

Specialist Desks

Ages 10–15 + parents · 1–4 players · about 25 minutes · no screens

OBJECTIVE

Eight specialist desks sit around a table. Each question (token) is sent to exactly 2 desks. A desk can only finish 2 tokens per round – extras drop. Score points when a kept token lands on its matching specialist. A giant model can keep many desks in the building while only a few lights turn on per answer.

MATERIALS

1 Desk Mat, pencils, and the 24 printed token lines (copy from the Answer Key rounds or scrap paper).

SETUP

- 1 Print one Desk Mat. The 8 desks are: Sports, Animals, Recipes, Space, Music, History, Weather, Jokes.
- 2 Play the three rounds in order: Lunch Rush, Science Fair, Mixed Bag.
- 3 Solo or teams: one Router decides the two desks for each token. Everyone can suggest.

ROUTING

- 1 For each token, choose exactly 2 different desks and write them on the token.
- 2 Variant A (Always First): every token goes to Sports and Animals.
- 3 Variant B (Balanced): send the matching specialty desk, then the desk with the smallest load so far (ties → lower desk number).

CAPACITY AND DROPS

- 1 After routing, tally how many tokens named each desk. A desk only has 2 seats.
- 2 Walk tokens in order. A token keeps a seat at a desk only if that desk still has a free seat. If either of its desks is full, the whole token drops.
- 3 Dropped tokens score 0.

SCORING

- 1 Kept token: +1 for each of its two desks that matches the token's topic (so 0, 1, or 2 points).
- 2 Sum points for the round. Highest total after three rounds wins, or just compare Always First vs Balanced at one table.

WHAT THE DESKS TEACH

- 1 Active vs total: 8 desks exist, but only 2 work on each token – that is the mixture-of-experts idea.
- 2 Always First on "Lunch Rush" drops 6 of 8 tokens and scores 0. Everyone piled onto two desks.
- 3 Across all three frozen rounds, Always First totals 1 points with 18 drops; Balanced totals 21 with 3 drops.
- 4 Balanced beats Always First on every round in the printed set.

FOR GROWN-UPS: MIXTURE OF EXPERTS

- 1 Grown-up name: mixture of experts (MoE). Total parameters can be huge while active parameters per token stay smaller.
- 2 Real routers learn which experts to pick; load balancing and token dropping are real training/serving concerns. This game freezes three rounds so paper scores stay honest.
- 3 Look these up at hibot.space/learn/concepts: mixture of experts, active parameters, parameters.

TOKEN LISTS (READ ALOUD)

- 1 Lunch Rush:
- 2 1. [Recipes] How do I scramble eggs?
- 3 2. [Recipes] Best sauce for pasta?
- 4 3. [Sports] Who won the big game?
- 5 4. [Sports] Explain offsides
- 6 5. [Animals] Why do cats purr?
- 7 6. [Weather] Will it rain tomorrow?
- 8 7. [Music] Name three brass instruments
- 9 8. [Jokes] Tell a short knock-knock joke
- 10 Science Fair:
- 11 1. [Space] How far is Mars?
- 12 2. [Space] What is a comet?
- 13 3. [Space] Why is the sky dark in space?
- 14 4. [Animals] Do octopuses have bones?
- 15 5. [History] When was the printing press invented?
- 16 6. [Weather] What makes thunder?
- 17 7. [Music] What is a tempo?
- 18 8. [Recipes] How do you boil rice?
- 19 Mixed Bag:
- 20 1. [Sports] Rules of basketball
- 21 2. [History] Who was Ada Lovelace?
- 22 3. [Animals] Where do penguins live?
- 23 4. [Jokes] A joke about robots
- 24 5. [Music] What is a chord?
- 25 6. [Recipes] How do you toast bread?
- 26 7. [Weather] What is humidity?
- 27 8. [Space] Name the planets in order

ANSWER KEY

- 1 Lunch Rush: Always First 0 pts (6 dropped) · Balanced 7 pts (1 dropped).
- 2 Science Fair: Always First 0 pts (6 dropped) · Balanced 7 pts (1 dropped).
- 3 Mixed Bag: Always First 1 pts (6 dropped) · Balanced 7 pts (1 dropped).

VARIANTS

- 1 Raise capacity to 3 and replay Lunch Rush – do Always First drops fall?
- 2 Invent eight new tokens for one topic pile-up and predict which strategy survives.
- 3 Forbid the matching desk on purpose – how often can a near-miss still score?

PRINT TONIGHT

Plain paper, one side, Actual Size / 100%. Print the Desk Mat (landscape), one per table. Cut the Token cards from the rules page or write the eight questions from a round on scrap paper. You need pencils and a way to tally loads on each desk.

Desk Mat: 1 page, landscape, one per table.