THIS WEEKEND'S FAMILY ACTIVITY

** The 10-Experiment Challenge

** MINI JOURNALISM + EXPERIMENT | SKILL: ** HYPOTHESIS TESTING

** 2-3 HOURS SPREAD ACROSS A WEEKEND (20 MINUTES SETUP, MULTIPLE 10-15 MINUTE EXPERIMENT SESSIONS, 30 MINUTES FINAL ANALYSIS)

RECOMMENDED AGE RANGE

** Ages 8-14 — Old enough to design simple experiments independently and track results systematically, but still naturally curious about testing "what if" questions.

WHAT YOU NEED

- Notebook or paper (the "experiment log")
- Pencil
- Timer or stopwatch
- Whatever materials the experiment requires (household items only)
- Optional: Phone camera to document results

ACTIVITY STEPS

01 **Friday night: Pick your challenge** — Your kid chooses ONE specific, measurable thing they want to optimize this weekend. Examples: "Make paper airplanes that fly the farthest," "Find the fastest way to sort a deck of cards," "Build the tallest tower from 20 pieces of dry spaghetti," or "Discover which homemade bubble solution makes the biggest bubbles." Write the goal at the top of the experiment log with a clear success metric (distance, time, height, size).

02 **Create your "AI agent instructions"** — Before starting ANY experiments, write down three things just like Karpathy did: (a) What you're allowed to change (plane fold style, sorting method, tower structure, bubble recipe), (b) What must stay the same (same paper size, same deck, same 20 pieces, same bubble wand), (c) When to stop each test (after three tries, after one minute, when tower falls, after five bubbles). These rules keep experiments fair and comparable.

03 **Run 10 mini-experiments** — Spread across Saturday and Sunday, conduct exactly 10 different attempts. After EACH attempt, write in the log: (a) What you tried, (b) What happened (the measurement), (c) What you learned, (d) What you'll try next. The key is treating "failures" as useful data, not disappointments. Between experiments, take breaks — you're not an AI, you need rest! But try to complete all 10 by Sunday evening.

04 **Find your top 3 discoveries** — On Sunday evening, review your log and identify the three approaches that worked best. Circle them. Now here's the AI agent thinking: Could you combine insights from multiple experiments? For example, if experiment #3 had the best wing design and experiment #7 had the best weight distribution, what happens when you combine both ideas? Test this combined approach.

05 **Report your findings** — Write a one-paragraph "research report" answering: What was your goal? What was your best result? What surprised you most? If you could run 10 MORE experiments, what would you test next? Read this aloud to your family like you're presenting research findings.

THE DEEPER LESSON

This is exactly what Karpathy's AI agents did with AI training — they ran hundreds of experiments with clear goals and constraints, learned from each attempt, and combined successful approaches to find optimizations humans might have missed. Your kid just experienced the same loop: defining success, setting constraints, running systematic tests, and learning from data rather than guessing. The difference is that AI agents can do this 24/7 without getting bored or tired. In the future, your kid won't need to run all the experiments themselves — they'll need to know how to set up the loop, just like they did on Friday night, then let AI agents do the repetitive testing while they evaluate which results actually matter.

CONVERSATION STARTER

*"** If you could have an AI agent run experiments on anything in your life for two whole days — your homework routine, your soccer practice, your morning routine, your room organization — what would you want it to optimize, and how would you measure whether it actually got better?"*