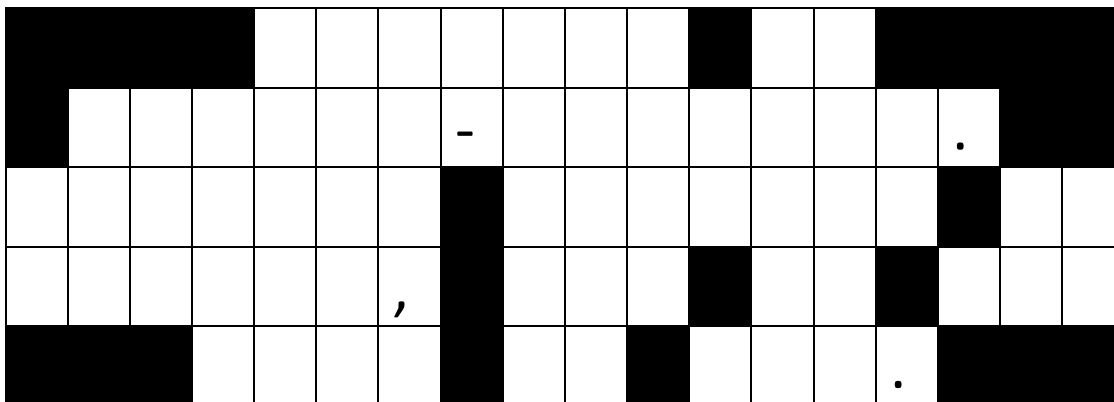


## The Nature of Physics

A fallen phrase puzzle shows the spaces for a statement or phrase. The letters are directly below the column in which they will fit, but jumbled within the column.



L E C C I S  
 Z R E S I O T B Y  
 U U M Z H E O F S A A N  
 N P Z U I N Y N R L M T E G H E  
 P A T Z P L D S S O E V I N D T B Y

**Maria Goeppert-Mayer** 1906-1972 was the second woman to receive the Nobel Prize in 1963 in physics, following Marie Curie. She developed the explanation of how neutrons and protons within atomic nuclei are structured. Called the "nuclear shell model," her work explains why the nuclei of some atoms are more stable than others. She believed that the nucleus is like a series of closed shells and pairs of neutrons and protons like to couple together in what is called spin orbit coupling. These pairs (either protons or neutrons) are called "magic numbers". Find out about magic numbers. What do they tell us?