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**The Atom: Clash of the Titans**

1. In the 1850's, with the industrial revolution going on, what became the key question for scientists to pursue?
2. Who was condemned as an “irreligious materialist” for claiming that matter had to have a smallest building block that can’t be divided?
3. What scientific observation led Einstein to conclude that the atom must exist?
4. A single human hair is about atoms \_\_\_\_\_\_wide.
5. What city became the center of atomic physics?
6. What two scientists were “unlikely collaborators?”\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_
7. What was Rutherford obsessed with?
8. How long did it take Rutherford to explain his findings on the “gold foil” experiment?
9. Why did most of the alpha particles drive straight through the foil?
10. What puzzling thing about Rutherford’s model did Bohr set out to solve?
11. What is the concept that Bohr came up with that is “misunderstood and misused?”
12. What famous scientist opposed Bohr’s idea of energy levels?
13. Who was the “champion” of the traditionalist atomic theory and how did he describe an electron?
14. Who was the “champion” of the radical movement in atomic theory and what was his theory called?
15. What is Heisenberg’s uncertainty principle?
16. What mathematician developed a way to use Schrodinger’s wave function in the quantum mechanical model and bridge the gap between the radicals and the traditionalists?