The Great Journey to the Universe of Atoms

gisele Silveira

In a bright science laboratory, Professor Helena stands before her students with a mysterious metal box. Rafa, a curious but skeptical boy, sighs as he asks why they need to study atoms if they are too small to ever be seen.

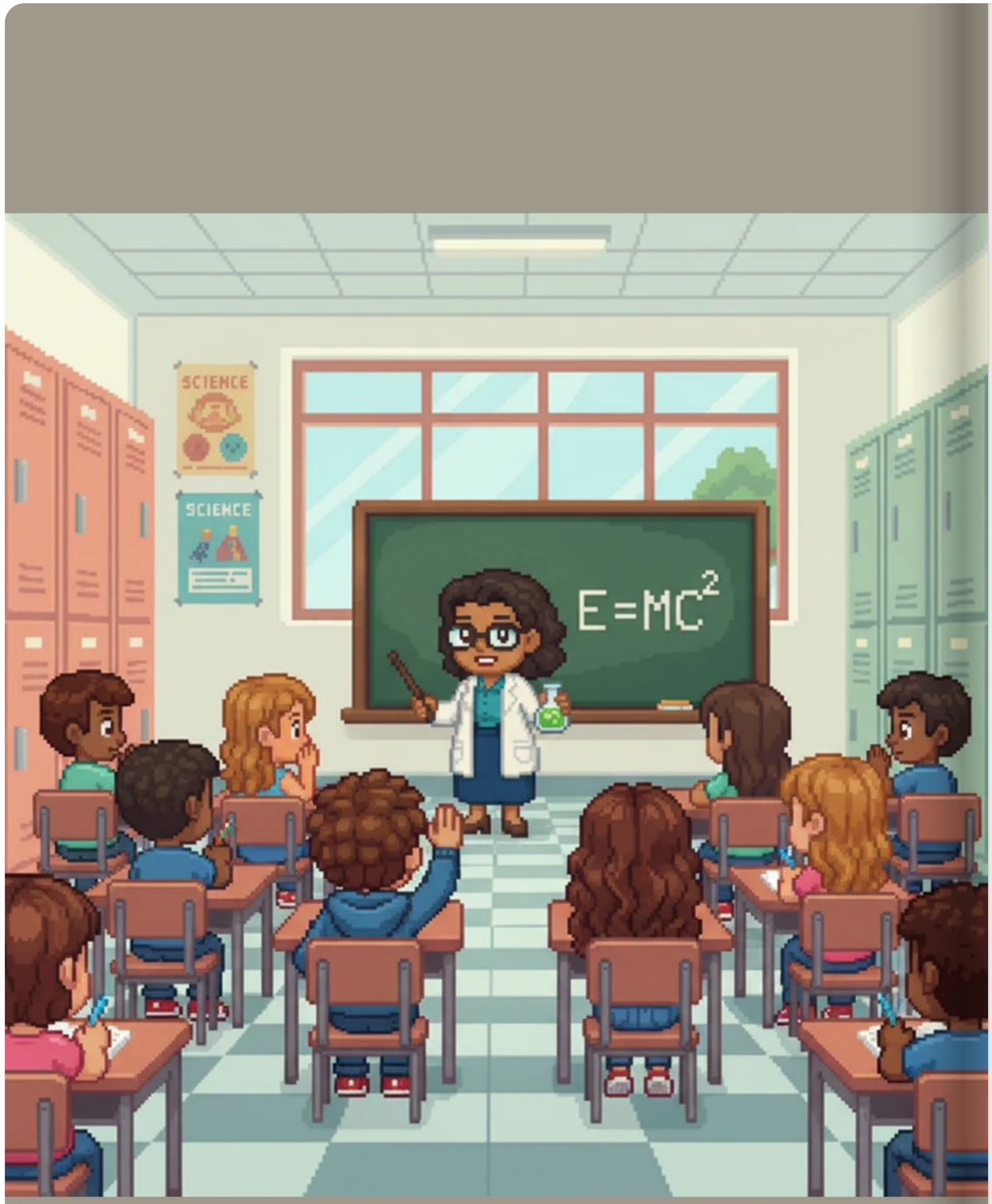
The classroom is suddenly bathed in a brilliant blue light as Professor Helena activates her experimental microscopic simulator. The students watch in awe as the walls and desks begin to grow to a gargantuan size, signaling that they are shrinking into a tiny world.

The children land in a strange, glowing landscape filled with floating spheres of light and vibrant energy. A cheerful little atom named Zig bounces toward them with a friendly smile, welcoming the visitors to the microscopic realm of matter.

Zig shows the children a shimmering projection of his own internal structure to explain how he works. He points to the bright nucleus at his center where protons and neutrons live, while tiny electrons zip around the outside like racing cars in a cosmic track.

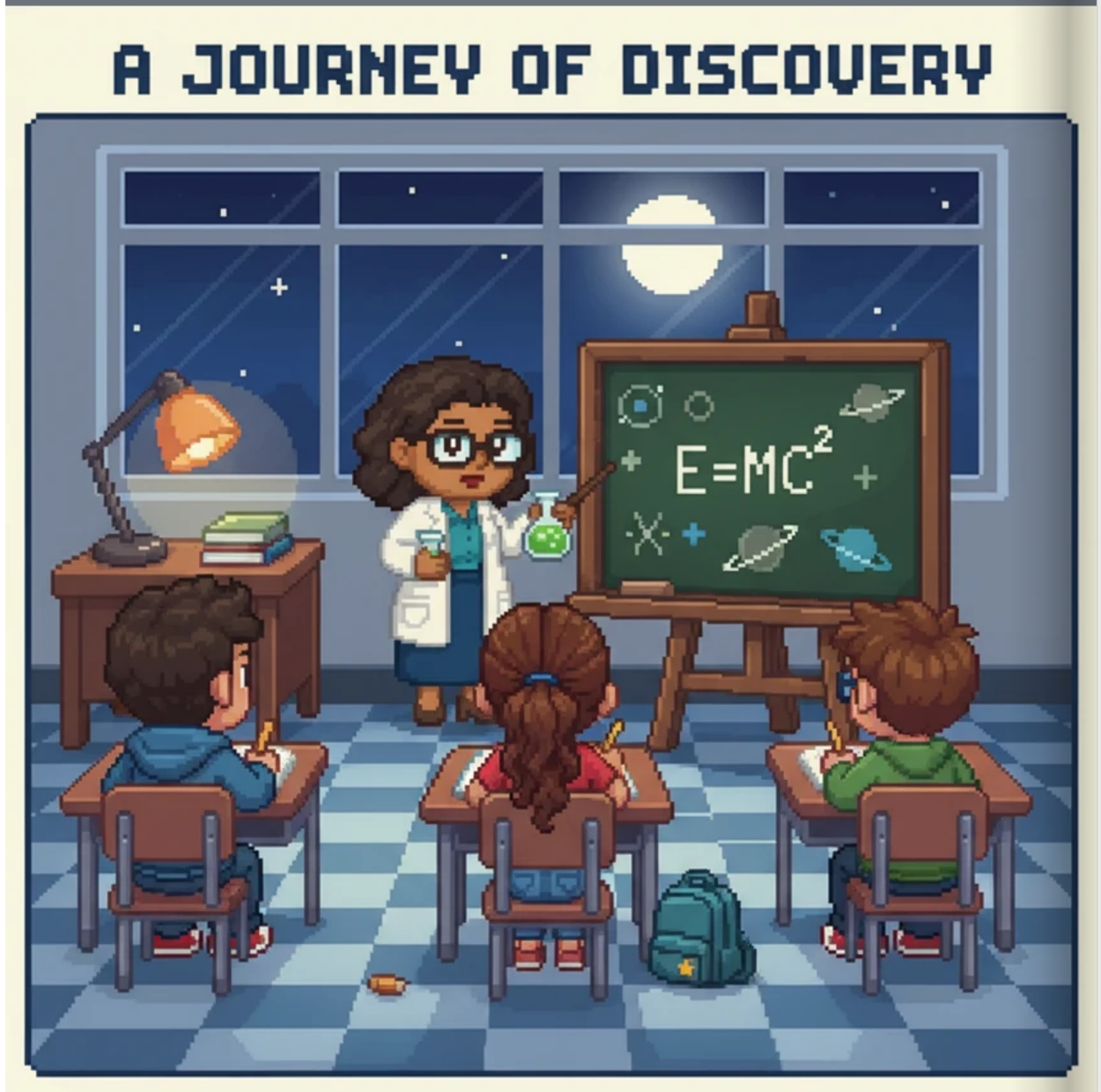
THE EXPERIMENT - NIGHT CLASS.

A series of glowing holograms appear in the air, showing the history of how humans first imagined the atom. The first hologram displays John Dalton’s model, a simple and solid sphere that represents the very first step in atomic science.



The next hologram displays J.J. Thomson's plum pudding model, showing a sphere filled with scattered electrons. The students laugh at the funny name while learning how scientists discovered the existence of negative charges within the atom.

The air fills with Ernest Rutherford's model, showing a tiny, dense nucleus surrounded by vast amounts of empty space. The children are amazed to realize that even the most solid objects in their world are actually made of mostly nothingness.



Niels Bohr's model illuminates the scene, showing electrons spinning in neat, organized layers or shells. Professor Helena explains how these energy levels determine how atoms interact with one another to create everything in the universe.

Zig points to his nucleus and explains that the number of protons he carries is like a unique identity card. This Atomic Number tells the universe exactly which element he is, serving as a distinct fingerprint for every atom in existence.

As the journey concludes, the children learn about atomic mass by observing the particles packed tightly within the nucleus. They look out over the vast, sparkling universe of atoms, finally understanding that these tiny building blocks are the foundation of everything they see and touch.