




Preparation for Applied Science



Key Terms: Medicine, Microscope, Advantages, TEM, SEM, Evaluate, Discoveries

A-Level Topic: Cells and DNA

Key Question: **Has the invention of the Electron Microscope changed our ability to manufacture good quality medicines.**

 What to watch	 What to read	 What to do
<p>Summary Case study clip (Watch the video on this page)</p> <p>https://www.youtube.com/watch?v=TJyOQmdwHhE</p> <p>Scientific Tools Made of paper?!</p> <p>https://www.ted.com/talks/manu_prakash_lifesaving_scientific_tools_made_of_paper</p>	<p>The electron Microscope - https://www.explainthatstuff.com/electronmicroscopes.html</p> <p>TEM vs SEM https://www.thermofisher.com/blog/microscopy/tem-vs-sem-whats-the-difference/</p> <p>Microscopes and Medicine https://www.healthtechzone.com/topics/healthcare/articles/2020/12/09/447368-what-a-microscope-used-in-health-industry.htm</p> <p>Use the Image at the bottom of this page to help https://ib.bioninja.com.au/standard-level/topic-1-cell-biology/12-ultrastructure-of-cells/electron-microscopy.html</p>	<p>Use the resources provided & your own research to write notes that answer the following questions:</p> <ol style="list-style-type: none"> 1) What's the difference between TEM and SEM? 2) How has the microscope helped in the medicine world? 3) What have been the major benefits of the Electron Microscope? 4) Are there any limitations on Electron Microscopes? 5) CHALLENGE: What do you think the future holds? Are they improving the world of medicine?



What to submit

Using your notes, **write a minimum of 250 words** that answers the key question: **Has the invention of the Electron Microscope changed our ability to manufacture good quality medicines.**

Your report should be well presented and informative to show an understanding of the content that you have been investigating. Use the key questions from the “**what to do**” Section to above to help you structure your writing. Try to reach a conclusion to the key question.