

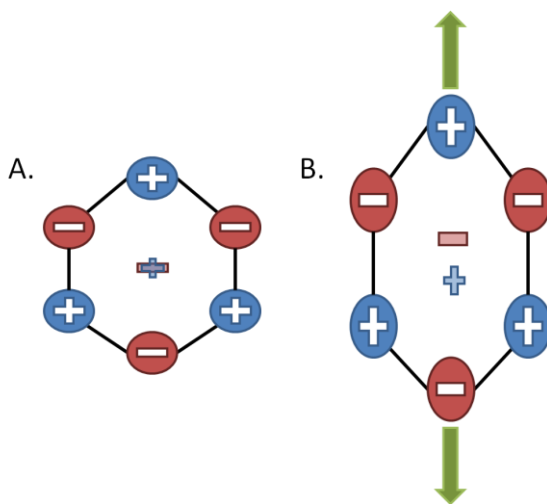
Piezoelectric Quiz **Answer Key**

1. Provide a brief explanation of the piezoelectric effect and the converse piezoelectric effect.

The piezoelectric effect converts mechanical energy into electrical energy.

The converse piezoelectric effect converts electrical energy into mechanical energy.

2. Make a drawing to illustrate what causes the piezoelectric effect at the atomic level.
(Hint: Think about the placement of charges in the atoms of the material.)



3. List three possible (conceptual or real) applications of piezoelectric materials.

Example answers: Sensors, actuators, speakers, artificial muscles, energy harvesting (piezoelectric sidewalks, clothes, roads, cars, etc.), light-up shoes, and many other possible applications.

Bonus Question: Explain your own, unique idea(s) for using piezoelectric materials.

Answers will vary.