



MECHANICAL ENGINEERING WITH DR MARK RENTSCHLER

TALKING POINTS

KNOWLEDGE:

1. How common is colorectal cancer in men and women?
2. Can you list some of the hollow and solid organs that make up the digestive system?

COMPREHENSION:

3. Can you explain what the Endoculus is in a single sentence?
4. In what ways is the Endoculus designed to overcome potential problems with treating colon cancer?

APPLICATION:

5. In what ways is the Endoculus an improvement on traditional endoscopes?
6. Can you think of some reasons why scientists begin by designing something without commercial considerations?

ANALYSIS:

7. The Endoculus is not just paving the way for improved treatment of colon cancer, it is also encouraging the advancement of other related technologies. Can you name some of these? How does the development of the Endoculus fit into the bigger picture of medicine?

EVALUATION:

8. The article should make clear just how many different skills are required to become a mechanical engineer. Do you find the need to bridge so many fields daunting or exciting? What characteristics do you feel you have that could help you become a mechanical engineer? What do you think you need to improve on?

ACTIVITIES YOU CAN DO AT HOME OR IN THE CLASSROOM

1. How would you explain Mark's research to a younger audience? Create a poster or PowerPoint aimed at a Year 7 student in your school. Think carefully about how you would use images, diagrams and clear language to explain complex ideas.
2. Mark gives some very thoughtful opinions and top tips. Devise top tips that you would offer younger students looking up to you. How could they make the most of their studies? How could you encourage them to challenge themselves in and out of lessons?

MORE RESOURCES

PROREADY

The University of Colorado's College of Engineering and Applied Science has a ProReady Initiative that is focused on out-of-classroom preparation steps students can take to position themselves for successful careers. Take a look at the site and follow the formula to help you chart your career path, gain relevant experience and grow your network:

<https://www.colorado.edu/engineering/proready>

Mark and the team have put together a video on YouTube that explains a little more about the Endoculus and the ways it could revolutionise the treatment of colon cancer:

https://www.youtube.com/watch?v=86MkG4aYDrc&feature=emb_title&ab_channel=UniversityofColoradoBoulder