# Ultrasound Imaging Post-Activity Quiz

**1. What is the frequency range of an ultrasound?**

(A) less than 20 Hz (B) Between 20 Hz and 20,000 Hz **(C) Greater than 20,000 Hz**

**2. Define ultrasound imaging.**

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**3 List some devices that use ultrasound for imaging.**

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**4. When operating sonar on a pool of water, an ultrasonic wave is emitted at a constant speed *S* in the water, which is at a temperature of *T* =10 oC. The wave spent a roundtrip time of *t* = 3 ms before being detected back. How deep is the pool of water? (*Hint*: Use the equation for speed = distance / time and use the data in the table to read the appropriate speed of sound into water.)**

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| |  |  | | --- | --- | | [**Temperature**](http://www.engineeringtoolbox.com/temperature-d_291.html) **- *t* (oC)** | [**Speed of Sound**](http://www.engineeringtoolbox.com/speed-sound-d_82.html) **- *c -* (m/s)** | | **0** | **1,403** | | **5** | **1,427** | | **10** | **1,447** | | **20** | **1,481** | | **30** | **1,507** | | **40** | **1,526** | | **50** | **1,541** | | **60** | **1,552** | | **70** | **1,555** | |  |