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Patent Summary Sheet

Instructions

In your engineering notebook or on this form, document each product available on the commercial or retail market related to the major project problem you have identified.

Source (APA format): Norman, P. A. (2005) Science Party Kit and Method (U.S. Patent Application No. US7476103B1). U.S. Patent and Trademark Office.

Patent Number: US7476103B1

Patent Summary: Claims a retail “science party in a box” comprising components and an instruction manual for an adult-supervised group to perform hands-on experiments that demonstrate a scientific law (exemplified by bottle-rocket activities teaching Newton’s third law). The kit is dimensioned for ~5–7 children over ~1–2 hours, with explicit safety roles for two adults and a designated “safe observation zone.” Representative claim language enumerates bottles, tubes, stoppers, goggles, and safety instructions; method claims stage the supervised sequence. The disclosure emphasizes that some common household consumables (e.g., water) are intentionally not included for practicality.

Patent Critique:

Pros

- Pedagogical design: Clear arc from preparation to demonstration; explicit alignment to a stated scientific principle.
- Group logistics & safety: Prescribes group size, time window, two-adult supervision, and a marked safe zone—valuable for classroom/club contexts.
- Engagement: Hands-on assembly and individualized launches sustain attention and agency.

Cons

- Operational constraints: Requires outdoor space, weather tolerance, and adult availability; “consumables not included” adds prep burden.
- Safety/cleanup overhead: Acid-base mixes, ejected stoppers, and water mess—even with a bucket—demand stringent controls and clean-up time.
- Topic breadth: Strong for Newtonian mechanics; less directly extensible to coding/data acquisition without auxiliary apparatus.

Images/sketch of Patent: