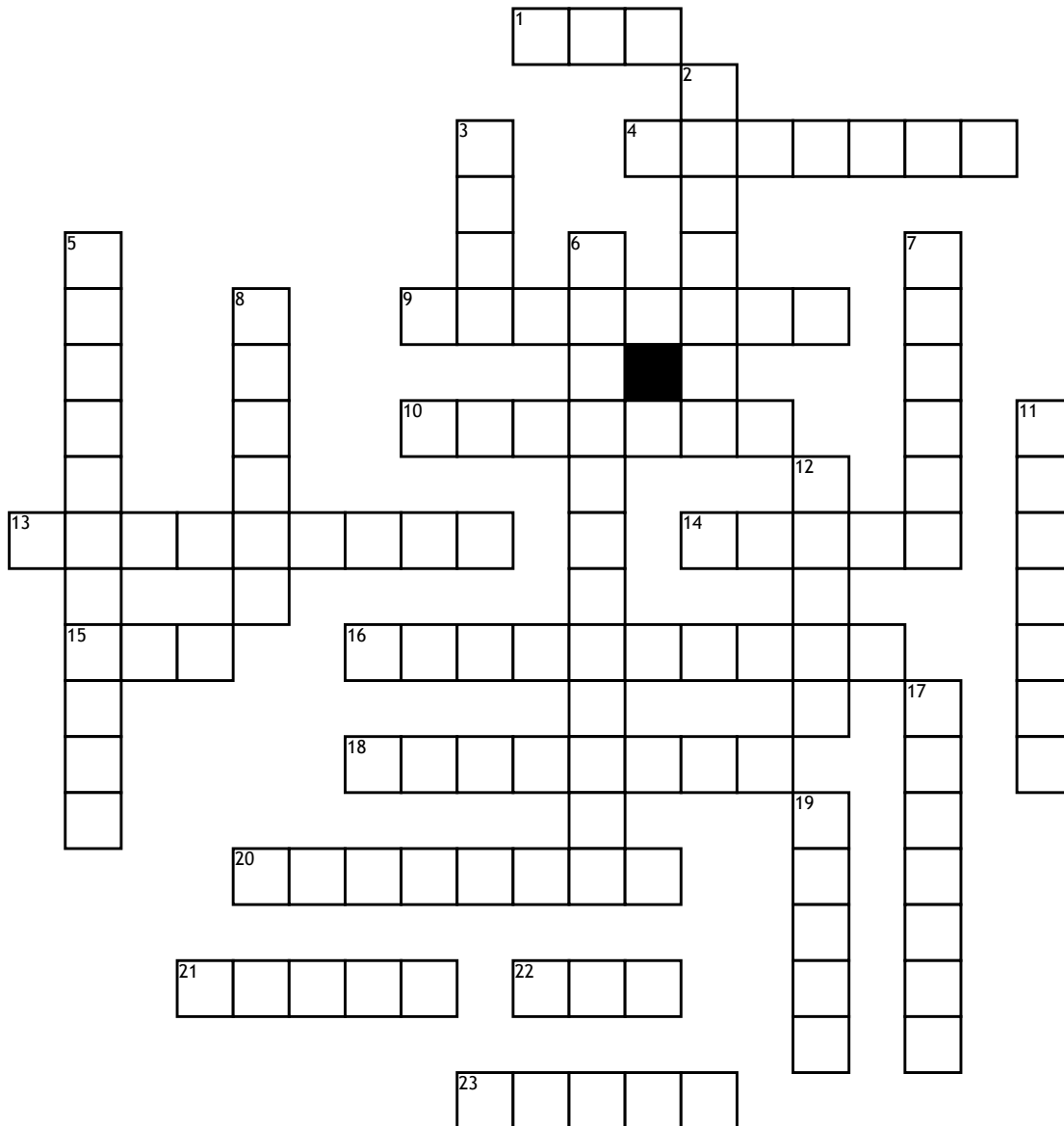


Name: _____ Date: _____

Transducer Study Tool



Across

1. A man-made ferroelectric material also known as lead zirconate titanate.
4. Part of transducer that reduces ringing and has a high degree of sound absorption
9. Damping will _____ the efficiency of the equipment.
10. A faster PZT has a higher frequency and a _____ crystal.
13. A mixture of man-made ferroelectric material that lowers impedance-less reflection and improves resolution.
14. Damping and composites create _____ pulses and improve resolution.
15. Damping lowers the _____ because it's reducing the number of cycles in the pulse

16. Convert one form of energy to another.

18. There is a need for _____ matching layers because the impedance is so great.
20. In front of the crystal and has an impedance between the skin and the active element
21. Damping lowers the SPL and improves _____ resolution.
22. In piezoelectric transducers, the quality factor is
23. The matching layer is aluminum powder also called _____ resin.

Down

2. Not naturally piezoelectric
3. For pulse wave, the bandwidth is _____.

5. Protects, insulates, and orientation to the transducer.

6. Electrical energy (voltages) converts into sound energy.
7. The speed of the PZT has a _____ relationship with the frequency.
8. Continuous wave has a _____ bandwidth.
11. Resonant frequency is determined by the _____ thickness
12. A slower PZT has a _____ frequency
17. The most effective thickness is _____ the wavelength of sound in the PZT.
19. Resonant or operating frequency is determined by the element thickness and _____ of the PZT.