The Sleepiness Chair Game

Model how caffeine blocks the sleepiness signal — and why the same cake at noon and at 9:47 p.m. makes two different nights.

Ages 6–9 · 20–25 min · Book link: Chapter 6 and Lab Notes, pages 42–45

YOU NEED

Three chairs in a row, 20 paper SLEEPY squares (printable), three boxes labeled THE PILE, FACTORY and BRAIN, role cards, music you can start and stop. Signs, role cards and squares are on the next pages.

HOW TO PLAY

1. Set up three chairs in a row — the Sleepiness Chairs. Put THE PILE (14 squares) in front of them and BRAIN behind them. Put FACTORY (6 squares) by the light switch.
2. Hand out roles: two Caffeine, one Brain, one Clock (a grown-up works well), two Melatonin Factory workers, and everyone else as Adenosine — the sleepiness signal.
3. How a message gets through: Adenosine players walk (no running) around the chairs while the music plays. When it stops, anyone who finds an empty chair sits and drops a square from THE PILE into BRAIN. At 8 squares, the Brain yawns: "Time for bed."
4. Round 1 — cake at noon. By bedtime most of that caffeine is gone, so Caffeine watches from the side. Lights off: the Factory carries squares to BRAIN too. How many stops until bed?
5. Round 2 — cake at 9:47. Squares back in their boxes. Caffeine sits in two chairs and stays. Lights off — but while Caffeine is sitting, the Factory waits at the curb: caffeine makes it start late. Play three stops. Is THE PILE any smaller?
6. Round 3 — wearing off. Keep going from Round 2. The Clock calls MIDNIGHT, then 1:00 (one Caffeine leaves), then 2:00 (the other leaves). When does the Brain finally say it?
7. Talk: did Caffeine make the pile smaller, or just keep the seats? Which two jobs went wrong? What is still in THE PILE at the end — and how would that feel in the morning?

For the grown-up

It's a model, so it simplifies. Real caffeine doesn't fill every chair or shut the factory: it takes some of the chairs, can make the factory start later, and wears off slowly over hours. Adenosine and melatonin are two different signals, not one kind of square, and adenosine sits down all day, not only at bedtime. The chair is really a receptor — Lumi admits it on page 43: "The chair is not really a chair." If a child has trouble sleeping, let them choose their role, and don't ask about their nights.

Caffeine isn't mean. It just sat down first. — L.

Who's who in your brain at night

ADENOSINE

EVERYONE ELSE

When the music stops, find an empty chair, sit, and drop one square from THE PILE into BRAIN. No empty chair? Keep walking.

CAFFEINE

ROUNDS 2 AND 3

Sit in a Sleepiness Chair before the music starts. Carry nothing. Stay put until the Clock says you've worn off.

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BRAIN

ALWAYS ON DUTY

Stand behind the chairs with the BRAIN box. Count each square out loud. At 8, yawn and say "Time for bed."

CLOCK

A GROWN-UP IS GREAT

Start and stop the music. Switch the lights off at bedtime. In Round 3, call the times and tell Caffeine when to leave.

MELATONIN FACTORY

LIGHTS-OFF CREW

Lights off and no Caffeine in a chair? Carry squares from FACTORY to BRAIN, one at a time. Otherwise wait at the curb — caffeine makes the factory start late.

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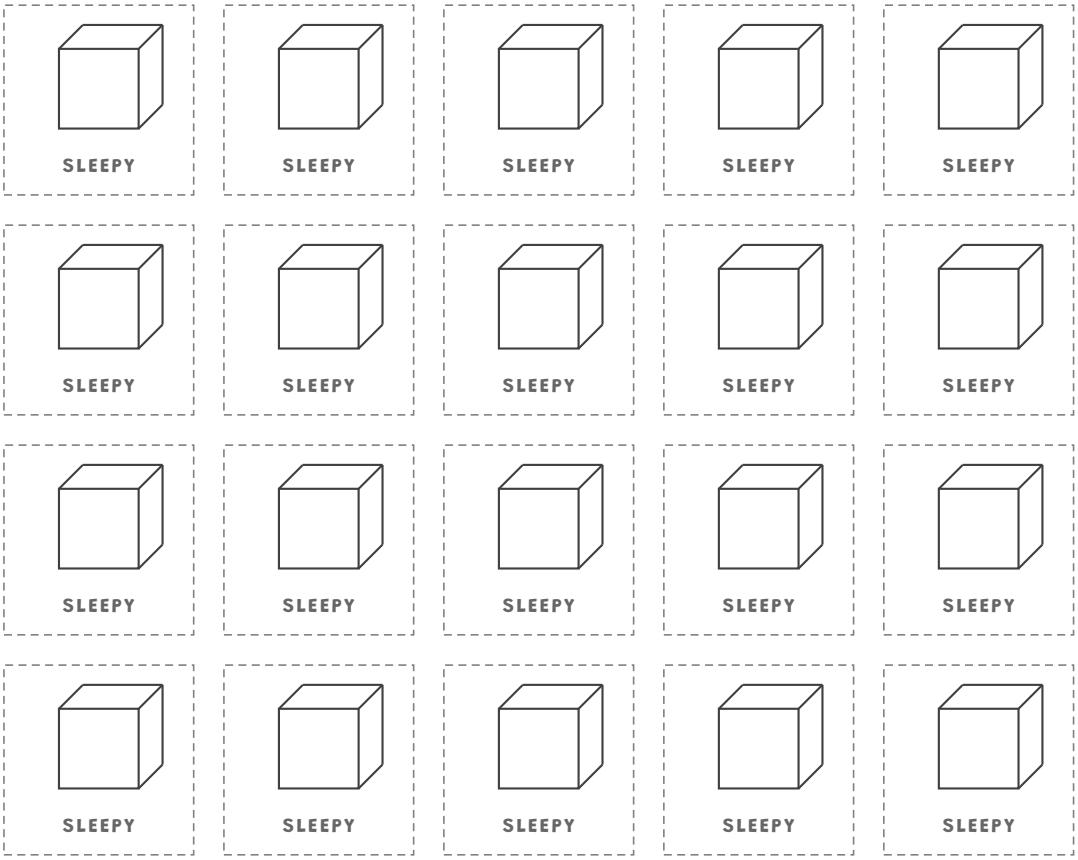
Signs for the boxes

THE PILE

FACTORY

BRAIN

20 SLEEPY SQUARES



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