

Name _____ Date _____ Time taken _____

What this sheet trains

Divided attention - holding a second rule in mind while your main attention is busy elsewhere. This is the skill behind listening to a teacher while taking notes, or checking your working while solving the next step.

Strategy: anchor and sweep. Give the main task your focus and let the second task run as a quick, automatic check - do not swap your full attention back and forth.

1 Read and tally

Main task: read the passage once. Second task: the counting rule below.

Counting rule

Every time you read the word study or studies, make one tally mark in the box at the foot of the page. Do not go back and re-read. One pass only.

In 2015 a team of some two hundred and seventy researchers published an attempt to repeat a hundred psychology studies drawn from leading journals. Fewer than half produced a statistically significant result in the same direction, and the average effect was about half the size originally reported. Similar exercises in cancer biology and in economics followed, with broadly comparable outcomes. The finding was not that the original authors had cheated. In almost every case the published study had been designed, run and analysed in a way its own field considered entirely normal, which is precisely what made the result unsettling.

The mechanism is a matter of ordinary incentives acting on small freedoms. A researcher running an underpowered study can choose when to stop collecting data, which outliers to exclude, which of several plausible measures to report and which variables to control for. Each choice is defensible on its own, and together they can lift a null result over the conventional threshold for significance. Journals then select for surprising findings, and nobody is rewarded for publishing a study that found nothing. Pre-registration, in which the hypothesis and the analysis plan are lodged before the data exist, removes most of that latitude from a study, and pre-registered studies report null results far more often.

It is tempting to read all this as evidence that published science cannot be trusted, and that conclusion is both too flattering to the sceptic and too hard on the enterprise. A field that measures its own error rate and then changes its procedures is behaving better than one that never looks, and these replication projects were run by insiders rather than critics. The real cost is slower and less dramatic: a decade of textbooks, policy pilots and funding decisions resting on effects smaller than claimed. What the episode demands is not blanket distrust of studies but the habit of asking which ones were designed before anyone had seen the data.

Tally here - one mark per study or studies

Make the marks as you read, then write your total before turning the page.

Total

1 Questions - cover the passage first

Answer from memory. Do not look back at the passage.

My tally total

From page 1

Q1. What did the large replication project of 2015 find when it repeated published experiments?

Q2. How can a series of defensible analytical choices produce a significant result from nothing?

Q3. Why would pre-registration be expected to change what appears in journals?

Q4. Why does the writer think blanket distrust of published science is the wrong response?

2 Grid sweep with a running count

Main task: cross out targets. Second task: keep a count in your head.

Rules - read both before you start, then start the timer

Main: cross out every number that is a multiple of 7.

Second: count - silently, no marks - how many numbers end in 5. Write the total in the box only when you have finished the whole grid.

832	833	739	678	190	250	986	462	395	110	301	977
358	954	183	916	183	388	997	830	146	173	880	312
685	488	463	939	564	246	700	898	242	321	789	279
383	410	659	513	354	681	988	249	239	686	923	643
286	748	515	813	534	334	601	751	770	375	603	235
195	490	248	205	409	720	937	632	394	917	449	106
335	866	948	642	712	943	941	994	169	819	814	754
514	212	378	676	352	720	696	443	825	777	295	898

Stop the timer when the grid is finished, not when you write the total.

Numbers ending in 5

Write it once the grid is done

3 Copy and total

Main task: copy each row of digits. Second task: keep a running total.

Rules

Main: copy each four-digit group into the box beside it, in order.

Second: add the two middle digits of every row to a running total as you go.

Write the running total in the box at the end of each row - from memory, not by going back and adding up at the end.

	Copy here	Running total
4 5 8 1		
6 2 8 2		
8 9 6 8		
7 5 9 8		
2 7 3 8		
7 9 2 5		
7 9 2 5		
9 1 8 8		
4 8 5 7		
8 1 8 3		
1 2 6 9		
6 8 3 5		

4 Bridging - answer in a sentence each

Where this shows up outside the sheet.

Q1. Which of the two tasks slipped first in this exercise, and did you try to recover it?

Q2. Writing up a practical while the teacher is still talking, which of the two wins your attention?

Q3. What is your honest limit for how long you can read closely without a break?

Answer key

Task 1 · tally
study or studies

7

Task 2 · crossed out
multiples of 7

12

Task 2 · counted
ending in 5

10

Task 3 · final total
two middle digits

134

Task 1 - suggested answers

Q1. Fewer than half the experiments gave a significant result in the same direction, and effects averaged about half the original size.

Q2. Each decision about stopping, outliers, measures and controls can be justified alone, but together they can push a null finding past the significance threshold.

Q3. The hypothesis and analysis plan are fixed before data exist, so null results can no longer be reshaped into positive ones.

Q4. Because the field audited itself and changed its methods, which is better behaviour than never checking at all.

Notes for the parent or teacher

- Mark the two tasks separately. A student who scores well on the main task and loses the count has not failed - that is the normal pattern, and it is the thing worth discussing.
- Do not prompt or remind during a task. The reminder is the skill.
- An untimed run is a valid run. Record the time only if the student wants to beat it next week.
- Repeat the sheet after a week rather than straight away. Spacing is what makes the gain stick.
- This is attention practice, not an assessment. It does not diagnose anything, and no sheet of this kind should be read as a measure of ability.