion: [6]







* 1. Discuss the direction you think nanoparticle research should take in the future? *(Give a direction and justify this )* [2]



END OF QUIZ