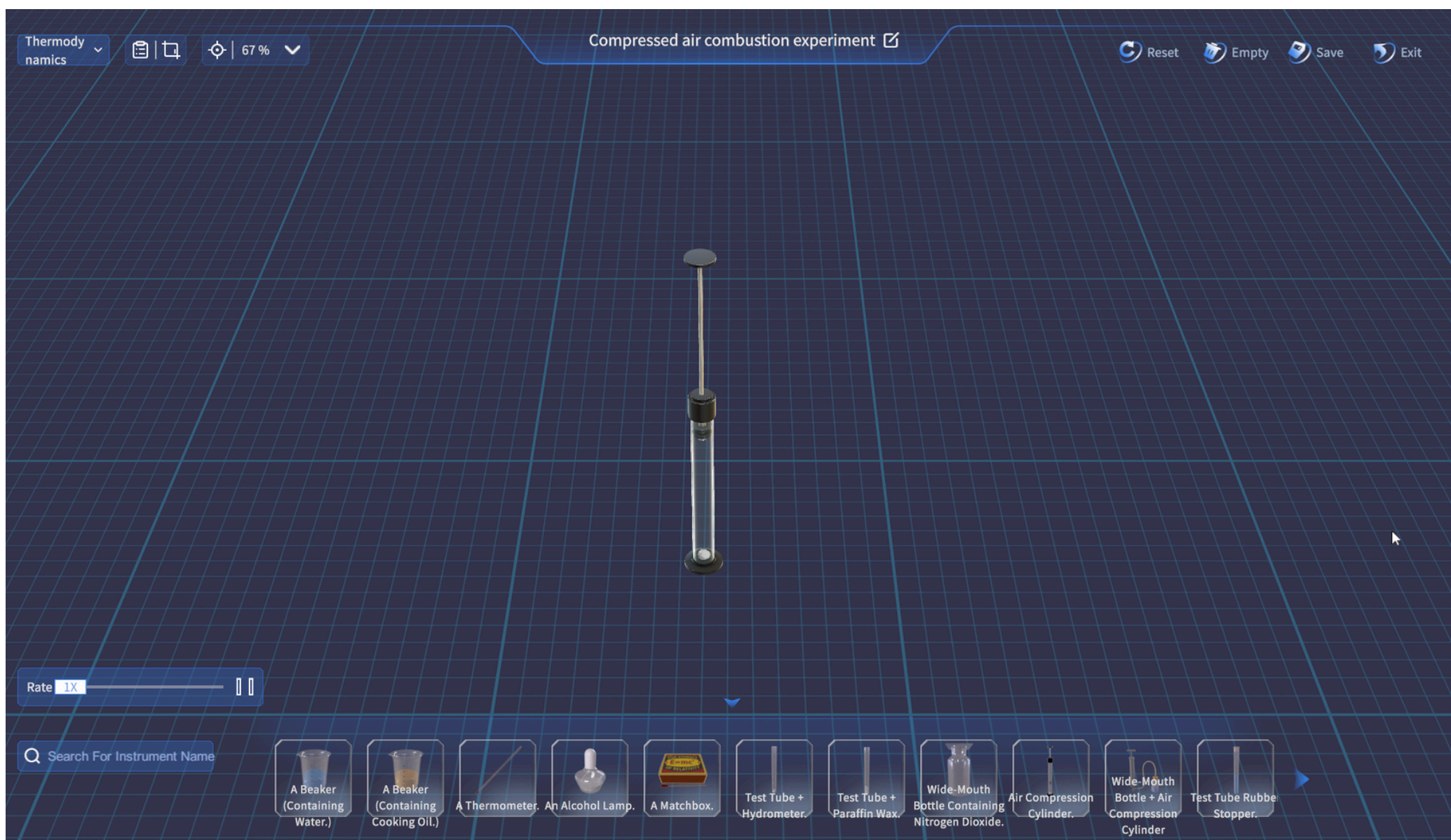
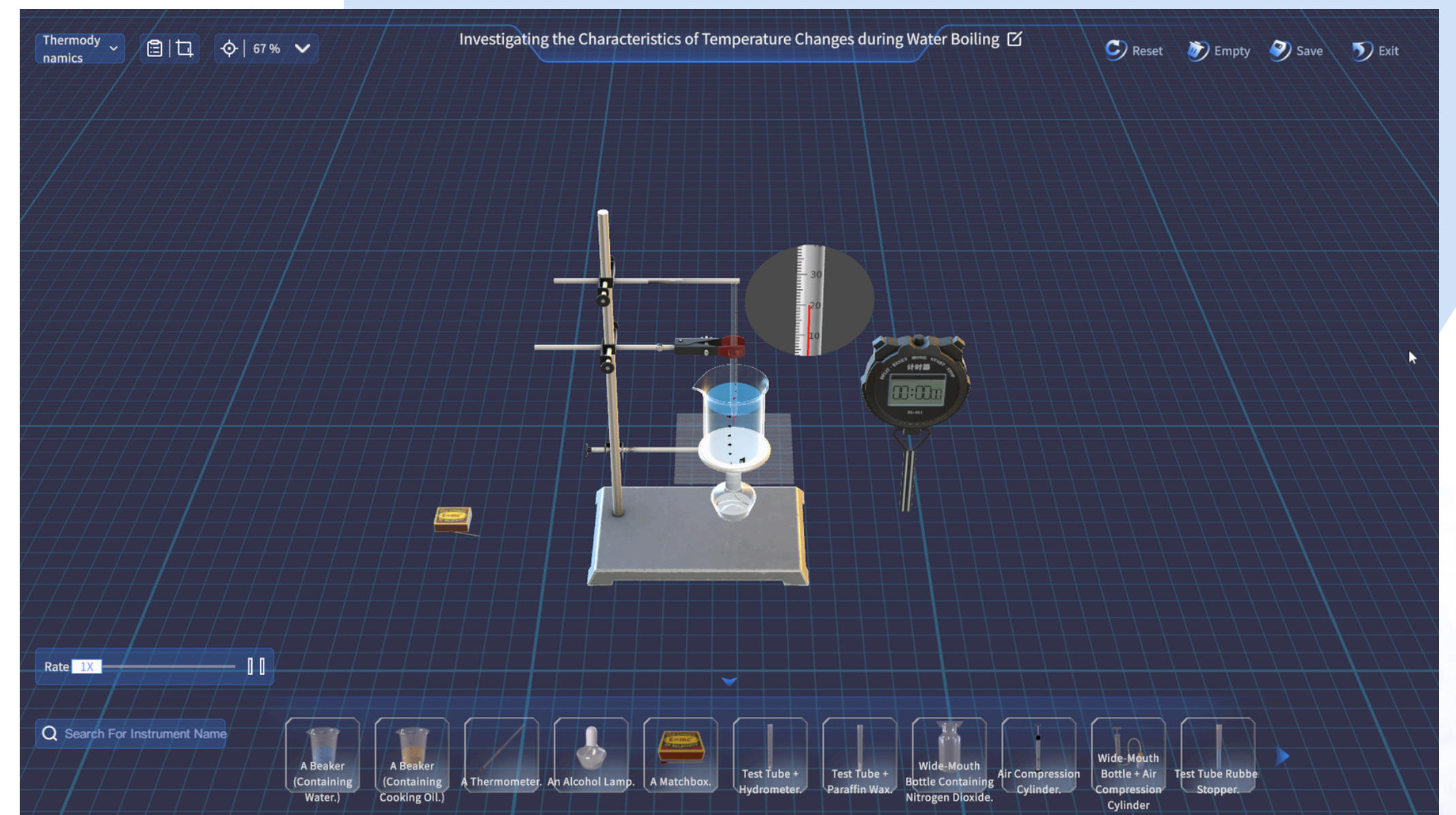


K12 Physical Thermal Editor

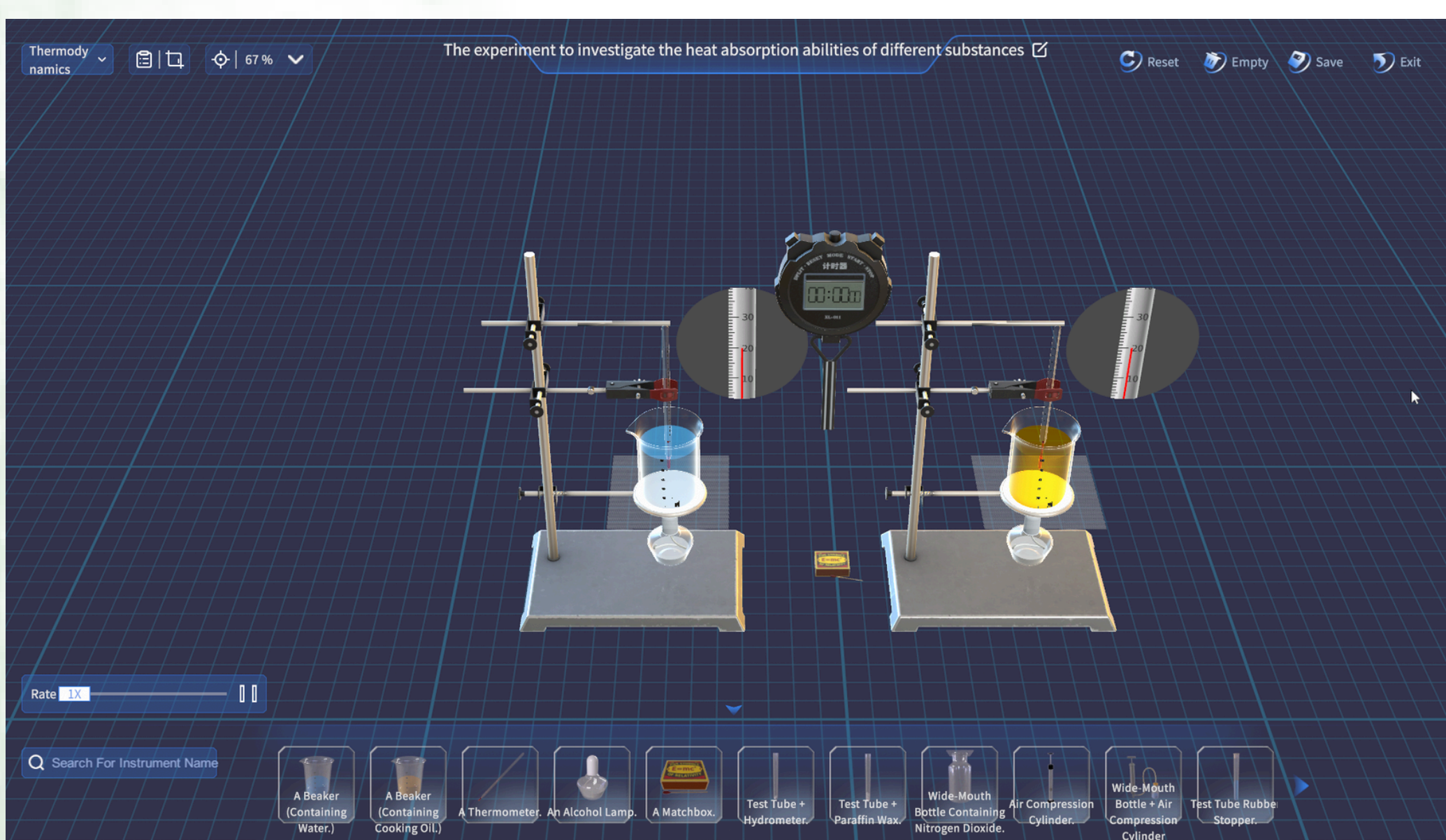
K12 Physical Thermal Editor is **an immersive virtual reality application for thermal physics study**. Equipped with **9 carefully designed experiments**, it lets users **interact with invisible thermal phenomena** (heat flow, phase changes). By **adjusting key variables in real time**, users can turn **abstract thermal concepts into tangible learning experiences**. This tool **bridges theory and practice**, making complex thermal physics **accessible and engaging for all learners**.



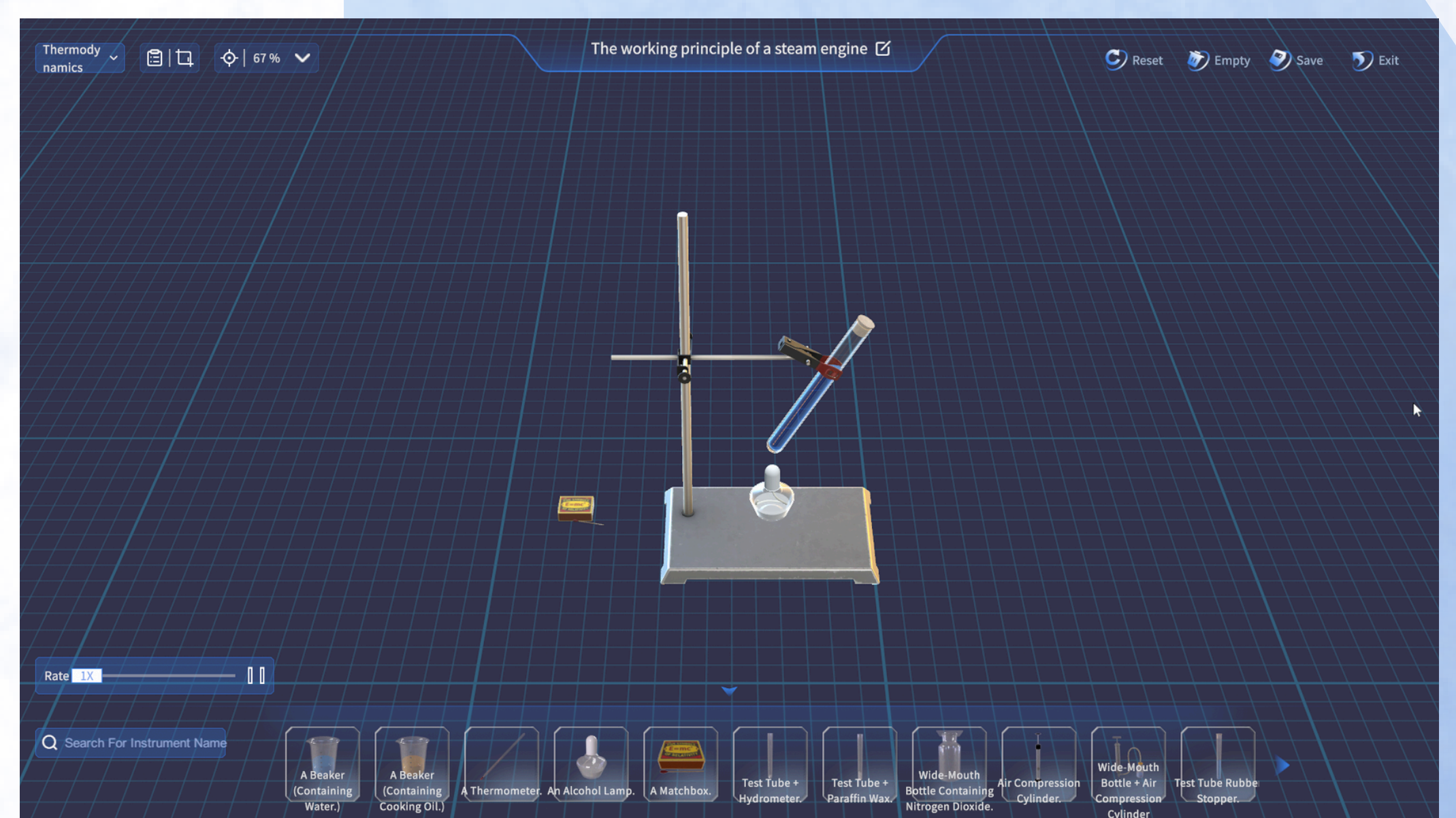
Experiment: Compressed air combustion experiment



Experiment: Investigating the characteristics of temperature changes during water boiling



Experiment: The experiment to investigate the heat absorption abilities of different substances



Experiment: The working principle of a steam engine

Highlights

- Covers **essential topics** including heat conduction, convection, thermal radiation, phase transition, and specific heat capacity testing, ensuring a **comprehensive overview of foundational thermal physics**
- Enables **clear observation** of heat flow paths, temperature distribution, and molecular motion during thermal changes, helping users grasp thermal phenomena in a **tangible, visual way**
- Allows **direct adjustment of experimental variables** with **instant feedback**, letting users deepen understanding through **active exploration**
- **Fits seamlessly into** classroom teaching, self-directed study, and research support, adapting to **diverse user needs**

Functionalities

Experiments

Content

Conversion of different forms of energy

Simulate the transformation process of various energy forms via virtual thermal instruments, authentically replicate energy conversion phenomena, and help users intuitively grasp the principles of thermal energy transformation.

Guidelines for the proper use of a thermometer

Provide a virtual thermometer consistent with real-world properties, simulate standard operating procedures (such as insertion position and reading method), and offer real-time feedback to help master the correct usage specifications of thermometers.

Investigating the Temperature Changes During Solid Melting

Use virtual test tubes containing sodium thiosulfate and paraffin, record temperature changes in real time during the melting process, support experimental speed control, and efficiently explore the temperature variation rules of different solids when melting.

The Experiment of Nitrogen Dioxide Gas Diffusion

Simulate the diffusion process of nitrogen dioxide gas through wide-mouth bottles, intuitively display the movement characteristics of gas molecules, and make the abstract diffusion phenomenon tangible and visible.

The Sublimation and Condensation of Iodine

Restore the physical properties of iodine with virtual sealed iodine glass tubes, present the entire process of iodine sublimation (solid to gas) and condensation (gas to solid) in real time, and visualize the phase change phenomena of substances.