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PSIM Fall 2024

Elective 5: Modifying for Lol- 1

In the investigation into balancing chemical equations. Students investigate using a PHET simulation students are asked to make observations about the chemical equations, they are led through a series of activities that show the atoms and help them count how many are on each side. The students are prompted to add molecules to the equation to make the numbers of atoms on each side identical, thus obeying the Law of Conservation of mass. At the end of this activity students are challenged to play a game in which they must correctly balance the atoms to move on to more challenging equations. The pros of this investigation is that it show students information about balancing but, the con, it does not allow for any modification or students creation.

of the following equations and fill in the table below

Action	Balanced Equation	Particle View (center of screen)	Steps you took to make the equation balanced
Make Ammonia	$\text{___ N}_2 + \text{___ H}_2 \rightarrow \text{___ NH}_3$		
Separate			

**Station Rotation 1: Phet Lab
Balancing Chemical Equation**



This is a discovery learning. The students are gaining information to understand how a process works. At this point, the students have been given information on why an equation must be balanced, they have had minimal instruction on how to balance an equation and will use this simulation to better understand the 'why'

The level of sophistication can be enhanced by allowing the student to have more control over the learning by creating a 'simulation' of their own. The student would create a balanced equation that shows all the pertinent steps and images that represent it. The creation of this would allow this to be an inquiry lesson.