

THE SAGE DAD

SMALL ADVENTURES. TIME TOGETHER.

Repeat Until...

SD-B038 / AGES 4+ WITH SUPPORT

Move one job at a time from Left to Done. Discover why a repeating plan needs both a changing count and a stopping check.

YOU NEED: Three large paper squares and two spaces labelled Left and Done, or a pencil to cross out and record jobs.

- MEET

Place 3 paper jobs in Left and none in Done. How many moves will finish the job?
- WATCH

Check Left. If any jobs remain, move one to Done, then check Left again.
- TRY

Keep checking and moving one job. Stop when Left is empty. Say the counts after each move.
- CELEBRATE

Try 4 jobs, then try 0. Explain how the first check changes what happens.

LEFT

DONE

After each move	Left	Done
Start	3	0
Move 1		
Move 2		
Move 3		

Try zero jobs: Do we move anything? Why? _____

TELL THE STORY: What gets closer to the stopping point each time?

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SD-B038 / GROWN-UP GUIDE / FAMILIAR

A little help beside the learner. Read this page first; keep the answers here.

LEARNING GOAL

Identify a repeated action and explain what changes each time and what makes it stop.

BEFORE YOU BEGIN

Follow a short sequence and count to 3, with adult support if needed.

WHY IT MATTERS

A loop repeats useful work. A check and a change toward the stopping point keep that repetition under control.

LOOK FOR THIS REASONING

With three jobs, the trace is (Left, Done): (3,0), (2,1), (1,2), (0,3). With four it ends at (0,4). With zero it ends immediately at (0,0). If Left never shrinks, the rule never stops on its own.

IF THEY GET STUCK

“The check alone makes it stop.” Ask what must change so that the answer to “any left?” eventually becomes no.

MAKE IT GENTLER

Use two jobs. Point to Left before every move. The learner moves the paper while the adult says the question.

ADD A LITTLE STRETCH

Compare checking before the move with checking after the move. Which plan handles zero jobs? Explain the extra first check needed in a do-then-check program.

A USEFUL STOPPING POINT

The learner identifies the repeated move, the shrinking Left count, and the empty-Left stopping check. With zero jobs, they explain why this check-first plan does nothing.

TAKE THE IDEA INTO THE COMPUTER LAB

The lab also counts Left down and Done up. Its starter checks after doing a repetition and expects a positive starting count. Compare that with this paper activity, which checks first and can handle zero.

Open the lab: thesagedad.com/computer-lab/#lesson/again-but-how-many-times