

Search sheets: how to run the activity



The pages after this one are 36 **search sheets**, dealt from *The Cat in the Hat* by Dr Seuss. Print them one-sided and hand out **one sheet per person**; every sheet is different, and nothing needs cutting out. Each holds 54–55 **token pairs**: a **next token** with the **previous token** that came before it in the text.

Match the room to the sheets, not the other way round. More people than sheets: print the whole set again, once per extra roomful. Every count multiplies equally, so the proportions — which is all the model is — hold. Fewer: hand the spares out anyway, two or three to a person. A sheet nobody holds is a hole in the model.

In **in** *the*, the boxed token is the context and *the* is the next token. A token keeps its colour wherever it appears, so say the colour as you call one out — “who has *the*? it’s a purple one” — and the room can scan by colour before reading. With 8 colours and far more tokens, a colour narrows the search rather than settling it.

black **grey** **red** **brown** **green** **blue** **purple** **magenta**

Running a round

Seed the board: someone reads out any token pair from their sheet, boxed token first, and both go up — the room supplies the beginning too. Then, each round:

1. **Call out the last token** on the board.
2. **Hands up** from everyone holding a matching token pair — one hand each.
3. **Pick a raised hand** — whoever shouts first is the fastest reader, not a sample of the text — and have that person choose one of their matching token pairs and read out its next token.
4. The scribe writes that token up. It is part of the next context. Repeat.

What to watch for

The hands approximate the probability distribution.

Every token pair sits with exactly one person, so a common continuation puts more hands in the air than a rare one; someone holding several matches still raises one hand, so it is close rather than exact. Nobody has to explain weighted sampling; the room is performing it.

Nobody holds the model. No single sheet can continue the text on its own. One hand is not a stall — but no hands at all means an empty seat, so reseed from any token pair and say why.

1962 tokens, 240 unique · 2.83 bits/token · perplexity 7.1 · branching factor 4.32

Worked example

Start anywhere. Someone reads out a token pair — say this one — and both its tokens go on the board.

Round 1. Call out *the* — the last token on the board. A sheet across the room matches it, and that person reads out *way*.

Round 2. Call out *way* — the last token on the board. A sheet across the room matches it, and that person reads out *that*.

Keep going for as long as you like. What the room writes will sound like *The Cat in the Hat* without ever repeating it — that is the model generating, not the corpus being read out.

the token pair that answers

in *the*

the *way*

way *that*

on the board

in *the*

in *the way*

in *the way that*

in the game that fish ! said ,
 things , Why do what should . so
 kites on tell me like , did not
 the cup is not can do so ,
 a lot fly kites find this I will
 the head tip of cat said you some
 fan ! us this , so ! so
 have to do not should not ! look
 wet , had to saw her with Thing
 and then bump on . no I do
 he has we tell that is hat .
 the dish . these then we and I
 to go ! then not all , the
 will not on the . what

find us did you Why , not mind
 ! and and so day . and I
 so , , wet said , hands with
 a pot , I ! said is not
 shame ! wet to kites , I call
 . and . have with the then I
 can have game that I do . that
 we do have Lots . not tip of
 to you the way will show saw them
 you do the ball mess , on a
 fish in like to he said fan as
 do as in the ! said that is
 the fish milk on him ! what would
 sad kind about it things will

then we him step mat ! fan ,
 put them . he what to house and
 ? Oh you can call up on the
 I said deep and wet day the milk
 ! and can hold to us . your
 and the have any ! Thump hop up
 with my things and ! Who , white
 said the saw him is a the fish
 the cup mess is , what a cake
 and Thing I know we had . .
 he put like it hands . milk and
 not all will not . your about with
 that are day . shame ! fish ,
 so tame bad tricks do something

what will him pick ! said is not
 the books . and fish ! we
 house . call them with a , I
 milk , said the want to toy ship
 so so put me shook their hands with
 you ? will see ! look fan with
 bad , day . wet , like these
 can hold ? Well shame ! mess !
 I will ! so on a he said
 we saw and Sally do ! about .
 not a that is then , . he
 the cat saw him to us and I
 things I . you hop on , I
 I will the cat deep in

! what	things fall	our fish	get them
gown with	fish .	then Sally	. that
wet and	house !	lit .	! and
the hat	toy man	not know	to find
want to	day ?	I can	some good
we did	he fell	on there	that bump
would you	what to	and so	. do
put them	so all	do ?	I say
! now	good fun	will like	saw one
the hat	Think of	, said	call this
can hold	said the	here .	like it
with a	the cake	shook up	, with
you should	? Why	and big	are pink
. two	is not	. Yes	

. our fish ! and good ,
 on his house ! and we . Thing
 do not shook with saw him get out
 what a the toy a ball can hold
 things they some fun are two there like
 fish in not sunny the cat he gave
 so . ? tell toy ship ! I
 . so will show . you From up
 and Sally to us would she , no
 I do , said put me I wish
 you hear like to said to yet !
 then Sally gown ! that . we looked
 the house kind of wet day ! bump
 here When with a at me

Sally . pick up that is ! and
 , and here When so we you sank
 their two things yet like it hops and
 are good good games not all . But
 what the , we said the get those
 then I fish as ! sit toy ship
 house ? our toy not be Lots of
 to shake the hall we saw . I
 ? and a cup he said some new
 . our on a and Thing ! he
 . then I like there with would you
 the hat at all gown , now you
 bit ! put them can hold I said
 and down will not the cat

has gone	then those	here is	things in
and Thing	he came	I will	a cup
Lots of	there ,	we saw	so big
will she	be in	at this	not all
I will	. and	. I	! then
can hold	that is	! we	they will
their kites	bit !	on the	our mother
said the	not like	! you	some milk
are tame	fish said	pick up	and this
? I	like that	good tricks	what did
now look	you wish	. .	, and
the cat	of her	get rid	the hat
house !	to be	, how	bite you
. .	Sally and	the cat	

tail I that is good trick he was
 gave them things that like to dish !
 of the be here and the can get
 ! then and the PLOP ! now !
 what to on the not like , wet
 here to they will we had . we
 ? what at all ! said then ,
 not be house ! a bow are not
 our mother to get there that you up
 could see the cat the cake said the
 fish said pick it I can I will
 . I so . my , too
 . what Sally and will hit For the
 bit . ! those the fish

, said he lit to fall into a
 hear ! ! the a pat , not
 ! and and the our fish fish .
 . and were down pick up dish ,
 things . I will not shine could ,
 Sally and there on the fan be here
 here . at me on my the cat
 they play ? should so we will have
 how do fast as now ! house !
 . But that were of this . .
 cold to I do not . the rake
 said the pack up can fan ! Oh
 like this what you good game . he
 we saw then our you pack

we can

a look

fast as

of this

in the

can get

will show

. .

be here

kicks and

not fly

books !

hear ?

! I

on the

there is

and I

, then

things .

I can

could do

our fish

kinds of

give you

, out

that I

cold ,

. .

fish shook

you sit

! I

not in

. what

string of

house all

how that

what will

I hop

the fish

the hook

? Oh

good things

said ,

to do

then he

now !

here When

he got

. she

at that

Sally and

like the

the hat

! look

they like

said to can hop . he be here
 , she things ran ? now could play
 in the man ! the dots what would
 house For not be how I on the
 at me will not he shut to know
 a rake then something ! so
 and all ! if Sally and I ,
 playthings and now , books ,
 like it up and of good the house
 mother's new ! they . and
 . we our house fish . .
 we saw net . cold , fast .
 , what you like that I lot of
 I can show you cat go the cat
 they like good fun

I call show to I can box ,
 like our one and the day our new
 a book , so ! said to the
 you another trick that can have wood box
 ! her now look net . in with
 ! put on the , we . I
 cat in lot ! fish in what a
 of something . and . then
 they are pat . two things . these
 good game things they said to not want
 we saw how . will give the ball
 strings , books ! at all be here
 and the then he fast as that day
 and Thing ? would up these the pot

, Why . this . and to say
 the fish then he trick , fast !
 out of we sat net , last !
 will not looked ! they should the house
 Thing one and so Oh , two books
 ! do I can fish said pot !
 tricks . one little the box cat in
 said the . Oh in the , the
 a tip our mother and kicks now ,
 at last ! and be about box are
 I do you have ! said that is
 up the , said show them not be
 what a play . things that little toy
 . it ? Oh of good

no fear	. so	I said	show you
up on	box .	you do	we can
. I	pot .	will come	the hat
then he	the fish	two things	Oh ,
that they	out and	little fish	not one
Thing two	. a	the things	and a
looked !	now .	one and	! at
, with	said the	of look	in the
, do	and look	net I	funny !
sat in	, said	they should	cat in
came down	our fish	at me	! those
hall .	! put	sun did	a box
fish came	play !	tricks .	to the
. this	I can	? and	

of his Oh dear and red .
 our fish box with in the . have
 little bit ! how ! then two ,
 them go ! then not wish one and
 . they cat . said the play ,
 pot . , here tricks , no ,
 Thing two bow . and I hall .
 out ! take them will bump the ship
 we sat then our now look came in
 sun is you get they will , no
 up those look at fish . I can
 if your book on at this the cake
 the mat . I I let a bump
 , and to go sat there

, I not . that our game
look ! if you to do and the
in the and you take a fall .
When your of Thing , what will find
we sat they want play ball ! said
the wall the cat little bit two .
now ! . with the sun at all
this mess said , came down , the
a lot them a no fear I do
out ! ! have home ! I saw
box . ! I Oh , one hand
up up pot . . I sat there
Thing one his hat cat in tricks are
you will fish on . there

up high

at me

! they

cat .

When our

in a

the milk

came down

, how

of one

hand !

the hook

and the

. it

. I

box came

to do

, look

sat in

no fun

you now

we looked

Oh ,

the cat

run down

I call

fish to

play .

do not

they ran

look at

asked you

one !

his hat

I always

said the

fear .

them out

, jumps

. you

out of

fall !

Thing one

if I

not pick

! then

little bit

a big

pot .

! said

bed !

two things

and a

this mess

Thing one new tricks at this a little
 came Thing this game Well . we tell
 the cat , now out ! not know
 . . When your said the cat .
 , I and Thing his head , said
 and I I had fall ! look at
 no fear ! I fear ! ! now
 . and . no little toy ! he
 Make that one ! up . the cat
 with Thing you do of the do ?
 Oh , tame . to the thumps and
 them out the wall shake hands in the
 I can play . they have those things
 if mother two things

cat .

said ,

out of

a tip

! put

. in

came back

tame !

those things

! and

I bet

went on

cake !

I know

Make them

Oh ,

another good

it was

they ran

new .

up all

fear !

shake hands

Thing one

know how

no fear

, said

the house

and Thing

fell on

. I

wall !

with a

not be

do .

. they

look at

this way

and they

the hat

! and

of my

in the

, and

them I

one little

two and

is what

the cat

was gone

mind at

you did

say .

we saw

! they	, that	sank it	Oh ,
my tricks	cat with	Thing two	. I
the things	was out	say .	and you
they should	two !	the fish	. .
the fish	, said	up all	a fish
with big	is not	fear ,	sit !
said the	of his	I stand	went away
look !	bet .	! have	! sit
I did	new rake	another good	
one little	and the	it ,	this house
those things	know what	out .	not know
you .	fell into	we could	do not
them Thing	wall in	in the	cake .
said our	. you	no !	

one kite no fear do not the things
Oh , they said all the new gown
I sat my tail . I look what
them to the hat sank our not one
! . fear of said the ! bump
the pot come here , and and the
is not , said ! it went bump
was to her the two ? and our
up the wish we with hops say .
sit ! . and cake , know !
I like cat , of good those two
it deep bet , in the Thing two
said the this trick ! not down on
mother was a box

was too . your . should come .
 those two ! what sit ! say ?
 step in ! and is not up there
 cat . wish to and he I know
 the cat down the me ! them away
 bumps , one kite I went , sank
 a red two things do . as I
 cake on mother could look !
 with a said , , as ! your
 the cat fear . not let of bad
 this wet all . went after and so
 . they it a my playthings
 no ! her . said the Thing two
 know it Oh , they ran in the

the string	the hat	to have	cat went
and our	. then	not !	and some
said ,	in this	those things	it was
a dish	all kinds	! and	them away
sit there	way that	high as	my hat
her way	mother is	, and	, no
! down	Oh ,	you will	do you
is good	fun to	no !	as I
I could	was shut	Who was	gone with
down with	up our	say !	one and
me .	! said	. so	hat .
two .	this box	big red	with a
Thing one	know some	. now	wish ,
pink ,	look at		

picked up	, if	to play	, said
mother is	is near	. I	as fast
you take	gone away	no way	up up
! look	her about	look at	this is
them run	two .	the fish	and look
fun in	a sad	I did	. and
down my	hat !	Oh ,	away .
cup on	know !	! said	! Make
the cat	ship ,	Thing two	me now
said ,	my net	was back	these things
wish to	way !	it came	all we
and he	. you	nothing at	in the
cat !	sit !	not bad	do I
big and	with a		

mother !	! fast	a house	all !
, wet	up !	tall ,	stand on
fun on	! said	hat you	know what
do you	in and	way home	them !
big bumps	said .	not bite	no !
two and	cat .	and the	the cat
I will	dear .	. look	. Oh
me !	her bed	the house	after my
is wet	my net	these two	cup and
with a	stop .	. with	it is
Oh dear	this !	you hear	, we
But that	and he	away !	look !
Yes .	down !	to us	! But
ship !	as a		

. a it ! I like down the
 do not is fun dear ! fun at
 ! no away . and the ! have
 that cat way at my net a game
 , and . Oh hat . ball !
 her gown ship , said the But you
 look ! two hands up with big thumps
 you shook these things as I mother will
 to play all . have to . But
 not like the gown cat in me down
 know some ! we let you should we
 with a cup , the hall and the
 , no back in in the rake .
 this ? no .

this is should not a good fun ?
 it is , did have no ship and
 my net hat . ! and me down
 no ! down ! let down cat .
 ! said the cat big mess ! I
 know what look at all ! and I
 . . away ! ! look you bent
 back in up the and then as you
 these books in a not one cup and
 hit ! I did But your . look
 said the is that mother asked
 do was the top top of , said
 rake , with the ball . to say
 . . that they something went

in the	! and	all !	! then
ball .	ran up	to stop	a game
my hat	and I	hat .	, we
! and	is not	did not	rake !
kite bump	this house	you .	she will
top with	look at	that is	down .
. and	up two	fun But	and we
your mother	me !	should not	sunny .
cat in	with a	as I	no .
said the	the fish	have no	I can
. then	it to	But I	do you
something to		! too	go !
. I	not wish	the cat	any fun
mother will	away with	, said	

away . the sun go away . they
 something new should not do ?
 . we and the , as hold up
 the things in the she do hat to
 kite we cat . ball . up the
 Thump ! have fun But that hook .
 ! I ! sit with the I saw
 got up it . mother came
 bump ! ran down a shame said the
 is so did nothing to play down ,
 . . ! look ! I fun that
 look . not all your mother , with
 that I you do this , as he
 no ! me now all . and Sally

take	, Oh	have no	! and
bump made	. now	and a	is on
fun ,	in on	to fly	do !
all the	he should	! on	with my
should not	that !	so ,	did you
I know	too .	it ?	as fast
. .	she say	cat in	! then
! put	mother is	your mother	games we
you do	not .	and she	hook .
look at	a PLOP	something to	
ran to	Thump !	the cat	always pick
up the	, and	go away	said the
ball !	down with	But our	this house
hat ,	the box	hold you	

and I , little not like ! no
 something ! said the it up you fall
 this big all . jump ! cat .
 ran about he picked hook . the things
 on top near ! to you with a
 ! Oh hold up should we she will
 ! you bump ! your mother . they
 did not go out that is mother is
 and a . it . But hat !
 we can shut with down ! so deep
 too wet head ! in the , and
 fun . ! and have Lots do not
 us two I said But that a little
 is out the cat

dots that things had hold a and with
 will hold us jump cat in to sit
 then we she say too cold head of
 game that on her your mother do to
 said the the ball ! they have no
 a shame ! tell bump From you have
 should we with Sally , and . he
 we shook red . hat . he should
 , cold is no . Oh . now
 I bet . he go ! ! But
 and then the pot in the jumps and
 that ? shut up But we did not
 not like mother is so so ran out
 all I ! with

will show should not your mother us ?
 tell her do ! I do to have
 bump ! on the with my you another
 then he the cat in the that cold
 game fun red wood ! Make , fast
 fox , But our and the cat in
 have fun not like had something
 a fox hold up said the , no
 rid of is no we two ! Oh
 too wet . you ! said see this
 . But he should so we ! Thump
 saw all the things things bump she said
 hat . . they all that did !
 the fish and , . you

not be	white and	the fan	that cat
your mother	! and	cat .	I know
fish in	and then	then !	will pick
so tall	all if	he fell	! they
did not	on this	said the	to shake
tell her	, Think	the fish	bent our
red fan	should not	! I	can not
us fast	. Why	. then	and too
hold up	the cat	made us	. I
a hook	hat !	game .	bump their
you did	had them	do you	have no
. that	saw those	with fear	we did
things should		see something	
is not	in this	! Oh	, I

so do	have come	on one	. then
, said	the strings	and I	I can
. Oh	do if	and the	hold the
cat in	kites in	he ran	! But
bump !	we could	should not	us ,
not go	Why ,	all my	tell that
saw mother's		things are	! not
to play	fly kites	! now	game ,
fish .	, the	did not	that went
can ,	. I	then he	said ,
shine .	with a	the pot	like it
in the	will she	a shame	the hat
. then	you will	is funny	your mother
had to	hat came	wet to	