Extension: Advanced Ceramics

Pottery and ceramics can be traced back to the earliest of civilizations, but there is a new emerging field of ceramics called advanced ceramics with many exciting applications. Watch this short video clip where a scientist from New Zealand discusses the differences between traditional and advanced ceramics.

Next, read this article and watch the embedded 2-minute video clip from the same website about some specific advanced ceramics applications. Finally, answer the questions below:

1. What does the name “sialon” represent?

2. What component makes these types of ceramics very different from traditional ceramics in terms of their properties?

3. Why do advanced ceramics have different applications than traditional pottery ceramics?

4. What is an “o-sialon” and how were they discovered?

5. What is the benefit for body armor made with sialons?