



ONTARIO GRADE THREE

Everything Else

Language · Science · Social Studies · Health & PE · The Arts

Sixty-eight sheets. The companion to the Grade 3 maths book.

This book belongs to

	Language	complex sentences · quotation marks · revising, not just editing	Sheets 1–18
	Science	plants · forces · strong structures · soils	Sheets 19–36
	Social Studies	Canada 1780–1850 · living and working in Ontario	Sheets 37–48
	Health & PE	moving · eating well · staying safe · big feelings	Sheets 49–56
	The Arts	variety in art · rondo · tension in drama · dance	Sheets 57–64
	Test week	what EQAO is, and how not to worry about it	Sheets 65–66

Four things that are brand new this year

Complex sentences. Joining two ideas with *because*, *although*, *when* — so writing stops sounding like a list.

Struts and ties. Why a triangle holds and a square folds.

Revision. Changing what a piece *says*, which is a completely different job from fixing spelling.

Canada 1780 to 1850. The first year history is about real people and real dates.



You are allowed to stop.

Do one sheet, or half a sheet, or none today. Nothing here is a race, nothing here is a test, and no sheet minds being left until later.

For the grown-up

Three notes before you start. First, a **great deal of this book happens off the page** — the science sheets ask for a jar and some soil, the arts sheets ask for singing and moving, and the health sheets ask for conversation. The writing lines are the smallest part of it. Second, **Grade 3 is an EQAO year in Ontario**, which is why sheets 65 and 66 exist; they are about keeping the test in proportion, not about drilling for it. Third, the sheet on **visible and invisible differences** (56) covers body autonomy and asking before touching. It is written plainly and is worth reading through yourself first.

Curriculum content is paraphrased from the Ontario curriculum documents for Science and Technology (2022), Language (2023),

Reading in chunks, not letters

Big words are not harder. They are just made of more pieces you already know.

look for chunks

write

say it out loud

✓ What changes in Grade 3

When you were learning to read, you sounded words out one letter at a time: **n – i – g – h – t**.

That still works, but it is slow, and it falls apart on long words. What good readers do instead is see whole **chunks** at once: **n + ight**.

Once you know that **ight** always says the same thing, you can suddenly read *night*, *light*, *right*, *bright*, *fright* and *frightening* without sounding out a single letter. **One chunk unlocks dozens of words.**

ight

night · light
right · might
bright · sight

tion

action · station
nation · motion
question · section

ould

could
would
should
Only three —
but you use them constantly.

ought

bought · thought
brought · fought
sought

Sort them into families

Write each word under the chunk it belongs to.

flight

nation

thought

should

tight

attention

brought

would

frightening

celebration

fought

could

ight	tion	ould	ought

Two of those words are **long** — *frightening* and *celebration*. Cover up everything except the chunk and they stop looking scary.

Build new words

Put a letter or two in front of each chunk.

+ ight =

.....

+ ought =

.....

+ tion =

.....

How many different **ight** words can you make in one minute?

.....

Find your own chunk

Open any book. Find **three** long words. Draw a line to split each one into chunks.

.....

.....

.....

There is often more than one sensible way to split a word.
Whatever helps you read it is the right way.

For the grown-up Grade 3 is when word reading is expected to become chunk-based rather than letter-by-letter — the curriculum calls this the consolidated phase. If your child is still sounding out familiar words letter by letter, that's the thing to work on, and it responds well to covering part of a word and revealing it in pieces.

B2.2

Bits you stick on the front and back

Adding a small piece to a word can change its meaning completely.

build words

write

work out meanings

On the front — prefixes

Bit	It means	Example
un-	not, or the opposite	unhappy, untie
re-	again	redo, rebuild
pre-	before	preview, preheat
dis-	not, or the opposite	disagree, dislike
mis-	wrongly	misspell, misread

On the back — suffixes

Bit	It means	Example
-ful	full of	hopeful, careful
-less	without	hopeless, careless
-ly	in that way	slowly, kindly
-ness	the state of being	kindness, darkness
-er	a person who	teacher, farmer

What does each word mean?

Use the tables. You do not need a dictionary — you can **work it out from the pieces**.

unlock

rewrite

painless

preheat

gardener

sadness

This is the single most useful reading skill there is. When you meet a word you have never seen, **look for a piece you recognise** before you give up on it.

Opposites

Add **un-**, **dis-** or **-less** to make the opposite.

happy →

agree →

careful →

One root, a family of words

Start with **care**. How many words can you build?

careful

Now try **help**:

Then try **hope**:

kind →

obey →

For the grown-up

Working out a word's meaning from its parts is far more powerful than memorising vocabulary lists, because it generalises to words neither of you have met. When she hits an unknown word while reading, resist supplying it — ask "is there a bit of that word you recognise?" first.

B2.3 • B2.4

Words that sound the same but aren't

These are the words that catch out grown-ups too. Learn the trick for each one.

🔍 learn the trick

✍ write

✓ check

there · their · they're

there = a place. It has **here** hiding inside it, and *here* is a place too.

their = belonging to them. *Their coats are wet.*

they're = **they are**, squashed together. The apostrophe is standing in for the missing **a**.

to · too · two

to = towards. *Going to school.*

too = also, or more than you want. It has an **extra o** — and it means extra.

two = the number 2. It has a **w**, like *twin* and *twice*, which are both about two.

here · hear

hear = with your ears. It has **ear** right there in the middle.

here = this place. Same ending as *where* and *there*, which are also places.

That one trick — *hear has ear in it* — will last you your whole life.

The apostrophe ones

These two pairs cause more mistakes than all the others combined. There is one test that always works: **try saying the long version out loud**. If it still makes sense, use the apostrophe.

its = belonging to it. *The dog wagged **its** tail.*
it's = **it is**. ***It's** raining.*

Test: "The dog wagged ~~it~~ is tail" — nonsense, so no apostrophe.

your = belonging to you. ***Your** boots are muddy.*
you're = **you are**. ***You're** late.*

Test: "~~You~~ are boots are muddy" — nonsense, so no apostrophe.

Choose the right one

- going to be late. (there / their / they're)
- Put your boots over (there / their / they're)
- I have cats and a dog. (to / too / two)

4. This soup is hot. (to / too / two)
5. Can you that noise? (here / hear)
6. The cat licked paw. (its / it's)
7. my favourite book. (Your / You're)

Two more pairs

write (with a pen) and **right** (correct, or not left).
knew (past of know) and **new** (not old).

I will a letter.

Turn at the corner.

She got a bike.

He the answer.

Write your own

Write one sentence that uses **there**, **their** and **they're** — all three, correctly, in one go.

.....

.....

.....

It is genuinely hard. If you manage it, read it out to somebody — you have done something most adults would have to think about.

For the grown-up The say-the-long-version test is the only one worth teaching, because it works every time and needs no memorising. These errors persist into adulthood precisely when people learn them as pairs to memorise rather than as a rule to apply.

B2.2 · B3.3

Beats in a word

Put your hand flat under your chin and say a word. Count how many times your chin drops.

? listen

|| count the beats

✎ write

✓ Two ways to find the beats

Clap it. Say *but-ter-fly* and clap on each beat. Three claps, three syllables.

Or use your chin. Rest your hand under your jaw and say the word normally. Your chin drops once for every syllable, because your mouth has to open for every vowel sound. The chin test is more reliable than clapping, because you cannot fake it.

Every single syllable has exactly one vowel sound in it. That is what makes it a syllable.

Count the beats

Word	Split it up	Beats
rabbit	rab · bit	2
garden		
elephant		
butterfly		
caterpillar		
information		
jump		

One of those has only **one** beat, even though it is five letters long. **Letters and beats are not the same thing.**

Sort by beats

Write each word in the right column.

dog

pencil

wonderful

bright

computer

happy

celebration

school

1 beat	2 beats	3 beats	4 beats

Why this helps with spelling

A long word is much easier to spell if you deal with **one beat at a time**.

Try spelling **caterpillar** in one go. Hard.

Now try **cat** — **er** — **pil** — **lar**. Much easier, and it is the same word.

Say each beat out loud as you write it. This works for almost every long word you will ever meet.

Try it: spell **information** one beat at a time.

Beat hunt

Find something in the room for each one. Names of people count.

1 beat

2 beats

3 beats

4 or more

The longest word most people know is the name of something in science or a very long place name. What is the longest word **you** can find? How many beats?

For the grown-up The chin-under-the-hand test is worth insisting on over clapping — children can clap to any rhythm they like, but the jaw only drops for real vowel sounds. Syllable-by-syllable spelling is the single most useful strategy for long words and transfers directly to the science and social studies vocabulary later in this book.

B2.1 • B2.2

Joining two ideas together ★ brand new

Short sentences are fine. But joining them shows **how the ideas fit together**.

write

choose the joining word

read it aloud

✓ Why bother joining them?

Here are two true sentences:

It was raining. We stayed inside.

Both are correct. But they sit next to each other like strangers — nothing tells you that one **caused** the other.

Now join them: *We stayed inside **because** it was raining.*

That one word does a lot of work. It turns two facts into an **explanation**. This is the main thing your writing gains this year.

✎ Joining words worth having

because

although

when

if

after

before

while

until

since

Each one
says
something

different

about how
the two
ideas are
connected:

because

gives a
reason,

although

shows a
surprise,

when and

while and

after

say

something
about
time, and

if sets a
condition.

Join each pair

Pick a joining word that makes sense. There is often more than one good answer — but not *any* answer.

1. *The dog barked. Someone knocked at the door.*

.....

2. *I finished my homework. I went outside.*

.....

3. *It was cold. She did not wear a coat.*

.....

4. *We can go to the park. It stops raining.*

.....

Number 3 needs **although** or something like it, because the second bit is surprising. Number 4 needs **if**, because it is a condition. **The joining word carries the meaning.**

The joining word can go first — and then you need a comma

Joining word in the middle — no comma needed.

*We stayed inside **because** it was raining.*
*She smiled **when** she saw the cake.*

Joining word at the start — put a comma where the two halves meet.

***Because** it was raining, we stayed inside.*
***When** she saw the cake, she smiled.*

Both versions mean the same thing. Starting with the joining word just puts the **reason** first instead of last — and good writers switch between the two so their sentences do not all sound the same.

Rewrite this one the other way round, and remember the comma:

He wore his boots because the path was muddy.

Careful — half a sentence is not a sentence

Read these out loud. Two of them are **not finished**. Tick the ones that are proper sentences.

- ☐ *Because it was raining.*
- ☐ *We stayed inside because it was raining.*
- ☐ *Although she was tired.*
- ☐ *Although she was tired, she kept going.*

"Because it was raining" leaves you hanging — it makes you wait for the rest. **A joining word promises a second half, and you have to deliver it.**

For the grown-up

Complex sentences are the headline new expectation in Grade 3 writing. The reliable error is the unfinished fragment — "Because I was late." — and the fix is reading aloud, because the ear catches the missing half long before the eye does. Praise the joining word rather than the length; a child who writes one good *although* sentence has done more than one who writes five short ones.

B3.1- B3.3

Three kinds of sentence

Every sentence you write is one of these three. Good writing uses all of them.

👁 spot the type

✍ write

📊 build your own

Simple

One idea. That is all.

The dog barked.

I like apples.

The old blue car finally started.

A simple sentence can still be **long**. The last one is nine words and still only one idea.

Compound

Two ideas of equal size, joined by **and**, **but**, **so** or **or**.

*The dog barked **and** the cat ran.*

*I was tired **but** I kept going.*

Cover the joining word. **Both halves would work as sentences on their own.** That is the test.

Complex

Two ideas where **one leans on the other**, joined by **because**, **when**, **although**, **if**...

*The dog barked **because** someone knocked.*

***When** the bell rang, we lined up.*

Cover the joining word here and **one half falls over**. "Because someone knocked" is not a sentence.

Which kind is each one?

Write **S** for simple, **CD** for compound or **CX** for complex.

..... The rain fell all afternoon.

..... I wanted to go outside, but it was pouring.

..... Although the bus was late, we still got there on time.

..... My little brother laughed at the puppet.

..... We will have a picnic if the weather stays dry.

..... She packed her bag and she left early.

The quick test: find the joining word. No joining word means simple. **and / but / so / or** means compound. Anything else — **because, when, although, if** — means complex.

Write all three about the same thing

Your subject: **a thunderstorm**. Write one sentence of each kind.

Simple

Compound — use and, but, so or or

Complex — use because, when, although or if



You do not have to use complex sentences all the time. A short simple sentence, dropped in after some long ones, is one of the strongest things a writer can do. It makes the reader stop. Like that.

For the grown-up The find-the-joining-word test is reliable enough to use as a rule, and it saves a lot of grammatical explanation. The point of the last box is real: children who have just learned complex sentences often abandon short ones entirely, and their writing gets worse before it gets better. Variety is the goal, not complexity.

B3.1

Writing down what somebody said ★ brand new

Quotation marks go around the **exact words** that came out of somebody's mouth. Nothing else.

look at the pattern

write

check

✓ The four rules

"I'm hungry," said Ravi.

- | | | | | | | |
|--------------------------------|--------------------------------------|---|--|--|--|--|
| <p>1. Quotation marks wrap</p> | <p>the only spoken words.</p> | <p><i>said Ravi</i>
Ravi did not say "said Ravi".</p> | <p>2. The speech starts with a capital letter</p> | <p>, even in the middle of the sentence.</p> | <p>3. There is a comma before the closing mark — not after it. The punctuation lives <i>inside</i>.</p> | <p>4. If the speech is a question or a shout, use ? or ! instead of the comma. Still inside.</p> |
|--------------------------------|--------------------------------------|---|--|--|--|--|

The same sentence, four ways

"I'm hungry," said Ravi.
Speech first, comma inside.

Ravi said, "I'm hungry."
Speech last. Comma before it, full stop inside.

"Are you coming?" asked Mia.
A question mark replaces the comma.

"Stop!" shouted the guard.
So does an exclamation mark.

Notice you **never** write "Are you coming?" — the question mark does the comma's job. One mark is enough.

Add the punctuation

Each of these is missing its quotation marks, capital letters and commas. Rewrite them properly.

1. *where are my boots asked Jo*

2. *the bus is here shouted Dad*

3. *Nan said I made you a cake*

4. *look out cried Sam*

A new speaker gets a new line

When somebody else starts talking, **start a new line**. It saves you writing "said" every single time, because the reader can see who is speaking from the layout.

"Have you seen my boots?" asked Jo.

"They're by the door."

"No, they aren't."

"Then look under the sofa."

Only the first line says who is talking, and you can still follow the whole conversation. That is the new line doing the work.

Write a short conversation

Two people are arguing about what to have for dinner. Four lines. New line for each new speaker.

.....

.....

.....

.....

Try to use one ? and one ! somewhere.

For the grown-up Punctuation inside the closing mark is the rule children most often get wrong, and the most useful correction is to point at the quotation marks and ask "did they say that bit?" The new-line-per-speaker convention is worth teaching alongside, because it's what makes written dialogue readable and it shows up in every novel she'll pick up.

B3.3

Commas and apostrophes

Two small marks that change meaning completely. Both are worth getting right.

write

check

read aloud

Three jobs for a comma

1. Separating a list

I packed apples, pears, plums and grapes.

A comma between each item. The last two are joined by **and** instead.

2. After an opener

Suddenly, the door opened.

After lunch, we went out.

When a sentence starts with a scene-setting bit, a comma shows where the real sentence begins.

3. Splitting joined ideas

Because it was late, we went home.

You met this on sheet 5. Joining word at the front means a comma in the middle.

Add the missing commas:

We need bread milk eggs and butter.

Later that evening the lights went out.

Although she was nervous she put her hand up.

Two jobs for an apostrophe

1. It stands in for missing letters

do not → **don't** cannot → **can't**

it is → **it's** they are → **they're**

I have → **I've** we will → **we'll**

The apostrophe goes **exactly where the missing letters were**. In *don't*, it replaces the **o** of *not*.

2. It shows something belongs to somebody

the bowl belonging to the dog → **the dog's bowl**

the book belonging to Sam → **Sam's book**

the coats belonging to the children → **the children's coats**

Ask yourself: **who does it belong to?** The apostrophe goes straight after that person or thing.

The mistake almost everybody makes

An apostrophe does **not** mean "more than one". This is the error you will see on shop signs your whole life.

Wrong

Fresh apple's for sale
Three dog's were barking

Right

Fresh apples for sale
Three dogs were barking

Just adding an **s** to mean "more than one" needs **no apostrophe at all**. Next time you are out, look for this mistake on a sign. They are everywhere.

Fix these

Each one has an apostrophe problem — either missing, or there when it shouldn't be.

1. *I dont know where my shoe's are.*

.....

2. *The cat's bowl is empty and its dirty.*

.....

3. *Two bird's landed on Sams window.*

.....

For the grown-up

"Where were the missing letters?" resolves nearly every contraction question, and "who does it belong to?" resolves nearly every possessive one. The greengrocer's apostrophe box is deliberately memorable — spotting the error in the wild is much stickier than being told the rule, and there is no shortage of examples.

B3.3



Every word has a job

The same word can do different jobs in different sentences. Look at what it is **doing**.

👁 spot the job

✍ write

Noun

A person, a place, a thing or an idea.

dog, Toronto, pencil, courage

Test: can you put *the* or *a* in front of it?

Verb

Doing or being.

run, think, is, became

Test: can you put *I* or *she* in front and have it make sense?

Adjective

Describes a **noun**.

muddy, enormous, three, quiet

Test: does it tell you *what kind* or *how many*?

Adverb

Describes a **verb**.

slowly, yesterday, outside, carefully

Test: does it tell you *how*, *when* or *where*?

Label the words

Write **N**, **V**, **ADJ** or **ADV** under each underlined word.

1. The muddy dog ran quickly across the garden.

.....

2. Yesterday my little sister paints a picture.

.....

Same word, different job

This is why you have to look at the **sentence**, not just the word.

*I will **water** the plants. →*

.....

*The **water** is cold. →*

.....

*Please **book** a table. →*

.....

*I read a **book**. →*

.....

Same four letters. Completely different jobs. The word does not decide — **the sentence does**.

Build a sentence to order

Write one sentence containing all four: a noun, a verb, an adjective and an adverb. Then label them.

.....

.....

Now write another one about the same thing, but make the adjective and the adverb **opposite** to the ones you just used. Does it still make sense?

.....

Why any of this matters

Knowing the names is not the point. The point is that **adjectives and adverbs are the words you can change to make writing better.**

The dog went across the garden. — nothing wrong with it, but nothing much in it either.

*The **filthy** dog **bolted frantically** across the garden.* — now you can see it.

When somebody says "add more detail", what they usually mean is: **swap a dull verb for a sharp one, and add an adjective that earns its place.**

For the grown-up

The same-word-different-job box is the one that matters — it stops children treating word classes as labels stuck permanently to words. And the closing point is the practical payoff: naming parts of speech is only worth doing if it gives you something to change when you revise, which is exactly what sheet 17 asks for.

B3.2

When did it happen?

Verbs change their shape depending on **when** something happens.

write

? listen for what sounds right

Past

already happened
I **walked** to school.

Present

happening now
I **walk** to school.

Future

not yet
I **will walk** to school.

The easy ones just add -ed

Now	Yesterday	Now	Yesterday
jump	jumped	paint	
climb		shout	
watch		help	

Careful with spelling: **hop** becomes **hopped** (double the p), and **hope** becomes **hoped** (drop the e). Say them out loud and you will hear why they are different.

The awkward ones change completely

These do not follow any rule. They just have to be known — and you already know most of them from talking.

go → **went**

see → **saw**

eat → **ate**

run → **ran**

take →

come →

write →

swim →

bring →

catch →

think →

teach →

Say the last four out loud: **brought, caught, thought, taught**. They all **sound** the same at the end — but look closely, because they are not all spelled the same. **brought** and **thought** use **ought**, the chunk from sheet 1. **caught** and **taught** use **aught** instead. Same sound, two spellings — which is exactly why these ones have to be learnt by eye and not just by ear.

Keep it consistent

This is the real problem in Grade 3 writing: starting a story in the past and **drifting into the present** halfway through.

*Yesterday I **walked** to the shop. I **see** a huge dog. It **barked** at me and I **run** away.*

Two verbs are in the wrong tense. Circle them, then write the sentence out properly:

.....

.....

Three times, one event

Write about a birthday party three times.

As if it already happened

.....

As if it is happening right now

.....

As if it is still to come

.....

For the grown-up Tense drift is far more common than any individual wrong verb, and it's worth checking for specifically when reading her writing back — ask "is this story finished or is it happening now?" and then check every verb matches. Irregular past tenses are learned by ear, so hearing them in read-aloud books does more than any list.

B3.2 · B2.2

Reading a story

Read it twice. The second time, slow down — stories hide things on purpose.

read twice

work it out

write

The Thing in the Woodpile

Nel heard it before she saw it — a small, dry scratching from somewhere inside the stack of firewood.

She put down the armful she was carrying and listened. Nothing. Then it came again, lower down.

“Dad,” she called, “there's something in the woodpile.”

Her father came out onto the step, still holding his tea. “Probably a mouse. Leave it be.”

But Nel did not leave it be. She lifted one log, then another, working slowly so the stack would not slide. Halfway down she found a hollow space, and in the hollow space, pressed into a nest of bark and dry grass, were four grey shapes no bigger than her thumb.

She put the logs back exactly as she had found them. Every single one.

At supper her father said, “Did you sort out that mouse?”

“It wasn't a mouse,” Nel said. She took a long drink of her milk and said nothing else at all.

Her father looked at her for a moment. Then he put down his fork, went outside, and moved the whole stack of firewood two metres to the left. He brought the evening's logs in from the shed instead.

Straight from the page

The answers to these are written down. Point at them.

1. What did Nel hear first?

.....

2. What did her father think it was?

.....

3. What did Nel find halfway down the stack?

.....

Work it out

These answers are **not** written down. You have to use clues.

4. Why did Nel put every log back exactly where it was?

.....

5. Why do you think she said nothing else at supper?

.....

6. Why did her father move the woodpile?

.....

Prove it from the text

What sort of person is Nel? Choose **one** word, then find the part of the story that made you pick it.

careful

disobedient

kind

nosy

protective

brave

My word:

The bit of the story that shows it:

More than one word could be right. What matters is that you can **point at the sentence that proves it**. An answer with no evidence is just a guess.

The father says nothing either

He does not ask what she found. He just moves the woodpile.

What does that tell you about **him**?

Sometimes a character shows you what they think by **what they do** rather than what they say. Watch for that in every story you read.

What happens next?

The story stops there on purpose. Write two or three sentences saying what you think happens in the spring.

For the grown-up

The three question types here are deliberate: literal, inferential, and evaluative. Most children handle the first set easily and stall on question 5, which needs them to notice that Nel is deliberately protecting the nest by not drawing attention to it. "What made you think that?" is the single most useful follow-up on this page — the reasoning matters more than the answer.

C1.3 · C2.3 · C3.1

Reading to find things out

Non-fiction is read differently from a story. You are hunting for information.

read

find the answer

write

Nature's engineers

Beavers are the second largest rodents in the world, after the capybara. A full-grown beaver can weigh as much as a large dog.

Beavers are famous for building dams. A dam is a wall built across a stream out of branches, mud and stones. Behind the dam the water backs up and forms a pond.

Why go to all that trouble? A beaver is slow and clumsy on land, and easy for a wolf or a bear to catch. In water it is fast and safe. By flooding the ground around itself, a beaver turns dangerous land into a safe highway.

In the middle of the pond the beaver builds a lodge — a dome of sticks and mud with its entrance underwater. Nothing that cannot swim can get in.

All this changes the landscape. The new pond fills with fish, frogs and insects. Herons and ducks arrive. Trees that cannot survive wet roots die standing up, and woodpeckers move into them. One beaver family can turn several hectares of forest into wetland.

Not everybody is pleased about it. A dam can flood a road or a farmer's field. Some Ontario towns fit a device called a beaver deceiver — a pipe running quietly through the dam. Beavers build in response to the *sound* of trickling water, so if they cannot hear the leak, they do not try to plug it.

The beaver is on the Canadian five-cent coin. Beaver fur, which was made into expensive hats, was the main reason Europeans first travelled deep inland across this country.

Find the facts

- Which rodent is bigger than a beaver?
.....
- What is a dam made of?
.....
- Where is the entrance to a lodge?
.....
- Which coin has a beaver on it?
.....

Work it out

- Why is an underwater entrance a good idea?
.....
- Why does a beaver deceiver work?
.....
- The dead trees are called a problem by nobody in this text. Who benefits from them?
.....

Two sides of the same animal

The text says beavers are good for some things and a nuisance for others. Sort what you read.

Good things a beaver dam does	Problems a beaver dam causes

Notice the writer does **not** tell you whether beavers are good or bad overall. They give you both columns and let you decide. Good non-fiction often does that.

Say it in one sentence

Summarise the whole text in **one** sentence. You will have to leave nearly everything out. That is the skill.

.....

Ask yourself: if somebody could only read one sentence of this, what would they most need to know?

What is still missing?

Write two questions this text did **not** answer, that you would like to know.

.....

Noticing the gap in what you have read is a real reading skill, and it is where the next thing you learn usually comes from.

For the grown-up The one-sentence summary is much harder than it looks and is worth doing slowly — children tend to retell rather than summarise, and the fix is asking what has to be left out. Question 6 is the best one on the page: it needs the reader to connect two facts stated a paragraph apart.

C2.3 · C3.2 · C1.4

All the bits that aren't the words

A non-fiction book gives you lots of ways to find things **without reading it all**.

look

name them

use a real book

A page from a book about soil

1 Under Your Feet

2 What soil is made of

Soil is not just dirt. It is a mixture of tiny pieces of rock, rotted plants and animals, water and air. The rotted part is called **3 humus**, and it is what makes soil dark and rich.

4



6

Did you know?

A single handful of healthy soil holds more living things than there are people on Earth. Most of them are far too small to see.

5

The layers of soil. Topsoil is only the top 20 cm or so.

Name each feature

Match the number to its name.

caption

heading

title

bold word

diagram

fact box

1 =

2 =

3 =

4 =

5 =

6 =

What is each one for?

Why is **humus** printed in bold?

What does the caption tell you that the diagram alone doesn't?

If you only wanted to know what soil is made of, which part would you read first?

At the front and the back of the book

Contents — at the front

Lists the chapters in the order they come. Use it when you want to know **what is in the book**.

Index — at the back

Every topic in alphabetical order with its page numbers. Use it when you want **one particular thing**, fast.

Glossary — at the back

A small dictionary of the hard words in *this* book. Those bold words usually turn up here.

Contents or index? Write which you would use:

You want to know if the book mentions worms.

You want to see how the book is organised.

Try it on a real book

Fetch any non-fiction book from a shelf.

Title of the book:

Does it have an index?

.....

Pick a topic from the index:

What page is it on?

Now time yourself. How many seconds did it take to get from the index to the right page?

Reading the whole book would have taken hours. **That is what an index is for.**

For the grown-up Text features are the difference between a child who can read a non-fiction book and one who can actually use it. The timing exercise at the end makes the point better than any explanation — and the index/contents distinction is worth checking, because most children reach for the contents page even when they want one specific fact.

C1.4 · C2.2



Is that true, or does somebody just think so?

A **fact** can be checked. An **opinion** is what somebody thinks. Both are fine — but they are different.

🗨️ think

🔍 look for clues

✍️ write

✓ How to tell them apart

Fact: *Beavers build dams out of branches and mud.* You could go and check. Somebody who disagreed would simply be wrong.

Opinion: *Beavers are the most interesting animal in Canada.* There is no way to check it. Somebody who disagreed would not be wrong — just different.

The test: could you prove it, or find it out for certain? If yes, it is a fact. If it depends on who you ask, it is an opinion.

🔍 Words that usually mean an opinion is coming

best

worst

should

beautiful

boring

amazing

I think

everyone knows

obviously

Watch out for the last two especially.

"Everyone knows"

and **"obviously"**

are used to make an opinion

sound like a fact so that you will not argue with it.

Fact or opinion?

Write **F** or **O**. Then say how you could check the facts.

Sentence	F or O	If it's a fact, how could you check?
Ottawa is the capital of Canada.		
Winter is the best season.		
A beaver is a rodent.		
Everyone should learn to skate.		
This book has 68 sheets in it.		
Homework is boring.		

Who made this, and why?

Everything you read was written by somebody, **for a reason**.
Match each one to its reason.

What it is

Why it was made

An advert, taken apart

CRUNCHO FLAKES

The **best** start to any day!
Now with **added** vitamin C.

a cereal advert	
a science textbook	
a funny comic	
a road sign	

Choose from: **to sell you something** · **to teach you** · **to make you laugh** · **to keep you safe**.

Nine out of ten kids love them.

Which words are opinions?

Which line is a fact you could check?

"Added" is doing sneaky work. Added to what? It does not say how much, or whether there was any before. A word can be true and still not tell you anything.

Write one of each

About your own street or neighbourhood:

A **fact** — something anybody could go and check

An **opinion** — something you think, that others might not

Now the hard part: write your opinion again, but **give a reason for it** using the word *because*. An opinion with a reason behind it is worth far more than one without.

For the grown-up "Obviously" and "everyone knows" are worth flagging as loudly as this page does — they're the everyday tools of persuasion, and spotting them is a skill with a very long shelf life. The advert box teaches something subtler: a claim can be literally true and still be designed to mislead. Cereal boxes at breakfast make excellent unplanned practice.

C3.1 · C3.2 · A1

Before you write a single word

Three questions come first. Answer them and the writing gets much easier.

plan

jot ideas down

Who is it for?

A note to your friend and a letter to the mayor use **completely different words**. Decide who is reading before you start.

What is it for?

To explain something? To tell a story? To persuade somebody? To give instructions? Each one is **built differently**.

What shape is it?

A poster, a letter, a story, a set of instructions, a report. **The shape follows from the first two answers.**

Match the job to the shape

What you want to do	Best shape for it
Tell people about a lost cat	
Explain how to make pancakes	
Persuade your family to get a dog	
Tell what happened on your holiday	

Choose from: **poster** · **numbered instructions** · **letter or list of reasons** · **story or recount**.

Getting the ideas out of your head

Write your topic in the middle. Then write **every** idea that comes, in the bubbles round it. Do not judge them yet — bad ideas often lead to good ones.



Now put them in order

Pick your **best three** ideas from the bubbles and number them. Which goes first? Which is the strongest, to finish on?

1

2

3

You are allowed to **throw ideas away**. A plan with three good ideas beats one with nine weak ones.

A plan is meant to be messy

Nobody else reads your plan. It can have arrows, crossings-out, bad spelling and drawings in it. It is a tool, not a piece of work.

Tick what you have decided:

- ☐ I know who will read it
- ☐ I know what it is for
- ☐ I know what shape it will be
- ☐ I have at least three ideas
- ☐ I know which one goes first

Five ticks and you are ready. **Writing gets much easier once the deciding is already done.**

For the grown-up

The commonest cause of a stuck writer is not lack of ideas but trying to decide and compose at the same time. Insisting the plan stays messy matters — children who make their plan neat have started writing without realising it, and then feel they've already failed when the real draft comes out differently.

D1.1 · D1.2 · D1.3



One paragraph, one idea

A paragraph is a group of sentences that all belong to the **same** idea.

build it

write

✓ The shape of a paragraph

Topic sentence

Says what the whole paragraph is about.
Usually first.

Detail

Something that backs it up: a fact, an example, a reason.

More detail

Two or three of these. Each one adds *new* something.

Closing sentence

Rounds it off. Do not just repeat the first line.

When do you start a new paragraph? When the idea changes. Also when the time changes, the place changes, or a new person speaks.

A paragraph taken apart

Beavers are extremely well suited to life in water. Their back feet are webbed like a duck's, which makes them powerful swimmers. A flat, leathery tail works as a rudder for steering. They can even close their nostrils and ears and hold their breath for a quarter of an hour. *On land a beaver is slow and awkward, but in water almost nothing can catch it.*

Which sentence is the topic sentence?

How many details are given?

What does the closing sentence do that the topic sentence didn't?

Spot the sentence that doesn't belong

One sentence here is about a **different idea**. Cross it out.

Soil takes a very long time to make. It can take a hundred years for nature to build a single centimetre of topsoil. Rock has to be broken down by frost, rain and roots. Plants and animals have to rot into it. My grandmother has a vegetable garden. Once topsoil is washed away, it is not coming back in your lifetime.

The sentence is not **wrong** — it might be perfectly true. It just belongs in a different paragraph. **That is the only test.**

Write one yourself

Choose a topic you know well: a pet, a place you go, something you are good at. Build the paragraph in the boxes first.

Topic sentence	
Detail 1	
Detail 2	
Detail 3	
Closing sentence	

Now write it out properly as one flowing paragraph. Try to include **one complex sentence** from sheet 5.

For the grown-up Building the paragraph in boxes before writing it out is worth doing even when it feels laborious — it separates having the ideas from making them flow, and children who skip it tend to produce a list of sentences rather than a paragraph. The odd-sentence-out exercise is the clearest way to convey what "one idea" actually means.

D2.1 · D2.2

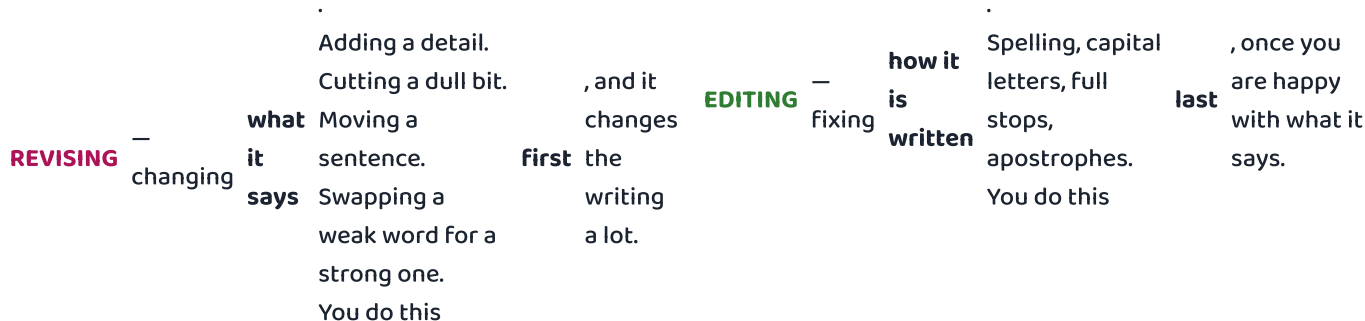
★ brand new

Revising means changing **what your writing says**. Editing comes later and is a different job.

Q decide what to change

 **rewrite**

- ✓ Two completely different jobs



Why the order matters: there is no point carefully correcting the spelling in a sentence you are about to delete. Fix what it *says* first, then tidy it up.

The same paragraph, before and after revising

First try

I like the park. It is fun. There is a slide. There is a swing. I go there a lot. It is good.

After revising

The park at the end of our street is the best place I know. The slide is so high that you can see the school roof from the top. My little brother is too scared to climb it, so I go up on my own. We stay until the streetlights come on.

Not one spelling was corrected. Every single change was to the *content*— and the second one is far better.

Four things revising can do

ADD

Put in a detail only you would know. "so high you can see the school roof"

CUT

Take out anything that says nothing. "*It is fun.*" "*It is good.*"
Both gone.

MOVE

Put things in a better order. Save the best bit for the end.

SWAP

Trade a tired word for a sharp one. *went* → *bolted*. *nice* → almost anything.

Look back at the two paragraphs above. Find one example of each: ADD CUT MOVE SWAP

Your turn to revise

Here is a weak paragraph. **Do not fix the spelling.** Add, cut, move and swap until it is worth reading.

My dog is nice. He is big. He likes food. He runs fast. He is a good dog. I like him.

If you cannot think what to add, ask yourself: **what could only I say about this?** Anybody can write "he is big". Only you know what he does when the post arrives.



Crossing things out is not failing. Every writer you have ever read threw away sentences. A page with arrows and crossings-out all over it usually means the writing is getting better, not worse.

For the grown-up

Distinguishing revision from editing is new in Grade 3 and is the single most valuable writing idea in this book. Most children, asked to "improve" a piece, will only correct spelling — because that is the kind of change they can see how to make. Naming the four moves gives them something concrete to do instead. When reading her drafts, ask "what could you add that only you know?" before mentioning a single spelling.

D3.1 · D2.4

The last job before anyone else reads it

Now, and only now, you fix the spelling and the punctuation.

 read it aloud

 check each thing

 make a neat copy

Check one thing at a time

Do not try to spot everything at once. Go through your writing **five separate times**, looking for one thing each time. It is faster and it works better.

1

Capital letters at the start of every sentence, and on every name

2

A full stop, question mark or exclamation mark at the end of every sentence

3

Spelling — circle any word that looks wrong, then check it

4

Apostrophes — are they doing a real job, or just decorating?

5

Does every sentence actually make sense on its own?

The read-aloud test

Read your writing out loud, properly, at normal speed. Do not skim it in your head — your head fixes mistakes automatically without telling you.

Where you **run out of breath**, the sentence is too long, or a full stop is missing.

Where you **stumble**, something is in the wrong order.

Where you **get bored**, so will your reader. That bit needs revising, not editing.

Reading to a listener is even better — even a patient dog will do. You hear your own writing differently when somebody else is there.

Edit this

There are **nine** mistakes. Mark them all, then write it out correctly.

last saturday we went to my cousins house. it was raining so we stayed inside and played card's. my cousin won three times but i didnt mind

Hint: **five capital letters** are missing — three sentences start without one, a day of the week needs one, and the word **i** always takes one, everywhere, always. Then **three apostrophe problems**: two words are missing one, and one word has an apostrophe it does not need. And the very last sentence has **no full stop**.

Publishing it

Once it is edited, decide how it will reach people:

- ☐ a neat handwritten copy
- ☐ typed up
- ☐ read out loud to somebody
- ☐ illustrated and put on the wall
- ☐ posted or given to the person it is for

Writing that nobody ever reads is only half finished.

Somebody has to receive it.

Looking back

Once it is done, answer these honestly.

The best bit of this piece is

The bit I would change if I did it again

Next time I want to get better at

Every writer has a "next time". That is not a sign the piece failed — it is how writing works.

For the grown-up Five separate passes really is more effective than one careful read; proofreading for a single feature at a time is what professional editors do, for the same reason. Reading aloud at normal speed is non-negotiable — silent reading of your own work is close to useless, because the brain supplies what should be there.

D3.1 · D3.2 · B3.3



Testing something properly

Anybody can guess. A **fair test** is how you find out who was right.

🔍 plan it

👁 observe

📝 record

✓ The one rule of a fair test

Change one thing. Keep everything else exactly the same.

Suppose you want to know whether plants grow better in sunlight. You put one plant on the windowsill and one in the cupboard — but you also give the windowsill one more water, and a bigger pot.

Three weeks later the windowsill plant is taller. **But you have learnt nothing**, because you cannot tell whether it was the light, the water or the pot.

Change **one** thing only, and any difference you see must have been caused by that thing.

The five steps

1 · Question

Something you actually want to know, written so it can be answered.

2 · Prediction

What you think will happen, *and why*. Being wrong is fine.

3 · Plan

What you change, what you keep the same, what you measure.

4 · Observe

Write down what happens as it happens. Not from memory.

5 · Conclude

What does it show? Was your prediction right? What now?

Design a fair test

Question: Does a paper aeroplane fly further if you make the wings wider?

What I will change	the width of the wings
What I will keep the same	
What I will measure	
How many times I will try	

Things to keep the same: the paper, the person throwing, how hard they throw, where they stand, indoors or out. **Wind alone can ruin this whole experiment** — which is why scientists repeat things.

Why do it more than once?

Turn these into testable questions

Three children threw the same plane three times each.

Throw	1	2	3
Distance (m)	6	9	7

All three throws were the **same plane**. So which number should you use?

Taking the **mean** of several tries evens out the flukes. You worked out how to do that on sheet 26 of the maths book.

Some questions can be tested and some cannot. Rewrite each one so you could actually find out.

Are dogs good?

Is ice cold?

Which paper towel is best?

Scientists work in lots of places

People use this exact way of thinking in jobs all over Ontario: a **farmer** trying two kinds of seed in the same field, a **nurse** checking whether a treatment helped, an **engineer** testing which bridge design holds more, a **chef** working out why one batch of bread rose and another did not.

Can you think of a time **you** tested something to find out?

For the grown-up The wonky-throw table is the important bit: it shows why repeats matter without needing statistics. Children naturally take the best result rather than the average, and noticing that impulse is worth more than the answer. Any real experiment you do at home will teach this faster than the page — and the messier it goes, the better the lesson.

A1.1 · A1.2 · A1.3 · A1.5 · A3.2

Instructions a machine could follow

Code is just instructions written so exactly that something with no common sense can follow them.

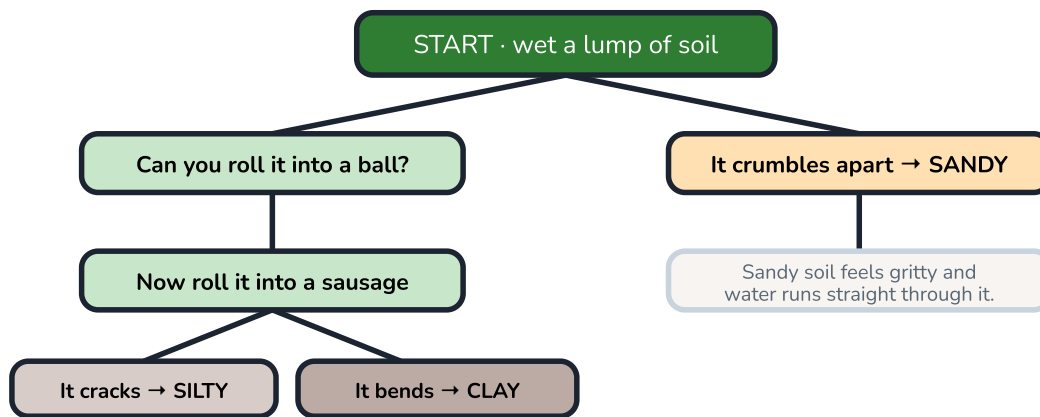
💡 think in steps

✍ write

📊 test it

A decision tree for identifying soil

Scientists use step-by-step tests like this all the time. Wet a small lump of soil and follow the arrows.



This is real code, drawn as a picture. Every box is either an **instruction** or a **question**, and every question has exactly two ways out.

Follow the tree

A soil rolls into a ball, then bends into a ring without cracking. What is it?
.....

A soil falls apart the moment you squeeze it. What is it?
.....

How many questions did you have to answer to identify the sandy one?
.....

A good decision tree asks **as few questions as possible**.
Notice sandy soil is found after just one.

Three kinds of instruction

In order — do this, then this, then this.
Fill pot. Plant seed. Add water.

All at once — two things happening together.
While the water heats, chop the vegetables.

Over and over — a loop.
Every day: water the plant and measure it.

The plant experiment on sheet 26 uses all three. Most real instructions do.

Write your own decision tree

Make one that sorts **leaves** into groups. Good questions to use: is it wider than your thumb? Does it have jagged edges? Is it still green? Each question must have a **yes** and a **no** way out.

Now hand it to somebody with a leaf and **watch them use it**. If they get stuck, your instructions were not exact enough — and finding that out is the whole point. Machines get stuck in exactly the same places people do.

For the grown-up The soil decision tree is genuinely how soil texture is assessed in the field, so it does double duty here and on sheet 34 — and it's worth actually doing with garden soil and a bit of water. Handing a hand-made tree to someone else to follow is where the learning is: ambiguity that felt obvious to the author is exposed immediately.

A2.1 · A2.2 · E1

Every part of a plant has a job

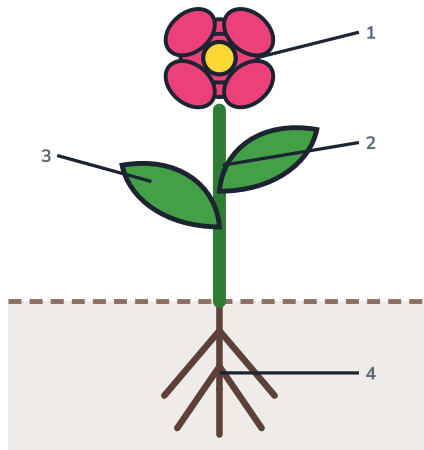
Look at a real plant while you do this if you can. Even a weed will do.

look closely

label it

go outside

Label the plant



No.	Name	What it does
1		
2		
3		
4		

roots

stem

leaf

flower

Roots

Two jobs. They **hold the plant down** so wind cannot take it, and they **drink up water** and the minerals dissolved in it.

Stem

Holds the leaves up **into the light**, and carries water up from the roots like a bundle of straws.

Leaves

The plant's **food factory**. This is where sunlight gets turned into food. Sheet 23 is all about how.

Flower

Where **seeds** are made, so there can be more plants. Sheet 22 opens one up.

Think about it

Why are most leaves **flat and wide** rather than round and thin?

A dandelion has a very long root that goes straight down. Why is that so annoying for gardeners?

Which part would you **miss most** if a plant lost it? Say why.

The parts we eat

When you eat a vegetable, you are eating **part of a plant**. Which part? Write root, stem, leaf, flower, fruit or seed.

carrot

lettuce

celery

broccoli

tomato

peas

Broccoli surprises most people. Those little green bumps are **flower buds** that never got the chance to open.

Go and find one

Pull up a weed — gently, with the roots attached — or look at a houseplant. Draw it and label all the parts you can see.



Not every plant has every part on show. Which part could you **not** find? Why might that be?

For the grown-up

A real weed with the root system intact teaches more than the diagram, and pulling one up is free. The vegetables box is the one children remember — celery being a stem and broccoli being unopened flowers reframes the whole supermarket. Note that "fruit" in botany means the seed container, which is why a tomato qualifies.

B2.2 · B2.3

Inside a flower

★ proper names this year

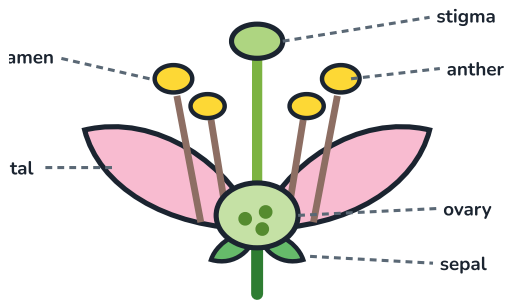
A flower is not decoration. It is the part of the plant that makes **seeds**.

look inside a real one

label

work out why

A flower, cut in half



Part	Its job
petals	bright, to attract insects and birds
stamen	
anther	
stigma	
ovary	
sepal	

makes the pollen

where seeds form

sticky top that catches pollen

the whole pollen-making stalk

protected the bud before it opened

The two important words

Stamen

The part that **makes pollen**. It is a thin stalk with a little pouch on top called the **anther**. Most flowers have several stamens standing in a ring.

Pistil

The part that **receives pollen** and makes seeds. Its sticky top is the **stigma**, and at the bottom sits the **ovary**, where seeds grow. Usually there is just one, in the middle.

Pollen has to travel from a **stamen** to a **stigma**. That journey is called **pollination**, and it is the whole reason flowers look and smell the way they do.

How does the pollen get there?

A flower cannot move. So it has to get something else to carry the pollen for it.

Insects — bees, butterflies and beetles come for the sweet nectar and get dusted with pollen on the way.

Wind — grasses and many trees just release clouds of it and hope.

Open a real one

A lily, a tulip or a big daisy works best. Pull the petals off one at a time and look in the middle.

How many stamens did you count?

How many pistils?

Birds and bats — in some parts of the world, though less so here.

Wind-pollinated flowers are usually small, green and dull.

Why don't they bother being colourful?

.....

Did any pollen come off on your finger?

What colour was it?

Nearly every flower has **many** stamens and only **one** pistil.

Now you know why: it takes a lot of pollen to be sure some of it arrives.

What happens next

Once pollen lands on the stigma, a seed begins to form down in the **ovary**. The petals have done their job, so they wither and drop off. The ovary then swells up around the seeds to protect them — and that swollen ovary is what we call a **fruit**.

Every apple you have ever eaten was once the middle of a flower. So was every tomato, every pea pod, and every pumpkin.

For the grown-up

Stamen and pistil are named explicitly in the Grade 3 expectations, and a supermarket lily dissected on a plate makes them unforgettable — the anthers are large enough to leave orange pollen on everything, which children find delightful. The closing point, that a fruit is a swollen ovary, is the connection that makes the whole unit click.

B2.4 · B2.5

Plants make their own food ★ the big idea

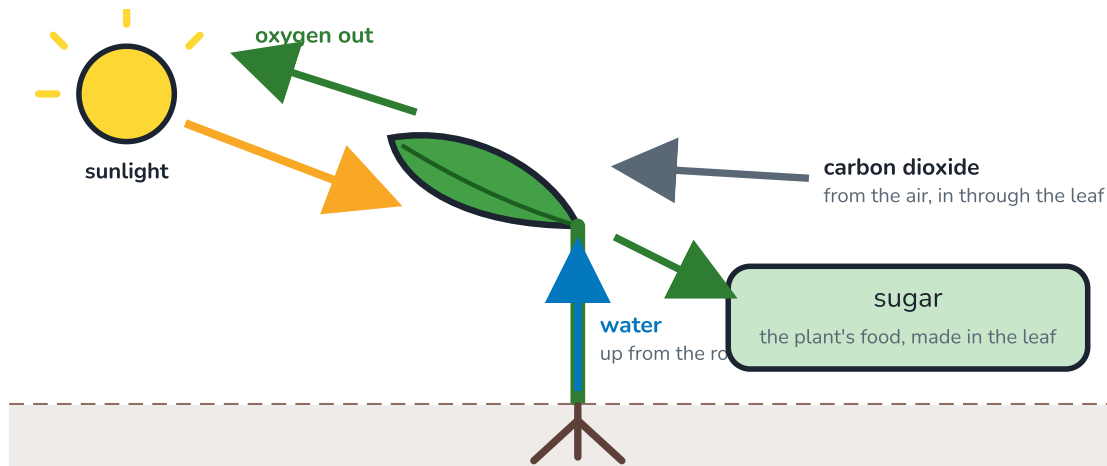
You have to find food. A plant **builds** its own, out of light, water and air.

study the diagram

label

work it out

What goes in, what comes out



This is called **photosynthesis**. Split it up: **photo** means light, and **synthesis** means putting things together. Putting things together using light. The name says exactly what happens.

Three things go in

Sunlight — the energy that drives the whole thing.

Water — pulled up from the soil by the roots.

Carbon dioxide — a gas in the air, taken in through tiny holes in the leaf too small to see.

Two things come out

Sugar — the plant's food. It uses some straight away and stores the rest in roots, fruit and seeds.

Oxygen — which the plant does not need, so it lets it go into the air. **That is the oxygen you are breathing right now.**

Why leaves are green

Leaves are full of a green substance called **chlorophyll**. It is the bit that actually catches the sunlight. No chlorophyll, no food.

In autumn some trees stop making chlorophyll, the green fades away, and the yellows and oranges that were hiding underneath all along finally show.

Why would a plant kept in a dark cupboard slowly go pale and die?

.....
A plant in a sealed glass jar with light can survive for months. Why?

Why this matters more than almost anything

You cannot make your own food. Neither can a dog, a fish or a bee. Every animal on Earth has to eat something that was **once a plant**, or eat something that ate a plant.

And the oxygen in every breath you take was let go by a plant that did not want it.

Plants are not just scenery. Everything alive is running on the food and the air that plants make.

Draw or write what you had for breakfast. Trace it back — how many steps until you reach a plant?

.....

.....

For the grown-up

Splitting the word — photo, light; synthesis, putting together — makes the term stick and reinforces the chunking work from sheet 1. The sealed-jar question is a genuinely good one: the plant recycles its own air, which is why terrariums work. Tracing breakfast back to a plant is the exercise most likely to be repeated unprompted at the table.

B2.3 • B3.2

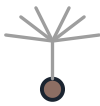
How a seed gets away from home

A plant cannot walk. But its seeds have to travel — and they have some clever ways.

- collect some
- look closely
- write

✓ Why bother travelling at all?

Imagine every seed from an oak tree just dropped straight down. Hundreds of tiny oaks would sprout in the same patch of shade, all fighting each other and their own parent for light, water and space. Almost none would survive. A seed that lands somewhere **new** has room, light and its own water. That is why plants spend so much effort on getting their seeds to leave.



Wind

Dandelions grow a parachute. Maple seeds spin like helicopters. Both can travel a long way on a breeze.



Eaten

A bird eats the berry, flies off, and the seeds come out the other end somewhere else — with a bit of fertiliser.



Hitching a lift

Burdock and burrs have tiny hooks that catch on fur, socks and dog tails. You have carried seeds without knowing.



Firing them off

Pea and bean pods dry out, twist, and split open with enough force to fling the seeds several metres.

There is a fifth way too: **water**. A coconut can float across an ocean and still grow when it washes up.

Match the seed to the method

Seed	Travels by
dandelion — a fluffy parachute	
blackberry — sweet and juicy	
burdock — covered in hooks	
maple — a papery wing	

Test a maple key

Find a winged maple seed, or make one from paper. Drop it from as high as you can safely reach.

What does it do on the way down?

How long does it take to land? seconds

Now drop a small stone from the same height. Which lands first?

Falling slowly is the whole trick. The longer a seed stays in the air, the further the wind can carry it.

coconut — light and
waterproof

You can usually tell how a seed travels just by **looking at its shape**. The shape *is* the method.

Sock walk

Pull an old pair of woolly socks on **over** your shoes and walk through some long grass or a weedy patch. Then look at what you have collected.

How many seeds did you pick up?

How many different kinds?

Plant the whole sock in a tray of soil, water it, and leave it on a windowsill. In a few weeks you will find out exactly what you were carrying.

For the grown-up

The sock walk is the best activity in this unit and costs nothing but a ruined pair of socks. Planting the sock and waiting is the part children remember for years. If the season is wrong for seeds outside, a handful of soil from the garden on a windowsill will still sprout a surprising number of things.

B2.5 · B2.6 · A1.3



What we get from plants

Look around the room. Try to find something that **did not** come from a plant.

👁 look around

✍ write

💬 ask somebody

Food

Every fruit, vegetable, grain, nut and bean. Bread, rice, pasta, chocolate, tea. And the grass that fed the cow.

Materials

Wood for houses and furniture. Paper and cardboard. Cotton and linen for clothes. Rubber. Cork.

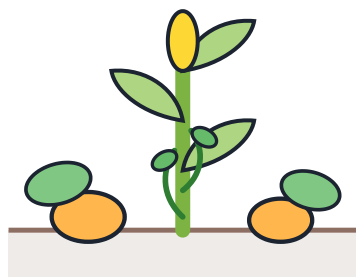
Medicine

A great many medicines were first found in plants. The painkiller in aspirin came originally from **willow bark**.

Air, shade and shelter

Oxygen to breathe. Shade in summer. Roots holding soil in place. Homes for birds and insects.

The Three Sisters



For thousands of years, many First Nations across this land have grown **corn, beans and squash together in the same mound**. They are called the Three Sisters because each one helps the others.

Corn	grows tall and straight, giving the beans a pole to climb
Beans	climb the corn, and put goodness back into the soil that the corn uses up
Squash	spreads big leaves across the ground, keeping the soil damp and shading out weeds

Grown separately, all three do worse. Grown together, all three do better — and the soil is not worn out at the end of the season.

This is careful science, worked out by watching closely over a very long time and passed down through generations. First Nations, Métis and Inuit peoples hold deep knowledge of the plants where they live — which ones are food, which are medicine, which are used for building or for ceremony. That knowledge is **different for different nations and different places**, and some of it is sacred and not for everyone to use.

Maple syrup

In late winter, sap rises in the maple trees. Indigenous peoples in this part of the world were collecting and boiling that sap **long before Europeans arrived**, and taught the newcomers how it was done.

It takes roughly **40 litres of sap** to make **1 litre of syrup**. Nearly all of it is water that gets boiled away.

Hunt around the room

Find **five** things that came from a plant. Say which part of the plant.

Thing	Which part

If a farmer wants 5 litres of syrup, roughly how much sap do they need? litres

We are not always good for plants

People clear forests for farms and buildings. We pave over soil so nothing can grow. We move plants from one country to another and sometimes they take over and crowd out the ones that were already there.

Name one thing people do that **harms** plants:

.....

Name one thing people do that **helps** plants:

.....

One thing **you** could do this month:

.....

For the grown-up

The Three Sisters is a genuine piece of agricultural science — the beans really do fix nitrogen that the corn depletes — and it's worth presenting as knowledge rather than as folklore. Note the caution in the text: practices differ between nations, and some plant knowledge is sacred. If your local area has a First Nation, Métis or Inuit education resource, that's a far better source than any worksheet.

B1.1 · B1.2 · B2.6



Grow something and watch it properly

This one takes three weeks. Start it today and come back to it.



set it up



measure



record every day

What you need

Four bean seeds, four small pots or yoghurt tubs with a hole poked in the bottom, and some soil. Dried beans from the cupboard usually work.

Pot A

light · water
the normal one

Pot B

no light · water
in a dark cupboard

Pot C

light · no water
next to pot A

Pot D

light · too much water
standing in a full saucer

Everything else must be identical: same beans, same soil, same size pot, planted the same depth on the same day. Pot A is your **control** — the one you compare all the others against.

Predict first

Write what you think will happen to each pot, **before** anything grows. Say *why*.

A

B

C

D

Do not rub these out later. **A prediction that turned out wrong is the most interesting thing on this page.**

Measuring rules

Same time every day. Measure from the soil to the very top of the plant, in centimetres.

- ☐ Same time each day
- ☐ Same amount of water each time
- ☐ Ruler standing on the soil, not in the air
- ☐ Write it down straight away
- ☐ Note the colour too, not just the height

If you forget a day, **leave the box empty**. Do not guess and fill it in — a gap is honest, a guess is not.

Three weeks of results

Day	3	5	7	9	11	13	15	17	19	21
A										

B										
C										
D										

Heights in centimetres. Write **0** if nothing has come up yet — that is a real measurement, not a blank.

At the end

Which pot did best?

Pot B often grows **tall, pale and floppy** before it gives up.

Which prediction were you most wrong about?

Why do you think it grows *taller* than pot A at first, even in the dark?

What surprised you?

A seed carries a small packet of food inside it, so it can start growing before it has any leaves. In the dark it spends all of that stretching upwards, desperately looking for light — then runs out. **Growing tall is not the same as growing well.**

For the grown-up Four pots is the right number: one variable changed per pot, with a control to compare against. The pale, leggy dark-cupboard plant is the most instructive outcome and reliably surprises children, because it grows fastest at first. Keeping wrong predictions visible matters more than any of the measurements.

A1.1–A1.5 · B2.1



Every force is a push or a pull

Nothing starts moving, stops moving or changes shape on its own. Something has to act on it.

[→ try it](#)[👁 observe](#)[✎ write](#)

✓ Five things a force can do

Start it moving kicking a still ball

Stop it catching that ball

Speed it up or slow it down pedalling, or braking

Change its direction heading a ball sideways

Change its shape squashing a can

A force also has a **size** and a **direction**. A gentle push and a hard shove are different forces, and pushing something left is different from pushing it right.

Push or pull?

Write **push**, **pull**, or **both**. Then say which of the five jobs above the force is doing.

What is happening	Push or pull	What the force does
opening a drawer		
squeezing modelling clay		
a goalkeeper catching a shot		
pedalling a bike faster		
steering a bike round a corner		

Opening a drawer and then shutting it uses **both**. Lots of everyday actions do.

Forces that have to touch

Most of the forces you meet are **contact forces** — the thing doing the pushing has to be touching the thing being pushed.

Your hand on a door.

A bat hitting a ball.

Wind pushing a sail.

Bigger force, bigger effect

Put a small ball on a smooth floor. Push it three ways and measure how far it travels.

Size of push	Distance
a gentle tap	
a normal push	

Water pushing a boat along.

A rope pulling a sledge.

Wind and water might feel like they do not count, but air and water are made of stuff, and that stuff is **touching** what it moves.

as hard as you can

Now do the same push on **carpet**. What changes?

.....
Sheet 29 explains why.

Forces in nature

Some of the strongest forces are not made by people at all. Wind, moving water, ice and shifting ground all push and pull with enormous power.

Wind

A storm can bend a tree double, or take a roof off. In Ontario the strongest winds usually come with summer thunderstorms.

Moving water

A spring flood can push boulders down a river and carve away a whole bank. You will meet this again on sheet 35.

Ice

Water expands when it freezes. Ice in a crack pushes so hard it splits solid rock — and cracks open roads every winter.

Which of these have you seen with your own eyes?
What did it do?

For the grown-up The five effects list is worth learning because it stops children equating "force" with "movement" — squashing and stopping are forces too. The ball-on-carpet comparison sets up friction on sheet 29 and works better if you actually do it, ideally with something that rolls badly.

C2.1 · C2.3 · C1.1

Forces that work without touching ★ brand new

A few forces can push and pull across a gap. Nothing has to be touching at all.

 test with a magnet

 observe

 record

Gravity

The Earth pulls **everything** towards its centre, and it does it without touching anything. That is why things fall down instead of sideways, and why you come back down when you jump.

Gravity is why rivers run downhill, why rain lands on you, and why the Moon goes round the Earth instead of flying off.

Heavier things are pulled harder — but, surprisingly, they do not fall faster. Drop a small stone and a large stone together and watch.

Magnetism

A magnet pulls certain metals towards it across a gap. Hold one near a paper clip and the clip jumps to it — nothing pushed it.

Every magnet has two ends, called **poles**: a north and a south.

Opposite poles pull together. North and south snap shut.

Same poles push apart. Two norths refuse to meet, and you can feel the push even with a gap between them.

The thing nearly everybody gets wrong

Most people assume **all metals are magnetic**. They are not. Only a few are: **iron**, **steel** (which is mostly iron), **nickel** and **cobalt**.

A magnet pulls these

paper clips · nails · a tin can lid · scissor blades · the fridge door

A magnet ignores these, even though they are metal

aluminium foil · a drinks can · copper wire · gold · silver

Test a fizzy drink can against a soup tin. One will stick and one will not, and they look almost identical. **Which is which, and were you right?**

Test things properly

Predict **before** you test each one. Then check.

Object	My prediction	What happened	Was I right?
a paper clip			
a coin			
aluminium foil			
a spoon			
a pencil			
your own choice:			

The **coin** catches people out. Try several different Canadian coins — and try old ones and new ones if you can find both.

How far does it reach?

Put a paper clip on the table. Slide a magnet slowly towards it and mark the spot where the clip first jumps.

Distance for a fridge magnet: cm

Distance for a stronger magnet: cm

Now try it **through** a sheet of paper, then through a book.

How many pages before it stops working?

Magnetism goes straight through things that are not magnetic.

Contact or non-contact?

A book falling off a table

Kicking a football

A fridge magnet holding a note

Wind blowing leaves along

A compass needle swinging north

The compass one is remarkable: **the whole Earth is a giant magnet**, and the needle is being pulled by it from thousands of kilometres away.

For the grown-up Contact versus non-contact is the new distinction in Grade 3, and the all-metals-are-magnetic misconception is nearly universal — a fizzy drink can beside a soup tin settles it in seconds. One thing worth knowing before the coin test: modern Canadian circulation coins have a steel core, so they generally *are* magnetic, which surprises most adults too.

C2.2 · C2.4 · C3.1

The force that slows things down

Rub your hands together hard and fast. That warmth is **friction** at work.

→ test it

measure

record

✓ What friction is

Whenever two surfaces slide against each other, they grip a little. That grip is a force pushing **against** the movement, and it is called **friction**.

Rougher surfaces make more friction. Carpet grips more than polished wood, which grips more than ice. Friction also makes **heat**. That is why your hands warm up, why a bicycle brake gets hot, and how people have started fires with two sticks for thousands of years.

When friction helps

Without it you could not walk, hold a pencil, or stop a bicycle.

The tread on your boots grips the pavement.

Brake pads squeeze a wheel and slow it.

A rubber grip stops a jar lid slipping.

Winter tyres bite into snow.

Try walking across a smooth floor in socks. **That is what a world with less friction feels like**, and it is not convenient.

When friction is a nuisance

It wears things out, wastes energy and makes unwanted heat.

Shoes wear thin at the heel.

A squeaky hinge needs oil.

A skater wants as little as possible.

A sticking drawer is friction winning.

Three ways to reduce it: make the surfaces **smoother**, add **oil or grease**, or put **wheels** on it so things roll instead of sliding.

The ramp test

Prop a book or a tray up at one end to make a ramp. Send the **same** object down it, and change only what the ramp is covered with.



Ramp covered with	Prediction	How far it slid
nothing — bare ramp		
a towel		
a plastic bag, pulled smooth		
sandpaper or a doormat		

Keep the ramp at exactly the same height every time and start the object from the same spot. Otherwise you are testing two things at once and the whole experiment tells you nothing — the rule from sheet 19.

Friction in air and water

Air and water push back against things moving through them. It is the same idea — surfaces rubbing.

A parachute is designed to catch **as much air as possible** so it falls slowly.

A racing cyclist crouches down to catch **as little as possible**.

A fish is smooth and pointed so water slides past it.

Drop a flat sheet of paper and a screwed-up ball of the same paper at the same time. Same paper, same weight. Why does one land first?

Design a problem away

Pick one and say what you would change, and why.

A heavy box is hard to drag across a floor.

.....

A path gets dangerously slippery when it freezes.

.....

A drawer sticks every time you open it.

.....

Notice that one of these needs **less** friction and one needs **more**. Working out which you want is the real skill.

For the grown-up The paper sheet versus paper ball is the single best demonstration here — identical mass, wildly different fall, and it isolates air resistance from weight entirely. The ramp test is a good chance to catch her changing two variables at once, which almost everyone does the first time.

C2.3 · C3.2 · A1.4



Things designed to keep you safe ★ brand new

Nearly every safety device works in one of two ways. Once you know them, you can spot them anywhere.

🔍 work out how

👁 spot them

✍ write

✓ The two tricks

- | | | | | |
|--------------------------------------|---|---------------------------------|---------------------------------|--|
| 1. Make the stop take longer. | Stopping suddenly hurts. Stopping slowly does not. Jump onto concrete and then onto a mattress from the same height — you land with the same speed both times, but the mattress | takes longer to stop you | 2. Spread the force out. | The same push hurts far more on a small patch of you than spread across a big one. A wide strap across your chest is much kinder than a thin cord in the same crash. |
|--------------------------------------|---|---------------------------------|---------------------------------|--|

Some devices do **both at once**. A bike helmet spreads the blow across your whole skull *and* squashes slowly to stretch the stop out.

How does each one work?

Write **slows the stop**, **spreads the force**, **both**, or **adds grip**.

Safety device	How it works	What would happen without it
bike helmet		
seat belt		
air bag		
winter tyres		
crash mat in a gym		
a handrail on stairs		

Cars are built to break

This sounds wrong, but it is deliberate. The front of a modern car has a **crumple zone** — a section designed to fold up in a crash.

A car that crumpled would look ruined. A car that did **not** crumple would stop instantly, and everything inside it — including the people — would stop instantly too.

The car is wrecked on purpose so that the stop takes

The egg test

Build a container that lets a raw egg survive a drop from as high as you can safely reach. Outside, over grass.

What did you use?

Which trick were you using — slowing the stop, spreading the force, or both?

longer. Engineers make part of it weak so the people inside stay safe.

Why is a very strong, rigid car actually **more** dangerous in a crash?

.....

Did it survive? From how high?

If it broke, **change one thing** and try again. That is exactly what engineers do, and they break a great many eggs.

Safety hunt

Find **four** safety devices around your home, street or school. Some are so ordinary you have stopped noticing them.

What I found	Where	What it protects you from

Ideas if you get stuck: the non-slip mat in the bath, the rounded corners on a table, a stair gate, the grit truck in winter, the padding under playground equipment, oven gloves.

For the grown-up

The crumple zone is the idea worth landing, because it is genuinely counter-intuitive and it explains the whole principle: a longer stop means a gentler force. The egg drop is the classic activity for good reason — do it outdoors, expect several failures, and treat each one as data rather than a wasted egg.

C1.2 · C2.3 · A1.1



Struts and ties

★ brand new

Two words that explain why bridges stand up. One **pushes**. One **pulls**.

build it

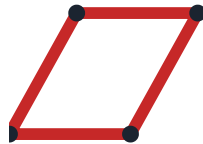
look for them

write

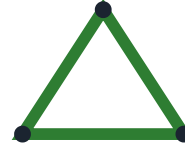
Why triangles and not squares



a square frame



push it — it folds over



a triangle — it will not budge

Make both shapes out of strips of card joined with split pins, or plastic straws threaded on string. Push the top corner sideways on each one. **The square collapses into a leaning shape. The triangle does nothing at all.**

That is why you see triangles in cranes, roof frames, bridges, pylons and bicycle frames. A triangle cannot change shape without one of its sides getting longer or shorter — and sides do not do that.

A strut pushes

A strut is a part that is being **squashed**. It holds two things **apart** and stops them being pushed together.



A table leg is a strut. So is a tent pole, a bridge pier, and the crossbar wedged in a doorway.

A tie pulls

A tie is a part that is being **stretched**. It holds two things **together** and stops them pulling apart.



A rope guying a tent is a tie. So are the cables on a suspension bridge, a dog lead, and the string on a kite.

The quick test

Could you replace it with a piece of string? If yes, it is a **tie** — string is fine at pulling. If the whole thing would collapse, it is a **strut** — because string is useless at pushing.

Part of a structure	Strut or tie?	How do you know?
a tent pole		
a guy rope on that tent		
a chair leg		
the cables of a suspension bridge		
a shelf bracket's diagonal bar		

Go and find some

Look at a bridge, a pylon, a crane, a climbing frame, a bike, or the roof space if you can see into one. Draw what you see and mark the struts **S** and the ties **T**.



Most structures need **both**. A bicycle frame is nearly all struts and triangles — which is exactly why it is so light and so strong at the same time.

For the grown-up The string test is the most useful thing on this page and gives a reliable answer every time. Making a square and a triangle from card strips and split pins takes five minutes and demonstrates rigidity better than any picture — let her push both and feel the difference. Struts and ties are named explicitly in the Grade 3 expectations.

D2.4 · D2.3 · D2.2



Why some things topple and some don't

Strong means it won't break. **Stable** means it won't fall over. They are different.

build and tip

test

write

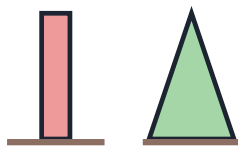
✓ Two different things

A tall thin vase is **strong** — you could stand on it and it would not snap. But it is not **stable**: the smallest nudge sends it over.

A cushion is very **stable** — you cannot knock it over however hard you try. But it is not **strong**: it squashes flat under anything heavy.

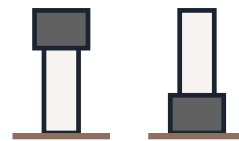
A good structure needs **both**, and they are solved in different ways.

Rule 1 — a wide base



The wider the bottom, the further you have to lean it before it goes over. That is why a pyramid has lasted four thousand years and a tower of blocks lasts four seconds.

Rule 2 — heavy at the bottom



Same two pieces, swapped over. The one with the weight **low down** is far harder to tip. This is why a racing car sits so close to the ground, and why a double-decker bus has heavy parts underneath.

The tilt test

Stand each object on a tray or a book. Slowly lift one edge until it topples. The further you can lift before it goes, the more **stable** it is.

Object	Prediction: most or least stable?	How high before it fell
an empty bottle, standing up		
the same bottle, half full of water		
a mug		
a book lying flat		
a book standing on its end		

The bottle is the interesting one. **Adding water makes it heavier and yet harder to knock over** — because all that weight sits in the bottom.

Explain these

Why does a lamp have a heavy base?

Why do you spread your feet apart when a bus brakes suddenly?

Why are road signs on a single thin post, but big billboards on wide frames?

Build the tallest tower you can

Use anything: blocks, books, boxes, tins. It has to stand on its own for ten seconds.

How tall? cm

What did you put at the bottom?

What made it fall the first time?

Now try again using what you learnt. Did it get taller?

For the grown-up

Strong and stable are treated as separate ideas in the curriculum, and the vase-versus-cushion contrast is the quickest way to separate them. The half-full bottle is the surprise on this page: heavier but harder to tip. The tilt test works with anything on a chopping board and gives a real number to compare.

D2.2 · D3.1 · A1.4



Build a bridge and break it

You need paper, tape and something to load it with. Breaking it is part of the job.



design



build



test to destruction

The challenge

Span a gap of **20 cm** between two books or two tins. Your bridge must hold as many coins as possible in a cup in the middle.

You may use

2 sheets of paper
30 cm of tape

You may not

rest anything in the middle of the gap

The gap

exactly 20 cm, every single time

Load

coins added **one at a time** until it fails

Paper is stronger than you think

A flat sheet of paper across a gap sags immediately. But **change its shape** and it becomes remarkably strong. Try these three first.



Folded into a zigzag

corrugated, like cardboard



Rolled into a tube

surprisingly hard to squash



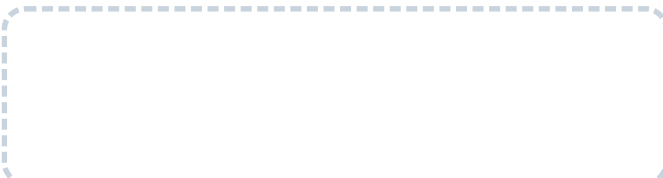
Triangles underneath

a truss, like a real bridge

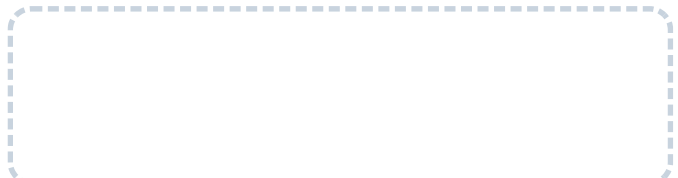
All three work because they stop the paper **bending**. A flat sheet folds instantly; a folded, rolled or triangulated one cannot.

Design, test, improve

Attempt 1 — draw your design



Attempt 2 — change **one** thing



Coins held:
Where did it fail?
.....

What I changed:

.....
Coins held:

Change **one thing at a time** between attempts. Change three and you will never know which one helped — the same rule as sheet 19.

Thinking about it afterwards

Which part was being **squashed** (a strut)?

.....
Which part was being **stretched** (a tie)?
.....

Did it fail by **breaking** or by **bending**?

.....
If you had one more sheet of paper, where exactly would
you put it?
.....

Real engineers test bridges to destruction on purpose, because **the way something fails tells you where it was weakest**. A bridge that never broke would teach you nothing.

For the grown-up

Give the materials limit properly — unlimited tape turns this into a sculpture rather than a design problem. The most valuable moment is between attempt 1 and attempt 2: insist on one change and a stated reason. Loading with coins one at a time gives a real number, which makes the comparison honest.

D3.1 · D2.2 · D2.4 · A1.1–A1.5

Soil is not just dirt ★ brand new topic

Go and get a handful from outside. Look at it properly before you read on.

☼ fetch some soil

👁 look closely

✍ write

Five things in every handful

Broken rock — ground down over thousands of years by frost, rain and roots.

Humus — rotted plants and animals. This is the dark part, and the rich part.

Water — clinging in a thin film around every particle.

Air — in the gaps. Roots need it as much as leaves do.

Living things — worms, insects, fungi and bacteria, in enormous numbers.

A single handful of healthy soil holds more living things than there are people on Earth. Almost all of them are far too small to see.

The layers



Almost everything grows in that top dark band, which is often only **20 centimetres** deep — about the length of this page. It can take **a hundred years** for nature to build a single centimetre of it.

Three kinds of soil

Type	How it feels	Water	Good for
Sandy	gritty, falls apart	drains away fast, dries out	carrots, potatoes
Clay	smooth, sticky, rolls into a ring	holds water, can waterlog	
Silty	soft like flour, cracks when rolled		

The best garden soil, called **loam**, is a mixture of all three. It holds enough water without turning into a puddle.

Use the **decision tree from sheet 20** to work out which kind you fetched: mine is

Ontario grows a great deal of food

Southern Ontario has some of the best farmland in Canada. Different places grow different things, because they have different **soil** and different **weather**.

Corn and soybeans

Ontario's two biggest field crops by far. Look for them in flat fields across the southwest.

Niagara — grapes and tender fruit

Peaches, cherries and grapes. Lake Ontario keeps the winters milder there than almost anywhere else in the province.

The Holland Marsh

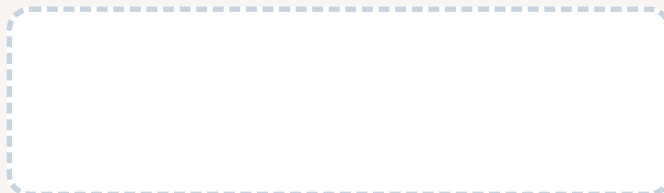
Drained marshland north of Toronto with deep black soil. Carrots, onions and celery, grown in ground that was once a swamp.

Why can't every crop be grown everywhere in Ontario?

The settling jar

Half fill a clear jar with soil, top it up with water, screw the lid on tight and shake hard. Then leave it completely alone overnight.

By morning it will have settled into **layers**, heaviest at the bottom. Sand sinks first, then silt, then clay. Bits of leaf and twig float on top.



Draw what yours looks like and label the bands.

Which layer was thickest?

Does that match what the decision tree told you?

For the grown-up

The settling jar is the best five minutes in this unit and needs nothing but a jam jar — leave it overnight and the bands are unmistakable. The hundred-years-per-centimetre figure is the one that gives the erosion sheet its weight, so it is worth pausing on. Soil texture varies enormously across Ontario, so whatever she digs up is the right answer.

E2.1 · E2.2 · E2.4 · E1.1

When soil gets carried away ★ brand new

Soil takes a hundred years to build one centimetre. A single storm can take it in an afternoon.

look outside

test it

write

✓ What erosion is

Erosion is soil being picked up and carried somewhere else. The three things that do it are the same three natural forces from sheet 27:

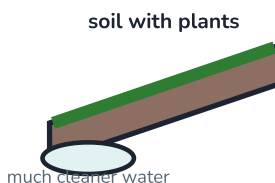
Water — rain splashes soil into the air, and running water carries it downhill. This is by far the biggest cause.

Wind — dry, bare soil blows away as dust. A strong wind over a bare field can lift tonnes of it.

Ice — freezing water prises soil and rock apart, loosening everything ready to be washed off.

Test it yourself

Fill two trays or baking dishes with soil. Leave one **bare**. Press a piece of turf, or some moss, or a handful of grass seedlings into the other. Prop both at the same angle over a bowl and pour the same amount of water down each.



Which bowl's water was muddier?

Which tray

Why do you think the plants made such a difference?

lost more soil?

Roots hold soil together like thousands of tiny ropes, and leaves take the force out of the falling rain before it hits the ground. Bare soil has neither.

Why it matters so much

Topsoil is the only layer most crops can grow in, and there is not much of it.

It takes about **100 years** for nature to make **1 cm** of topsoil.

A bad storm on a bare field can strip that away in a **single afternoon**.

The soil does not disappear — it ends up in rivers and lakes, where it clouds the water and smothers fish eggs.

Roughly how long would it take to replace **5 cm** of lost topsoil? years

How farmers fight back

Windbreaks — rows of trees along field edges to slow the wind.

Cover crops — planting something over winter so the ground is never left bare.

Ploughing across a slope instead of up and down, so water cannot run straight downhill.

Leaving the stubble after harvest instead of clearing it away.

Every one of these does the same job: **keep something covering the soil, and slow the water down**.

Spot it near you

Erosion is happening everywhere once you know what to look for. Go out and find at least one.

- | | |
|---|--|
| ☐ a bare muddy patch where grass has worn away | ☐ a little channel cut by rainwater |
| ☐ soil washed across a path after rain | ☐ tree roots exposed above the ground |
| ☐ a river or ditch running brown after a storm | ☐ soil piled up against a fence or kerb |

Where did you find one?

What do you think caused it?

.....
What would you do to stop it getting worse?

For the grown-up

The two-tray demonstration is dramatic and worth doing outside — the difference in water colour is obvious even to a sceptic. The hundred-years-per-centimetre figure gives the topic its urgency; without it, erosion sounds like tidiness rather than a genuine problem. Worn patches on any playing field make the point on the walk home.

E1.1 · E1.2 · E2.3



The things that live in soil ★ brand new

Soil is not a dead thing. It is crowded with living creatures doing a job.

🔦 go and dig

👁 look closely

📝 record

Decomposers — nature's clean-up crew

Every autumn, tonnes of leaves fall. Every year, plants and animals die. **So why is the world not knee-deep in dead leaves?** Because an army of small creatures eats them, breaks them down, and turns them back into soil. They are called **decomposers**.

Earthworms

Eat dead leaves and pull them underground. Their tunnels let air and water in. The soil that comes out the other end is richer than what went in.

Woodlice and millipedes

Chew rotting wood and leaves into small pieces so smaller things can get at them.

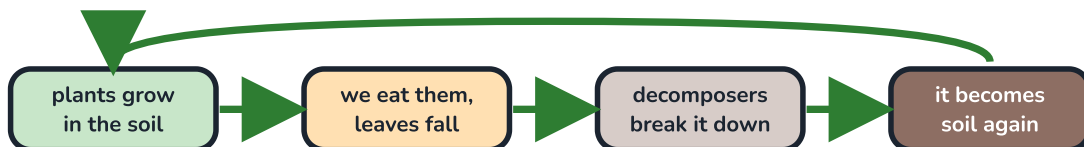
Fungi

Spread invisible threads through the soil and dissolve dead material. Mushrooms are just the bit that pops up.

Bacteria

Far too small to see, and there are billions in a spoonful. They finish the job the others started.

The circle it all goes round



Nothing is wasted and nothing is thrown away, because in nature **there is no away**. Everything gets used again.

Composting at home

A compost heap is just decomposers, given a good place to work.

Goes in

fruit and vegetable peel ·
tea leaves · eggshells ·
grass cuttings · dead
leaves · cardboard

Stays out

meat · fish · dairy · cooked
food with oil · anything
plastic

Meat and dairy are kept out because they smell terrible as they rot and attract rats. Plastic simply never breaks down at all — the decomposers cannot eat it.

Sort these

Write **IN** or **OUT**.

banana skin

chicken bone

apple core

crisp packet

coffee grounds

cheese rind

fallen leaves

eggshell

Does your household compost or use a green bin?
Find out what your town does and does not accept — the rules differ from place to place.

Go and count what's down there

Dig up a spadeful of soil onto a light-coloured tray or an old sheet. Spread it out and watch for a minute before you decide it is empty — most things freeze when disturbed and only move once you are still.

What I found	How many	What it was doing

Put everything back where you found it, gently, and water the patch afterwards. They live there. You were only visiting.

For the grown-up "Why isn't the world knee-deep in dead leaves?" is the question that makes decomposers feel necessary rather than merely present. A spadeful of soil on a white tray reliably produces more life than expected if you wait a full minute before looking — the waiting is the hard part. Composting rules genuinely vary between Ontario municipalities, so checking your own is worth doing together.

E2.5 · E1.2 · E2.6



Seventy years that made Ontario

★ brand new topic

This is the first year you study real history: real people, real dates, real places near you.

📖 read the timeline

📏 work out the gaps

✍ write

What happened when

- 1783** ○ **The American Revolution ends.** Thirteen colonies to the south become the United States. People who had stayed loyal to Britain are no longer welcome there.
- 1784** ○ **The Haldimand Proclamation.** Britain grants land along the Grand River to the Six Nations, led by Joseph Brant, for their alliance during the war. Many Haudenosaunee people move there from what is now New York State.
- 1791** ○ **Upper Canada is created.** The colony is split in two. Upper Canada is roughly today's southern Ontario; Lower Canada is roughly today's Quebec.
- 1793** ○ **The Act to Limit Slavery.** Upper Canada becomes one of the first places in the British Empire to begin ending slavery. It did not free anybody already enslaved — but no new enslaved people could be brought in.
- 1812** ○ **The War of 1812 begins.** The United States and Britain go to war, and much of the fighting happens right here. First Nations allies, settlers and British soldiers all take part.
- 1834** ○ **Slavery is abolished across the British Empire.** From this year, slavery is illegal in Canada — while it continues in much of the United States for another thirty years.
- 1837** ○ **Rebellion in Upper Canada.** Ordinary people, angry that a small group of wealthy families ran everything, take up arms. The rebellion fails, but it leads to big changes in how the colony is governed.
- 1850s** ○ **The Underground Railroad at its height.** Thousands of people escaping slavery in the United States travel north to freedom in Canada.

Working with dates

How many years between 1783 and 1850?

.....

How long after Upper Canada was created did the War of 1812 begin?

.....

How many years passed between the Act to Limit Slavery and slavery being abolished altogether?

.....

How long ago was 1834?

.....

That last one changes every year. **Take 1834 away from the year it is now.**

Before all of this

This timeline starts in 1780. But that is **not** where the story starts.

First Nations peoples had been living here, with their own governments, languages, trade routes and treaties, for **thousands of years** before 1780. If this timeline showed all of that, the seventy years on this page would be a fingernail's width at the very end of a line stretching right across the room.

1780 is where this particular story starts. It is not the beginning.

Who was here, and why they came

Between 1780 and 1850 this place changed enormously. Over the next few sheets you will meet the different groups of people living here.

Group	Why they were here	Sheet
First Nations	Here for thousands of years already	38
Métis		38
Loyalists		39
Black Loyalists and freedom seekers		40
Settlers from Britain and Ireland		41

Come back and fill this in as you go. **Nobody's story here is the whole story.**

For the grown-up The box about what came before 1780 matters more than the dates. Grade 3 history is the first place children can pick up the idea that Canadian history begins with European arrival, and the fingernail image is worth saying out loud. The date arithmetic doubles as subtraction practice with four-digit numbers.

A1.1 · A3.1 · A3.4



The people who were already here

Long before 1780, this land had names, laws, trade routes and nations of its own.



read



think about it



write

Nations, not one single group

"First Nations" is not one people any more than "Europeans" is. There are many nations, with different languages, different governments and different ways of living. In what is now Ontario these include:

Anishinaabe

Including the Ojibwe, Odawa, Potawatomi and Mississauga peoples. Their territories cover much of what is now Ontario.

Haudenosaunee

Also called the Six Nations. A confederacy of six nations joined together under one of the oldest continuing governments in the world.

Huron-Wendat

Farmers and traders whose homeland lay around what is now Georgian Bay, with large villages and long-distance trade routes.

Many places near you still carry names from these languages. **Ontario**, **Toronto**, **Ottawa**, **Mississauga**, **Niagara** and **Canada** itself all come from Indigenous words.

The Métis

During the fur trade, some First Nations women and European (often French) fur traders married and had families. Their descendants did not become simply one or the other. Over generations they became **a distinct people with their own culture, their own traditions and their own language, Michif.**

The Métis are one of the three recognised Indigenous peoples of Canada, alongside First Nations and Inuit.

The Haldimand Proclamation

During the American Revolution many Haudenosaunee fought alongside the British and lost their homelands in what became the United States.

In **1784**, Britain granted land along the **Grand River** to the Six Nations, led by **Joseph Brant** — whose Mohawk name was **Thayendanegea**.

Six Nations of the Grand River is still there today, and is the most populous First Nation in Canada. Much less land remains than was originally promised, and that has been disputed ever since.

What changed, and what it cost

As thousands of newcomers arrived, life changed for the people who were already here — mostly not for the better.

Land. Treaties were signed, but the two sides often understood them very differently. Many First Nations

Illness. Newcomers brought diseases that had never been here before. Enormous numbers of Indigenous

understood they were agreeing to *share* land. The newcomers wrote them down as agreeing to *give it up*.

people died, in some places before they had even met a European.

Hunting and fishing. As forests were cleared for farms, the animals and plants people had always relied on became harder to find.

Continuing. Despite all of it, these nations are still here. Their languages, governments and ceremonies continue today, and many are being actively rebuilt and taught to children right now.

Find out about where you live

Whose traditional territory is your town on?

Find three place names near you that come from an

Indigenous language:

Is there a treaty covering your area? What is it called?

Many Ontario schools and councils read a land acknowledgement naming the nations whose territory they are on. If yours does, **listen to the words next time** — they are naming real nations, most of whom are still here.

For the grown-up

Two things are worth holding onto here: that "First Nations" covers many distinct nations, and that these communities are present-tense, not historical. The treaty box is deliberately blunt about the difference in understanding, which is the honest account and is what the current curriculum asks for. Your municipality's or school board's land acknowledgement is a good starting point for the last box.

A1.2 · A1.3 · A2.1 · A3.2



The Loyalists

Thousands of people walked north with whatever they could carry, because staying had become impossible.

📖 read

💡 imagine it

✍️ write

✓ Who they were

When the Thirteen Colonies rebelled against Britain, not everybody living there agreed with the rebellion. Those who stayed **loyal to Britain** were called Loyalists.

When the war ended in 1783 and the rebels had won, Loyalists were treated as traitors in the new United States. Many had their farms and businesses taken away. Some were attacked or driven out.

So they left. Around **forty thousand** went north into British territory, and **several thousand** of those settled in what would soon become Upper Canada.

What they were given

Britain offered Loyalists **free land** to start again. A family might receive 200 acres, along with an axe, a hoe, a blanket and some seed — and food for the first year or two.

But the land was **uncleared forest**. Before you could plant anything you had to fell the trees, drag out the stumps and build a shelter, usually before winter arrived.

And that land was not empty. **It was land First Nations peoples had lived on for thousands of years**, transferred to newcomers through treaties that the two sides often understood very differently.

Not one kind of person

The Loyalists were a very mixed group:

Farmers and tradespeople who simply wanted to keep farming.

Soldiers who had fought for Britain.

Haudenosaunee families who had allied with Britain and lost their homes because of it.

Black Loyalists, some formerly enslaved, who had been promised freedom in exchange for supporting the British side.

Sheet 40 follows what happened to that last group.

What would you take?

You have to leave tomorrow, on foot or in a small cart, and you are not coming back. You can take **six** things. Remember: no shops where you are going, and winter is coming.

1

2

3

4

5

6

Now cross out the one you would give up first if the cart broke. Why that one?

Real Loyalist families made exactly this choice. Many took an **axe** before anything else — without one you could not build a house, make a fire, or clear ground to grow food.

Two ways to tell the same story

From a Loyalist family's point of view:

We lost our home for staying loyal. We arrived with nothing and built a farm out of forest. It was the hardest thing we ever did.

From a First Nations family's point of view:

Strangers arrived in growing numbers and began cutting down the forest we hunted in. Agreements we thought meant sharing turned out to mean losing it.

Both of these are true at the same time. **History almost always has more than one point of view**, and leaving one out does not make the other one truer — it just makes the story incomplete.

Whose point of view is usually missing from stories you have heard about this time?

For the grown-up The packing exercise is the one that makes this real, and children take it seriously. The two-points-of-view box at the end is a Grade 3 expectation in itself — holding both accounts without ranking them is genuinely difficult and worth practising. If you have a pioneer village or historic site nearby, this is the sheet to pair it with.

A1.2 · A2.3 · A3.3



Travelling north to be free

Some of this is hard to read. It happened to real people, some of them children your age.

📖 read carefully

💬 talk about it

✍ write

Slavery, and how it ended here

Slavery means that one person is treated as the property of another: forced to work without pay, unable to leave, and able to be bought and sold. It existed in what is now Canada too, though on a smaller scale than in the colonies to the south.

- 1793 ○ A woman named **Chloe Cooley**, enslaved in Upper Canada, was tied up and taken across the Niagara River to be sold. She fought and shouted so loudly that witnesses reported it to the government. Her resistance led directly to the **Act to Limit Slavery** that same year.
- 1793 ○ The Act did **not** free anyone already enslaved — which is important to say plainly. But it banned bringing any more enslaved people into Upper Canada, and said children born to enslaved mothers would go free at twenty-five.
- 1834 ○ **Slavery was abolished throughout the British Empire.** From that year it was illegal here — while it continued legally in much of the United States for another thirty years.

The Underground Railroad

It was **not underground and not a railroad**. It was a secret network of people, routes and hiding places that helped those escaping slavery reach freedom in the north.

Because it had to stay secret, people used railway words as code. Guides were **conductors**. Safe houses were **stations**. The people travelling were **passengers**. Canada was **the promised land**.

Journeys took weeks or months, mostly at night, often on foot. Getting caught meant being sent back.

People and places you can visit

Harriet Tubman escaped slavery and then went back *again and again* to guide others out. She lived in **St. Catharines, Ontario** for several years in the 1850s.

Josiah Henson escaped to Upper Canada in 1830 and helped found the **Dawn Settlement** near Dresden.

The **Buxton Settlement** near Chatham was founded in 1849 and became a thriving community with its own school — so good that white neighbours sent their children to it.

Several of these places are museums today, in southwestern Ontario.

Think it through

Why did people travel at night?

Why use code words instead of plain ones?

Harriet Tubman had already escaped. Why do you think she went back?

Arriving in Canada meant being legally free. It did **not** mean being treated fairly — many Black communities faced prejudice here too, and had to build their own schools and churches because they were shut out of others. **Both of those things are true, and it is worth holding onto both.**

One person's story

Choose **one** real person from this sheet and find out three more things about them. A library book or a museum website will do.

Who I chose:

.....

.....

.....

What is the one thing you would most want other people to know about them?

.....

For the grown-up

This sheet is written plainly rather than softened, which is what the topic deserves and what the curriculum asks for. Two points are handled deliberately: the 1793 Act limited slavery rather than ending it, and arriving in Canada meant legal freedom but not equal treatment. Both are corrections to a comfortable version of the story that children often absorb. It is a good sheet to read alongside her rather than hand over.

A1.1 · A1.3 · A2.4 · A3.5



A day in 1830, if you were eight

Read this and keep asking yourself: could I have done that?

read

compare

write

Before breakfast

You wake when it gets light, because there is no reason to be up before that and no lamp worth wasting. You sleep in the loft with your brothers and sisters, up a ladder, under the roof. In January there is frost on the inside of the walls.

Somebody has to bring in water. The well or the creek might be a few minutes away, and the bucket is heavy.

Somebody has to feed the animals and check for eggs. Somebody has to bring in firewood, because the fire went out overnight and everything — breakfast, warmth, washing — depends on getting it going again.

By the time you eat, you have already worked for an hour.

Everyone had jobs

Children were not extra help. The farm did not work without them.

Age 4–5: collecting eggs, fetching small things, watching the baby.

Age 6–8: carrying water and wood, weeding, feeding animals, picking berries.

Age 9–12: milking, helping with harvest, minding younger children all day, sewing, working alongside the adults.

There was no real line between being a child and being a worker. **You were both from about the age of four.**

The house

Most families started in a **one-room log house** they built themselves, with a dirt or plank floor and a fireplace at one end.

No electricity. No taps. No bathroom — there was an outhouse in the yard, and you went out to it in February too.

Light after dark came from the fire or from candles, and candles cost money or took hours to make. **When it got dark, the day was mostly over.**

School, if there was one

Many children went to school only in **winter**, because the rest of the year they were needed on the farm. A school was often one room with one teacher and every age together, from five to fifteen.

Slates, not paper

Paper was expensive. You wrote on a small slate with chalk and wiped it clean to use again.

Learning by heart

A great deal of chanting and reciting out loud, all together, over and over.

Walking there

Several kilometres each way was normal, in all weather,

often carrying a piece of firewood for the school stove.

Compare your day with theirs

	A child in 1830	You
Wakes up when	the sun comes up	
First job of the day	fetching water and wood	
Gets to school by	walking, often a long way	
Writes on	a slate, wiped clean each time	
After dark, does	almost nothing — goes to bed	

Would you swap?

Name one thing about their life you think you would **like**:

Name one thing you would find **hardest**:

Here is the thing worth remembering: **they did not think their life was hard.** It was simply the life there was. Nobody was missing electric light, because nobody had ever seen it.

For the grown-up Children usually engage most with the small concrete details — frost inside the walls, carrying firewood to school, going out to the outhouse in winter — rather than the general point about hardship. The closing note is worth saying aloud: judging the past by present comfort is the commonest mistake in thinking historically, and Grade 3 is not too early to name it.

A2.2 · A2.5 · A3.4



What changed, and what didn't

Not everything got better. And some things have not changed at all.

compare

ask somebody older

write

Then and now

	In 1830	Today
Light	fire and candles	
Water	carried in buckets from a well or creek	
Getting about	walking, horse, or boat in summer	
Sending a message	a letter, carried by whoever was going that way	
If you got ill		
Food in winter		

For the last two: in 1830 there were very few doctors and almost no medicines that worked, and in winter you ate what you had **preserved** in the autumn — salted, smoked, dried or stored in a cold cellar. If it ran out, it ran out.

Things that got better

Far fewer children die young.

Medicines that actually work.

Everybody goes to school, not just in winter.

Clean water out of a tap.

Slavery is illegal.

Women can vote, own property and do any job.

Add one of your own:

.....

Things that were lost

Enormous forests were cleared and have not come back.

First Nations lost most of their land and, for a long time, the right to use their own languages and hold their own ceremonies.

Many people knew how to make, mend and grow things that few of us can do now.

Rivers and lakes that were once clean.

Add one of your own:

.....

Things that have not changed

A child in 1830 would find almost everything about your life astonishing. But some things they would recognise instantly.

Families argue and make up.

Children play, invent games and fall out over the rules.

People sing, tell stories and make jokes.

Winter is long and everybody complains about it.

What else do you think would be the same?

.....

Ask somebody who remembers

Find the oldest person you can talk to — a grandparent, a neighbour, someone at a community centre. Ask them these, and write down what they say **in their own words**.

What is one thing you had as a child that children today don't?

.....

What is one thing children today have that you wish you'd had?

.....

What has changed most about this place?

.....

This is real history work. **Talking to someone who was there is called an oral history**, and it is how a great deal of what we know has been preserved — especially in communities whose stories were never written down by anybody else.

For the grown-up The "things that were lost" column is what keeps this from being a story of straightforward progress, and it's the harder half to think about. The oral history task is genuinely worth doing — it usually produces something no worksheet could, and older relatives tend to give it far more than three sentences.

A2.5 · A3.6 · A1.1



Three very different Ontarios

The ground itself is different in different parts of the province — and that changes everything else.

- read the map
- label
- work out why

A simplified map of Ontario

This map is **simplified** — the real borders are much wigglier. But the three bands are roughly in the right places.

Region	What the ground is like
Hudson Bay Lowlands	Flat, wet and boggy. Very cold. Almost nobody lives there.
Canadian Shield	
Great Lakes – St. Lawrence Lowlands	

deep, rich soil · warmer · most of Ontario's people and farms

ancient hard rock · thin soil · thousands of lakes · forest and minerals

The Canadian Shield

It covers roughly **two thirds of Ontario** and is made of some of the oldest rock on Earth. Glaciers scraped most of the soil off it long ago, which is why it is covered in bare rock, forest and an enormous number of lakes.

You cannot farm it well — the soil is too thin. But the rock itself holds **nickel, copper, gold and other minerals**, and the forests supply timber.

The southern lowlands

A much smaller strip in the south, but it is where the good soil is, left behind by the same glaciers that stripped the Shield.

Warmer summers, longer growing season, flat land, and the Great Lakes nearby for shipping and for keeping the weather milder. **The great majority of Ontario's people live here**, along with almost all of its farmland.

Why the ground decides so much

Match each region to what people do there, and say why the land makes it possible.

What people do	Which region	Because the land is...
growing corn and soybeans		
mining nickel near Sudbury		
canoeing and camping among lakes		

growing peaches in Niagara

Where do you live?

My town or city:

Is the land around you flat or hilly?

Which region is it in?

Is there a lake or river nearby?

Here is a striking fact. The Canadian Shield is **two thirds of the province**, but only a small share of Ontarians live there. Nearly everybody is squeezed into the southern strip. **Why do you think that is?**

For the grown-up

The idea to land is causal rather than factual: the rock and soil determine what can be grown, dug up or built, which determines where people live and what work they do. Everything on the next three sheets follows from this one. If you drive north from Toronto, the moment the farmland stops and the bare pink rock starts appearing in the cuttings is the Shield beginning — worth pointing out from the car.

B3.1 · B3.2 · B2.3



What the land gets used for

Every piece of land is being used for something. Look out of the window and check.

👁 observe

📍 map it

✍ write

Farming

Fields, orchards, greenhouses, pasture. Needs good soil, flat ground and a long enough summer.

Forestry

Growing and cutting trees for timber and paper. Mostly on the Shield, where farming will not work anyway.

Mining

Digging out metals and minerals. Only possible where they happen to be in the rock — you cannot choose.

Housing and towns

Where people live. Grows outwards from where people already are, usually onto farmland.

Industry

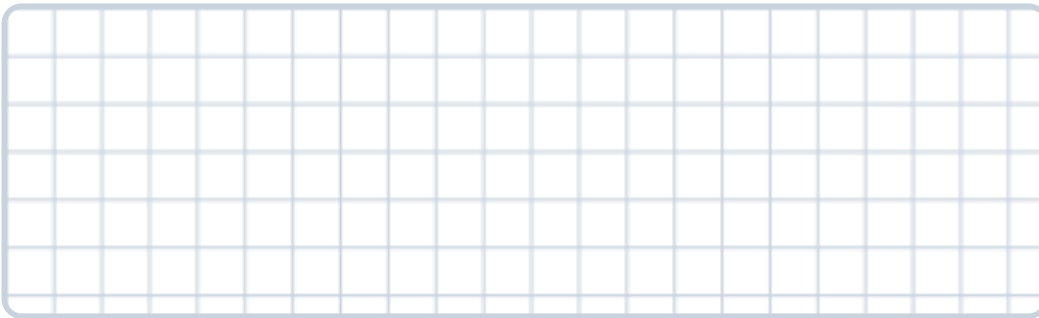
Factories and warehouses. Needs flat land, roads, and to be near workers and customers.

Parks and recreation

Protected land, trails, campgrounds, sports fields. Land deliberately **not** built on.

Map your own neighbourhood

Draw a rough map of the area within about ten minutes' walk of home. Shade each area by what it is used for, and make a key.



My key

- houses
- shops
- parks
- roads
- school
-

Which use takes up the **most** space near you?

Was anything hard to fit into a category?

When two uses want the same land

Land cannot do two jobs at once, so people have to choose — and they often disagree.

A developer wants to build 400 houses on a farm at the edge of town. The town needs homes. The farm

You decide

What would **you** do about the farm, and why? There is no right answer — but there is a difference between an answer with a reason and one without.

.....

.....

has some of the best soil in the county, and once it is built on, it is farmland forever lost.

Who would be **for** it?

Who would be **against**?

Now write down the **strongest argument against** your own answer. Being able to do that is a sign you have actually thought about it.

For the grown-up

The farmland-versus-housing dilemma is live in almost every Ontario municipality right now, so there's a good chance it's being argued about locally. Asking her to state the strongest case against her own view is the most valuable instruction on the page and is worth returning to in other contexts.

B3.3 · B2.1 · B1.2



Who decides about your street

Somebody chose where the crossing goes and when your bin gets emptied. Who?

find out

ask

write

✓ Three levels, three different jobs

— your city, town or township.

Municipal The closest one to you. Deals with the street outside your door.

— Ontario.

Provincial Schools, hospitals, the big highways, the provincial police.

— Canada.

Federal Passports, money, the armed forces, the post, borders.

If your bin was not collected, complaining to the Prime Minister will get you nowhere. **Knowing which level does what is how you actually get things fixed.**

What your municipality probably does

rubbish and recycling collection

clean water and sewers

local roads, footpaths and street lights

clearing snow in winter

parks, playgrounds and sports fields

the library

the fire department

buses, in places that have them

Exactly which services your council runs varies from place to place in Ontario — some are shared with a bigger regional council. **Find out for yours.**

Who the people are

A municipality is run by a **council**: a **mayor** and a group of **councillors**. All of them are **elected** — the people who live there vote for them, roughly every four years.

Most towns are divided into areas called **wards**, and each ward elects its own councillor. So there is one particular person whose job it is to speak for **your** part of town.

Council meets in public, and the decisions are made by voting.

Who pays for it all?

Mostly people who own property in the town, through **property taxes**, plus some money from the province and some fees.

That money is a fixed pot, so the council has to **choose**. More spent on a new arena is less for road repairs. This is why council meetings involve so much arguing — they are not

arguing about what would be nice, they are arguing about what to give up.

If you had to cut one service from the list above to pay for something else, which would you cut?

Which level would you contact?

The problem	Municipal, provincial or federal?
There is a deep pothole on your street.	
You need a passport for a trip.	
The park has no bin and it is always littered.	
You think the school year should be shorter.	
The bus never comes on time.	

Find out about yours

My municipality is called

My ward is

The mayor is

My councillor is

All of this is on your municipality's website, and most councils post their meetings online too. **Anybody can attend a council meeting**, including you. In most places you can even ask to speak.

For the grown-up The practical value here is knowing which level to contact, which most adults are hazy about too. The budget point — that council is choosing between things rather than deciding what would be nice — is the bit that makes local government make sense. Looking up your actual ward councillor together takes two minutes and makes the whole sheet concrete.

B3.5 · B1.1 · B3.6



What people do all day in Ontario

Most jobs exist because of something about the place they are in.

- 🔍 connect it up
- 💬 ask people
- ✍️ write

Three kinds of work

Getting things out of the earth

Farming, fishing, forestry, mining. These jobs can only happen **where the resource is**. You cannot mine nickel where there is no nickel.

Making things

Factories turning raw materials into products: cars, food, furniture, steel, medicines. Needs workers, roads and power.

Helping and serving people

Teachers, nurses, shopkeepers, bus drivers, plumbers, software developers, chefs. **Most people in Ontario work in this group.**

Sort these into the three groups: **farmer · nurse · car factory worker · logger · librarian · baker · miner · bus driver**

Out of the earth	Making things	Helping people

Why here and not there

Each of these places became known for something because of what was around it.

Place	Known for
Sudbury	nickel mining — because the rock there holds it
Niagara	
Oshawa and Windsor	
Northern Ontario	

building cars

forestry and timber

Jobs change over time

In 1830, almost everybody you knew would have been a farmer. Today very few Ontarians farm — but there is **more** food grown than ever, because machines do the work that used to take a whole family.

Meanwhile there are thousands of jobs today that nobody in 1830 could have imagined: electrician, pilot, software developer, physiotherapist.

Name a job that exists now but did not exist when your **grandparents** were young:

.....

Interview somebody about their work

Ask an adult you know these four questions and write down what they say.

What is your job?

What is the best part of it?

What is the hardest part?

What did you have to learn to be able to do it?

Everything needs everybody

Think about a loaf of bread on a shop shelf. A **farmer** grew the wheat. A **truck driver** moved it. A **mill** ground it into flour. A **baker** made the bread. Somebody **built the oven** and somebody else **fixes it** when it breaks. A **shop worker** put it on the shelf, and somebody keeps the shop's accounts.

No job on that list works without the others.

Choose something else in your house and trace back as many jobs as you can that had a hand in getting it to you:

For the grown-up The interview is the part most likely to stick, and it works better with someone outside the household. The bread chain at the end quietly introduces interdependence without the vocabulary — and it's a good one to repeat with whatever is in front of you at dinner.

B3.4 • B2.4 • B2.5



People change the land

Every road, field and building was once something else. That is not always bad — but it is never free.

👁 look around

⚖ weigh it up

✍ write

Southern Ontario used to be forest

Almost all of it. When settlers arrived in the 1780s, the land was covered in enormous trees. Clearing it was the hardest work they ever did — and they were proud of it, because a cleared field meant food.

What was gained

Farmland that still feeds millions of people. Towns, roads and homes. Timber for building.

What was lost

Nearly all the old forest, and the animals that lived in it. Wetlands drained. Soil left bare and washing away.

What nobody knew then

That trees hold soil in place, keep rivers clean, and cool the land. Much of that was only worked out later, once it had gone.

This is the honest shape of it: the people doing the clearing were not villains. **They were doing what everybody agreed was right, using what they knew at the time.** We know more now, which is why we are expected to do differently.

Ways people change things

Cutting down trees for wood or space.
Paving over soil so rain cannot soak in.
Damming rivers for power or reservoirs.
Draining wetlands to make fields.
Putting waste into air and water.
Digging mines and quarries.

When rain cannot soak into paved ground it has to **run somewhere**, all at once. That is why heavy rain floods streets in a city but not in a forest.

And ways people repair things

Provincial parks and conservation areas, where land is protected from building.
Planting trees along streams and roads.
Cleaning up rivers and lakes that were badly polluted — the Great Lakes are far cleaner now than they were fifty years ago.
Rules about what factories may release.
Recycling and composting instead of burying everything.
These all happened because **people asked for them**, often for years, before anything changed.

Every change has both sides

For each one, write something gained and something lost. Real decisions almost always have both.

The change	What is gained	What is lost
a new motorway		

a dam that makes electricity		
a shopping centre on a field		
a wind farm		

Look at your own street

Roughly how much of what you can see from your door is **covered over** — buildings, roads, driveways?

.....

How much is **soil or plants**?

.....

Where does the rain that falls on your street **go**?

.....

What was on this land 200 years ago, do you think?

.....

Next time it pours with rain, go and watch where the water runs. Follow it as far as you safely can. **It ends up in a river, and then in a lake** — along with everything it picked up on the way.

For the grown-up The paragraph about settlers not being villains matters: environmental history taught as blame produces guilt rather than understanding, and "they knew less than we do, so we are held to a higher standard" is both truer and more useful. Following rainwater downhill in a storm is a memorable ten minutes and connects straight back to the erosion sheet.

B1.2 · B1.3 · B2.6



You are allowed to change things

You cannot vote yet. You can still do almost everything else.



notice a problem



speak up



write

✓ How things actually get changed

Almost every improvement in your town started the same way: **somebody noticed a problem and would not let it drop**. A crossing outside a school, a bin in a park, a ramp at a library door, a bench at a bus stop.

They are there because a person asked, then asked again, then got other people to ask too.

Nobody had to be important to start it.

Find out

Who is responsible for this? Use sheet 45. Getting the right person matters more than shouting at the wrong one.

Write to them

Councillors read letters, and a letter from a child gets read more carefully than most. Say what, where, and why it matters.

Get others

Ten signatures is more convincing than one. A hundred is much harder to ignore.

Just do it

Some things need nobody's permission: picking up litter, helping a neighbour, planting something.

Write a real letter

Think of one thing you would genuinely change about your neighbourhood. Write to your councillor about it. A good letter has four parts.

Who you are	I am nine and I live on ____ Street.
What the problem is	
Why it matters	
What you want done	

Now write it out properly. Use what you learnt in the Language sheets — plan it, put it in paragraphs, then edit it before you send it.

.....

.....

.....

.....

.....

Then actually send it. Most councillors reply. It is one of the few pieces of school work that can change something real.

Being part of a place

Citizenship is not only about problems. Tick anything you already do, and circle one you would like to start.

- ☐ Sorting the recycling properly
- ☐ Picking up litter that isn't yours
- ☐ Helping a neighbour
- ☐ Using the library
- ☐ Being kind to somebody new
- ☐ Looking after a shared space

Disagreeing well

People who share a town will not agree about everything. That is normal, and it is not a problem to be solved — it is what having lots of different people in one place is like.

What matters is **how** you disagree:

Listen properly before you answer.

Argue about the **idea**, not the person.

Be able to say what the other side's best point is.

Be willing to change your mind if they are right.

That last one is the hardest, and the most valuable.

For the grown-up If only one thing on this sheet gets done, make it the letter, and actually send it — a reply from a councillor does more for a child's sense of agency than any amount of instruction. The disagreeing-well box is worth returning to outside this book; it's the same skill as stating the strongest counter-argument on sheet 44.

B1.1 · B1.3 · A3.6



Moving counts in more ways than you think

Almost none of this sheet should be done sitting down.

→ get up and move

☀ go outside

✍ write a bit

✓ Sport is not the only kind of moving

People often think being active means being on a team. It does not. **Walking the dog, building a den, climbing a tree, dancing in the kitchen, raking leaves, chasing someone round the garden and cycling to a friend's house all count.**

The guideline for children is roughly **an hour a day** of moving enough to get warm and breathe harder — but it does not have to be an hour in one go. Ten minutes here and twenty there adds up perfectly well.

Puffed out

Things that make your heart beat fast and your breath come quick. Good for your heart and lungs.

running · swimming · cycling · skating · skipping · tag · dancing

Strong

Things that make your muscles and bones work hard. Good for holding you up and carrying things.

climbing · monkey bars · hopping · jumping · carrying · digging
· pushing a swing

Bendy and balanced

Things that stretch you out and keep you steady on your feet.

stretching · yoga · gymnastics · balancing on a wall · reaching · rolling

Try one of each, right now

Put the book down and do these. Come back afterwards.

Puffed out

Run on the spot, or up and down the stairs, for one minute.

How did you feel after?

.....

Strong

Hold a plank, or hang from something, for as long as you can.

How long?

Balance

Stand on one leg with your eyes shut.

How long?

Eyes shut makes balancing far harder, because your eyes were quietly doing most of the work.

What do you actually enjoy?

This matters more than any list. **The activity you keep doing is the one you like.**

Moving I enjoy most:

.....
Something I used to like and stopped:

.....
Something I have never tried but might:

.....
If you dislike every organised sport, that is completely fine.
Plenty of very active people have never played one.

Moving in every season

Ontario weather makes this harder for part of the year. Write one thing you can do in each.

Spring

Summer

.....
Autumn

.....
Winter

.....
Winter is the one people get stuck on. Skating, sledding, snowball fights, shovelling and just walking in snow all count — walking in deep snow is surprisingly hard work.

For the grown-up

The framing throughout is enjoyment and variety rather than targets, which is both what the curriculum intends and what actually predicts a child staying active. Worth noticing if she names something she used to enjoy and stopped — the reason is often social rather than physical, and it's usually fixable.

B1.1 · B1.2 · B2.1



What happens inside when you run

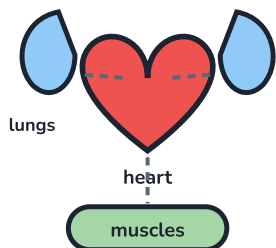
You will need somewhere to run and a clock with seconds.

→ run about

||| count your pulse

✎ record

Why you go red and puffy



Your muscles need two things to keep working: **oxygen** and **fuel from food**. Both are delivered by your blood.

When you start running, your muscles use up oxygen quickly. So:

Your **lungs** work harder to take in more oxygen — that is the puffing.

Your **heart** beats faster to push the blood round quicker — that is the thumping.

Your skin goes **red and sweaty** because all that work makes heat, and your body has to get rid of it.

None of that is something going wrong. **It is your body doing exactly what it should.**

Find your pulse

Press two fingers — not your thumb — gently on the inside of your wrist below the thumb, or on your neck just beside your windpipe. Wait until you feel a steady tap. That tap is your heart.

Count the taps for **15 seconds**, then multiply by **4** to get beats per minute. That is a use for the four times table you were probably not expecting.

When	Taps in 15 seconds	$\times 4 =$ beats per minute
sitting still		
straight after running for 1 minute		
2 minutes after stopping		
5 minutes after stopping		

Everybody's numbers are different, and that is fine — there is nothing to compare against here. **The interesting thing is the pattern:** it goes up fast, then comes back down.

Coming back down

How long did it take to get near your sitting-still number?

.....
Do you think it would come down faster or slower if you
ran for five minutes instead of one?

.....

Looking after the machine

Three things your body needs, all unglamorous:

Sleep. Children your age need somewhere around nine to eleven hours. This is when your body actually does its repairs and growing.

Water. Drink when you are thirsty, and more when you

Here is the interesting part: people who move a lot tend to **recover faster**. Their heart does not have to work as hard to do the same job. You could test this over a few weeks if you wanted a real experiment.

have been running about.

Food you enjoy, of lots of different kinds. More on that on sheet 53.

Being tired makes everything else harder — moving, concentrating, and coping with a bad day.

For the grown-up Multiplying a 15-second count by four is a genuinely useful application of the four times table and children enjoy it. The sheet deliberately gives no target heart rates and nothing to compare against — the pattern of rise and recovery is the whole point, and introducing "normal" numbers would only invite worry.

B2.2 · B2.3 · D1.1



Getting better at moving

Every one of these is a skill, and every skill gets better with practice. Nobody is born good at them.

[→ practise](#)[👁 watch what happens](#)[✎ record](#)

Travelling

Getting yourself from one place to another.

running · skipping · hopping · galloping · side-stepping · dodging · rolling

Sending and receiving

Making something go where you want, and catching what comes back.

throwing · catching · kicking · hitting with a bat · bouncing · rolling a ball

Staying steady

Controlling your body while it is still or turning.

balancing · twisting · landing · stopping quickly · stretching · spinning

Three things that make throwing better

1. Point where it's going

Step forward with the foot *opposite* your throwing hand, and point your other arm at the target first.

2. Turn your body

The power does not come from your arm. It comes from twisting your hips and shoulders round.

3. Follow through

Do not stop your arm at the moment you let go. Let it carry on swinging down past your other hip.

Try five throws the way you normally do, then five using all three. Aim at a target on a wall or a bucket on the grass.

	How many hit the target out of 5
my normal throw	
using all three tips	

If it got **worse** at first, that is completely normal. Changing a habit always feels awkward before it feels better. Give it a week.

Try these and see where you are

Not a test. Just a starting point, so you can try again in a month and see the difference.

Thinking during a game

Skills are only half of it. The other half is **working out what to do**.

Challenge	Today	In a month
Catches out of 10, thrown to yourself		
Skips in a row without stopping		
Seconds balancing on one leg		
Bounces of a ball in a row		

In a chasing game, is it better to run in a straight line or change direction? Why?

.....
If you are throwing to someone who is running, where should you aim?

.....
You throw to where they are **going to be**, not where they are. Almost everybody has to be told this once, and then it seems obvious forever.

Being somebody people want to play with

This matters more than being the fastest. Nobody remembers who won a playground game last Tuesday. They remember who was fair.

Include people. Notice who is standing at the edge and ask them in.

Play by the rules, even when nobody is watching.

Lose without sulking and win without gloating. Both are hard. Both are noticed.

Encourage people who find it difficult. You were not good at it once either.

Which of those do you find hardest?

.....

For the grown-up The three throwing tips genuinely work and produce a visible change in about ten minutes — the opposite-foot step is the one most children are missing. Warning her that it will get worse before it gets better prevents the usual abandonment at the first bad attempt. The "today / in a month" column is only worth filling in if you actually come back to it.

C1.1 · C1.2 · C2.1 · A1



Staying safe in three places

Some of this you know already. Read it anyway — the point is knowing it **before** you need it.

🗨 plan ahead

🗨 agree it with an adult

✍ write

Things worth knowing by heart

Fill these in and then learn them. In an emergency nobody can look anything up.

My full address:

A grown-up's phone number:

A second grown-up I could call:

The emergency number in Canada:

The emergency number is **911**. Call it if somebody is badly hurt, there is a fire, or somebody is in danger. **You will not be in trouble for calling** if you thought it was a real emergency. Say what has happened and where you are, and do not hang up until they tell you to.

At home

Know how you would **get out** if there were a fire, and where your family would meet outside. Practise it.

If there is smoke, stay **low** and get out. Never go back in for anything.

Medicines and cleaning bottles are not to be touched. More on that on sheet 54.

Do not open the door to someone you do not know if you are on your own.

Outside

Crossing a road: **stop, look both ways, listen, and keep looking as you cross**. A car turning the corner will not have seen you.

Helmet on the bike, every single time, even for a short trip.

Never go onto ice unless an adult has checked it. Ice that looks solid often is not, especially near shore, near moving water, or after a mild spell.

Never swim alone.

Online

Never give out your full name, address, school, phone number or photos to someone you do not know in person.

People online can say they are anybody. Somebody claiming to be your age might not be.

Never agree to meet someone you only know online, and tell an adult if you are asked to.

If anything you see or read makes you feel uncomfortable, tell a grown-up straight away.

The most important part of all of this

If something goes wrong, tell a grown-up you trust. Straight away, even if you think you might get into trouble, and even if somebody has told you not to.

Grown-ups would far rather be told about something small than find out too late about something big. **You will not be in trouble for telling.** That is worth reading twice.

Write down **three** grown-ups you could go to. At least one who does not live in your house.

1

.....

2

.....

3

.....

What would you do?

You are at the park and you cannot find the person you came with.

.....
Someone messages you online asking which school you go to.

.....

Talk these through with a grown-up rather than just writing them. **Having thought about it once beforehand is what makes you act quickly** when it actually happens.

You smell smoke at night.

.....
A friend dares you to walk out onto a frozen pond.

.....

For the grown-up

Worth doing together rather than handing over. Two Ontario-specific points earn their place: ice is genuinely the seasonal danger here and children badly misjudge it, and 911 is only useful if she has said her own address out loud a few times. The "you will not be in trouble for telling" line is the one that matters most, and it only works if it is also true in practice.

B3.1 · B3.2 · D2.2 · D3.1



What's on the plate

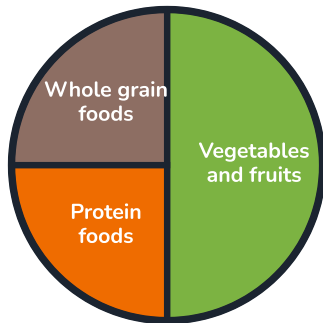
Canada's Food Guide is a picture of a plate, not a list of rules. There is nothing to count.

👁 look at your plate

🎨 draw

🗨 cook with somebody

The plate



and water to drink

That is the whole guide. **About half the plate vegetables and fruit, a quarter protein foods, a quarter whole grains, and water to drink.**

Vegetables and fruit — fresh, frozen or tinned all count. Frozen peas are just as good as fresh ones, and cheaper in February.

Protein foods — meat, fish, eggs, beans, lentils, nuts, cheese, yoghurt, tofu.

Whole grains — bread, rice, pasta, oats, barley. Whole grain means less of the grain was taken away.

Notice what the guide does **not** do. It does not count anything, weigh anything, or tell you a number. It just shows you roughly what a plate might look like across a whole day.

The part people skip

Half of Canada's Food Guide is not about food at all. It is about **how** you eat.

Cook more often

Even helping a bit counts. People who can cook eat better their whole lives.

Eat with other people

Meals together, without a screen, at a table if you can.

Enjoy your food

Eating should be a good part of the day, not a chore or a worry.

Notice food adverts

Remember CRUNCHO FLAKES on sheet 14? Adverts are trying to sell, not to help you.

Design a meal you would actually eat

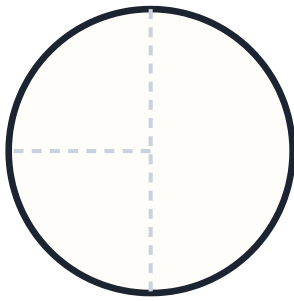
Draw it on the plate. It has to be something you like — a meal nobody wants to eat is not a good meal.

A few honest things

No food is a bad food. Cake at a birthday is part of eating well, not a failure. What matters is what you eat *most of the time*, not any one meal.

Nobody eats a perfect plate every day, including the people who wrote the guide. It is a rough picture of a good direction, not a test you pass or fail.

Water is the best thing to drink when you are thirsty, and it is free out of the tap.



What did you put on it?

Which bit was hardest to fill?

Cook something this week

With a grown-up. It does not have to be complicated — scrambled eggs, a salad, soup, pasta sauce or muffins are all real cooking.

What we made:

What I actually did:

What went wrong:

Would I make it again?

Something going a bit wrong is normal and is how you learn where the tricky part is. **Everybody's first pancake is rubbish.**

For the grown-up

The 2019 guide deliberately dropped serving counts in favour of a plate proportion and a set of habits, and this sheet follows that — no numbers, no weighing, no good-and-bad foods. The cooking task is the highest-value thing on the page. If food or body comments ever start coming home from elsewhere, the "no food is a bad food" box is the one to return to.

D1.2 · D2.1 · D3.2



Medicines and other things in bottles

Medicines are useful and important. They are also one of the easiest things in a house to get wrong.

📖 read

💬 talk it over

✍️ write

✓ The same thing can help or harm

Medicine that a doctor gives to the right person, in the right amount, at the right time, can make somebody better or even save their life.

The exact same medicine, taken by the wrong person or in the wrong amount, can make them very ill.

That is why medicine has rules around it — not because it is bad, but because getting it right is what makes it work.

The rules, plainly

Only ever take medicine from a grown-up who looks after you — a parent, a carer, a nurse, a doctor.

Never take medicine that was given to somebody else, even a brother or sister, even if you have the same illness.
Never take more because you want to get better faster. It does not work like that.

Medicine is not sweets, even when it is coloured, sweet, or shaped like a cartoon. Some medicine is made to taste nice so that ill children will take it — that is exactly why it has to be kept out of reach.

Not just medicine

Plenty of ordinary household things are dangerous to swallow, breathe in or get in your eyes.

Cleaning sprays and bleach.

Dishwasher tablets — which look very like sweets.

Laundry pods.

Things in the garage or shed.

Berries, mushrooms and leaves outdoors.

Never taste or smell something to find out what it is. If you do not know, do not touch it — go and ask.

If something has been swallowed

This is the bit to know **before** it happens. It might be a younger brother or sister, or a friend.

1. Tell a grown-up immediately

Shout. Do not wait to see what happens. Do not try to sort it out yourself.

2. Say what it was

Bring the bottle or packet if you can. Knowing exactly what it was matters enormously.

3. If nobody is around, call 911

You will not be in trouble. Getting help quickly is the only thing that matters.

Do not try to make anybody sick up. That used to be the advice and it is not any more — with some substances it makes things worse. Let the grown-ups and the doctors decide.

Safe or not safe?

Write **safe** or **not safe**, and say why.

Your dad gives you medicine the doctor prescribed for you.

.....
A friend offers you a tablet from their bag.

.....
You find sweets on the ground at the park.

.....
You take two spoonfuls instead of one so it works faster.

Check your own home

Walk round with a grown-up and find out.

Where is medicine kept in your house?

.....
Where are the cleaning things kept?

.....
Could a very small child reach either?

.....
If the answer to the last one is yes, **that is worth mentioning to a grown-up**. Noticing something like that is a genuinely useful thing to do.

For the grown-up

Two corrections worth knowing yourself: inducing vomiting is no longer recommended, and speed of getting expert advice matters more than anything you do first. The **Ontario Poison Centre** is open 24 hours on **1-800-268-9017** — worth putting in your phone now rather than looking for it later. In a genuine emergency, call 911.

D1.3 · D2.3 · D3.1



When a feeling gets very big

Everybody has feelings that feel too big to hold. Everybody. There is nothing wrong with you.

🔍 notice

🗨 say it out loud

✍ write

✓ Feelings are information, not problems

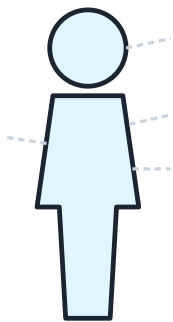
There are no bad feelings. Being angry, worried, jealous or miserable is not a mistake — those feelings are your brain telling you that something matters to you.

What you do with a feeling can go well or badly. But the feeling itself is just information, and you are allowed to have it.

Even the biggest feeling **passes**. It never feels like it will at the time, and it always does.

Where do you feel it?

Feelings are physical. Most people feel them somewhere particular in their body, and noticing where is the first step to catching one early.



Draw a line from each feeling to where you feel it. Everyone is different — there is no right answer here.

Angry

Worried

Excited

Sad

Common answers: hot face, tight chest, churning tummy, heavy arms, buzzing legs, a lump in the throat.

Things that help

Different things work for different people. Try them when you are **calm**, so you already know which ones are yours when you need them.

Slow your breath

Breathe in while you count to four, out while you count to six. Six times. The long breath out is the part that does the work.

Move

Run, jump, push against a wall, go up and down the stairs. A big feeling has energy in it and moving gives it somewhere to go.

Go somewhere quieter

Fewer people, less noise, less light. Leaving the room is allowed and is not rude.

Name it out loud

"I am really frustrated right now." Saying the word genuinely makes the feeling smaller.

Which of these do you think would work for you?

Is there something else that already helps you?

Afterwards, not during

When a big feeling has passed, it is worth looking back. Not to feel bad about it — just to notice the pattern.

What set it off?

.....
What did I do?

.....
What might work better next time?

.....
Do this **after**, when you are calm. Nobody can think about their feelings usefully in the middle of having one.

Telling somebody

Some feelings are too big or last too long to handle on your own. That is not weakness — it is just true of some feelings.

Tell a grown-up you trust if:

a worry keeps coming back and will not go
you feel sad or flat for a long time
something is frightening you
you do not know why you feel the way you do

You do not need the right words. **"I feel bad and I don't know why"** is a completely good thing to say, and any decent grown-up will take it from there.

For the grown-up Practising the strategies while calm is the instruction that makes the difference — nothing on this page can be learned mid-meltdown. Note that the sheet treats leaving the room and seeking quiet as legitimate rather than as avoidance, which matters a great deal for some children. If a low mood or a persistent worry does turn out to be lasting, your family doctor is the right first call.

A1.1 · A1.2 · A1.5



Everybody is different, and your body is yours

This sheet is worth reading together with a grown-up. Stop and ask about anything at all.

📖 read together

💬 talk about it

✍️ write

Some differences you can see. Most you cannot.

Differences you can see

How tall somebody is. Their hair, their skin, their face.
Whether they use a wheelchair, a hearing aid or glasses.
What they wear.

Differences you cannot see

How somebody learns. What sounds, lights or textures they find hard. What languages they speak at home. What they believe. What they are worried about. Whether they slept. What is happening in their family. How their brain works.

Almost everything about a person is invisible. You could sit next to somebody for a whole year and not know the most important thing about them. Which is a very good reason to be kind to people before you know why they might need it.

You do not have to understand it

Somebody might need things you do not need. Quiet. More time. Different food. Instructions written down. To move about while they think. Not to be touched.

You do not have to understand why in order to respect it.

You do not need a reason, and it is not rude to simply accept that somebody is different from you.

And you are allowed to need things too. **Everybody needs something.**

Asking well

Being curious is fine. **How** you ask is what matters.

Better: *"Is there anything that would make this easier for you?"*

Better: *"Do you want to join in? It's fine either way."*

Not so good: *"What's wrong with you?"*

Not so good: asking loudly, in front of everybody.

And if somebody does not want to explain, **that is a complete answer.** Nobody owes anybody an explanation of themselves.

Your body belongs to you

You get to decide who touches you. You can say no to a hug, a kiss or being picked up — even from family, even from somebody you love, even if they will be disappointed.

You can offer something else instead: a wave, a high five, or just "no thank you".

There are times a grown-up has to help with your body even if you would rather they did not — a doctor examining you with your parent there, or somebody helping you when you are hurt. **Those things happen in the open,** with a good reason you are told about, and a grown-up who looks after you knowing all about it.

Other people's bodies belong to them too. Ask before you hug somebody. If they say no, or move away, or go quiet — **stop**, and do not make them explain.

"No" does not need a reason, from them or from you.

Surprises and secrets are not the same thing

A **surprise** is something everybody will find out soon, and everybody will be pleased about. A birthday present. A party. Surprises are fun and they end.

A **secret you are told to keep forever**, especially one that makes you feel worried, uncomfortable or sick in your tummy — that is **always** a secret to tell.

If anybody ever asks you to keep a secret about touching, or about your body, tell a grown-up you trust straight away. It does not matter who asked, how nice they usually are, or what they said would happen.

You will not be in trouble. It will not be your fault. Read that twice. And if the first grown-up you tell does not listen properly, tell another one, and keep telling until somebody does.

My people

Write down grown-ups you could go to about anything at all. Try to include one who is not in your house — a teacher, a coach, a relative, a neighbour.

1

2

3



If you ever cannot think of anybody, or the people on your list are the problem, a grown-up at school always counts. So does any teacher, any nurse, or any parent of a friend. There is always somebody.

For the grown-up

Please read this one with her rather than handing it over. Three things are deliberate: that she may decline affection from family, that "no" needs no justification, and that a secret about touching is always to be told. Children disclose to whoever they believe will believe them, which is why the sheet insists on telling another adult if the first does not listen — and why the three names are worth actually filling in.

Kids Help Phone is free, 24 hours, for any child in Canada: **1-800-668-6868**, or text **CONNECT to 686868**.

D1.4 · D2.4 · D3.3 · A1.4



The things every picture is made of

You need a pencil for this one, and something to make colour with.

draw

look

notice

Line does more than you think

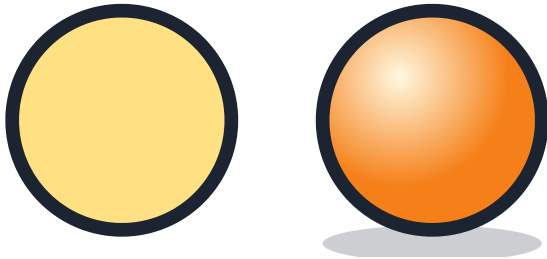
A line is not just an outline. Lines have moods.



Draw five lines of your own in the box below. Make one **angry**, one **sleepy**, one **nervous**, one **proud** and one **silly**. No pictures — just lines.

Shape

Flat shapes have two dimensions. **Form** is when a shape looks solid, usually because of shading.



Same circle. The second one has shading and a shadow, so it reads as a ball.

Colour

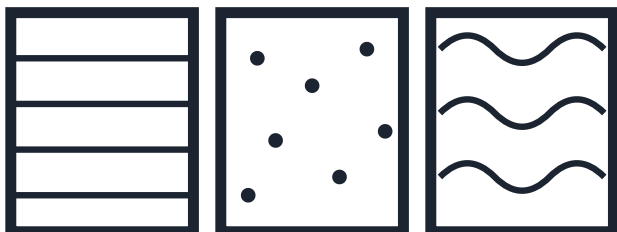
Warm colours come forward. Cool colours sit back.



Which row feels hotter? Which feels further away?

Texture

How something would feel if you touched it — shown with marks.



Try rubbing a pencil over paper laid on a rough surface.

Space — making things look far away

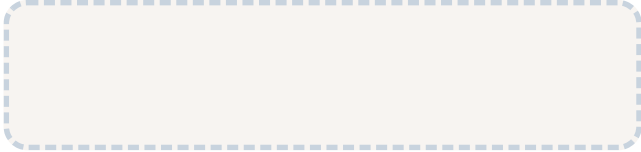
Three tricks artists use, all at once:

Things further away are drawn **smaller**.

They are placed **higher up** the picture.

They **overlap** — whatever is in front is nearer.

Draw three trees: one near, one middle, one far. Use all three tricks.



Look at a real picture

Find any picture — a book cover, a poster, something on a wall. Look at it for a full minute before you write.

What kind of lines has the artist used?

.....
Warm colours, cool colours, or both?

.....
Where does your eye go **first**? Why do you think that is?

.....

For the grown-up The emotional lines exercise at the top is the one that unlocks this — children who think they "can't draw" can always draw an angry line, and it shifts art from representation to expression. The one-minute look before writing is worth enforcing; the first ten seconds of looking at a picture produce nothing much.

D1.1 · D1.2 · D1.4



Variety

★ your new idea this year

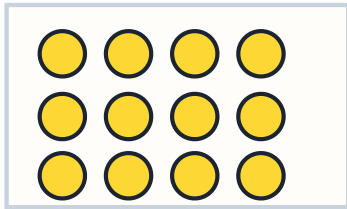
Variety means **deliberately mixing things up** so a picture stays interesting to look at.

👁 compare

🎨 draw

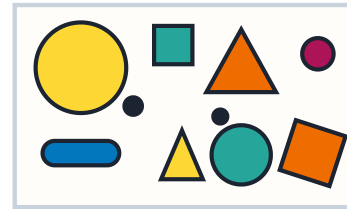
✍ write

The same idea, twice



No variety. Same shape, same size, same colour, evenly spaced.

Your eye has nowhere to go.



Variety. Different shapes, sizes, colours and spacing. Your eye

moves around.

Both pictures took about the same effort. One of them you look at for two seconds; the other you keep looking at. **That difference is variety, and it is a choice the artist made.**

Five things you can vary

Size

big next to small

Shape

round next to angular

Colour

warm next to cool

Line

thick next to thin

Spacing

crowded next to empty

Careful, though. Variety is not the same as chaos. If *everything* is different, a picture becomes a mess and your eye still has nowhere to rest. Good artists vary **some** things and keep others the same — often one colour, or one shape, running through the whole picture to hold it together.

Fix a boring picture

Here are six identical squares. Redraw them in the box with as much variety as you can — but keep **one thing** the same throughout, so it still holds together.



Variety is everywhere, not just in art

Once you have the idea, you start seeing it in everything people make.

A **song** with a loud bit and a quiet bit.

A **story** with long sentences and then a short one. Like this.

What did you keep the same?

A **meal** with something crunchy and something soft.

A **garden** with tall plants and low ones.

Find one example of variety somewhere in your home and describe it:

For the grown-up

Variety is the Grade 3 principle of design, and the two-picture comparison makes it visible in seconds. The caveat matters as much as the idea: children given "make it varied" often produce chaos, and the instruction to keep one element constant is what turns it into a design decision. It connects neatly to the sentence-variety point back on sheet 6.

D1.3 · D1.4 · D2.2



Make something and mean it

This sheet is a plan. The actual work happens on a bigger piece of paper.

🔍 plan

🔧 make it

💬 talk about it

The brief: a place that matters to you

A room, a corner of the garden, a route you walk, a spot at a grandparent's house, somewhere you go in your head. It does not have to be beautiful or important to anybody else.

It must show variety

Vary at least three of: size, shape, colour, line, spacing.
Keep one thing the same all the way through.

Any materials

Pencil, paint, felt tips, collage from magazines, torn paper, or a mixture. Mixing materials is itself a kind of variety.

It does not have to look real

You can make the important things bigger and the boring things tiny. Artists do this constantly.

Plan it first

My place is

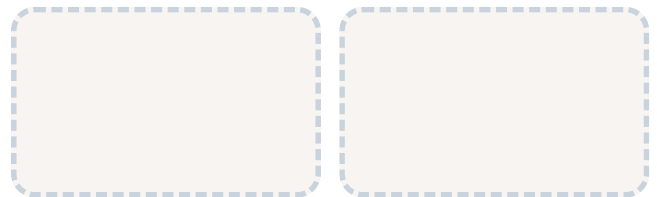
.....
Why it matters to me

.....
The feeling I want it to have

.....
The one thing I will keep the same throughout

Rough it out small first

Do two quick versions here, each in under a minute. Then choose one to make properly.



Working small and fast first is what artists actually do. It stops you falling in love with your first idea.

While you work

Stand back from it every few minutes. Things look different from a distance.

Big shapes first, small details last. Almost everybody does this the wrong way round.

If you hate it halfway through, keep going. Nearly every piece looks worst in the middle.

Stop before you fiddle it to death. Knowing when to stop is a real skill.

Afterwards

The part I am most pleased with

Something I would do differently next time

The part that did not work

Did it end up with the feeling you wanted?

Now show it to somebody and ask them **one** question: "*What do you notice first?*"

Not "do you like it" — that gets you nothing useful. Asking what they notice tells you where the picture is actually pulling the eye, which is the thing you can learn from.

For the grown-up

Two quick thumbnails before the real thing is the single habit most worth building, and it takes ninety seconds. "What do you notice first?" is a far better prompt than any praise — it gives real information and sidesteps the like-it-or-not question entirely. Expect the middle stage to look bad; saying so in advance keeps the work going.

D2.1 · D2.3 · D3.2

How long does a note last?

Clap a steady beat while you read this. Keep it going — that beat is what everything else is measured against.

? keep a beat

|| count

clap it

The notes



Two of these are new this year. The **whole note** lasts four beats — you hold it while you count 1, 2, 3, 4. And the **dotted half note** lasts three.

What the dot does

A dot after a note is not decoration. **It makes the note half as long again.**

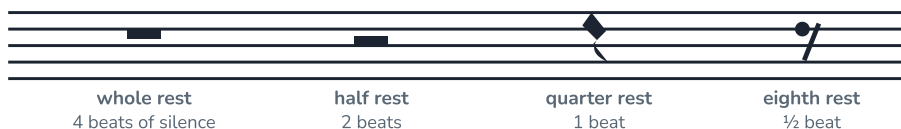
a half note is 2 beats

half of 2 is 1

so a dotted half is 2 + 1 = 3

The same rule works on any note. If a whole note is 4 beats, how long is a **dotted whole note**? beats

Silence is written down too



A **rest** means stop making sound — but **the beat carries on**. You still count. Silence is part of the music, not a gap in it.

Whole and half rests look almost the same. The trick: the **whole rest hangs below the line** like a hat on a hook, and the **half rest sits on top of the line** like a hat on a head.

Add them up

How many beats altogether?

2 half notes = beats

4 quarter notes = beats

Clap a rhythm

Count 1–2–3–4 steadily out loud. Clap on the numbers shown and hold the rest.

A clap 1 · clap 2 · clap 3 · clap 4

B clap 1 — hold — clap 3 — hold

1 dotted half + 1 quarter = beats

1 half + 2 quarters = beats

8 eighth notes = beats

Notice that every one of those comes to the **same total**. Five different ways to fill four beats.

C clap 1 — hold — hold — clap 4

Which pattern used a **dotted half note**?

Now make up a fourth pattern and clap it to somebody. Can they clap it back?

For the grown-up Keeping a steady beat while reading is what makes note values mean anything — without it they are just shapes. The hat-on-a-hook image for whole versus half rests is the standard mnemonic and it sticks. Pattern C is the dotted half; clapping it back and forth is more useful than any written exercise here.

C1.1 · C1.3 · C2.1

Counting music in groups ★ brand new

Beats do not just go on forever in a line. They come in **groups**, and you can feel where each group starts.

? listen

|| count in groups

→ move to it

✓ The two numbers at the start

Every piece of music begins with two numbers stacked up.

The top number tells you how many beats are in each group.

The bottom number tells you what kind of note gets one beat. A 4 down there means the quarter note is the beat — which is nearly always the case in the music you know.

Each group of beats is called a **bar**, and a vertical line is drawn to show where each one ends.

2/4 — counting in twos



ONE-two, **ONE**-two. This is how marching works, and how walking works. Left, right, left, right.

3/4 — counting in threes



ONE-two-three, **ONE**-two-three. This is a waltz. It swings and sways instead of marching, and you cannot march to it — try it and you will end up on the wrong foot.

4/4 — counting in fours



ONE-two-**three**-four. Beat 1 is the strongest and beat 3 is a little strong too. **Most songs you have ever heard are in 4/4** — it is so common that musicians sometimes just call it "common time".

Feel the difference

Do this standing up.

Fill the bars

Each bar must add up to exactly the right number of beats.
What could you put in?

In 2: march on the spot. Stamp on every ONE.

In 3: sway side to side, leaning further on every ONE.

In 4: clap on 1, tap your knees on 2, clap on 3, tap on 4.

Now put music on and try to work out which one it is. **Count along and see which grouping fits** without you having to force it.

A bar of **4/4** with one note in it: a

A bar of **3/4** with one note in it: a

A bar of **2/4** with one note in it: a

A bar of **4/4** with a half note and what else?

The 3/4 answer is the reason the **dotted half note** exists at all. Without the dot there is no single note worth three beats.

For the grown-up Marching versus swaying is what makes 2 and 3 distinguishable by feel rather than by counting, and it is worth doing standing up. The last question ties the two music sheets together: 3/4 is precisely why the dotted half exists. Put on any waltz and any march back to back and the difference becomes obvious in about fifteen seconds.

C1.2 · C1.3 · C2.2

The shape of a piece ★ brand new

Music has a plan, just like a story does. You can hear it if you listen for it.

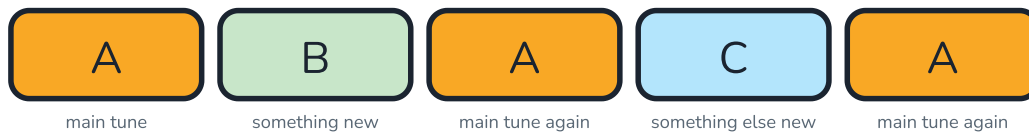
? listen

🗨 sing

✍ write

Rondo — the tune that keeps coming back

In a **rondo**, one main tune returns again and again, with different music in between each time. Musicians label the sections with letters.



A – B – A – C – A. The A sections are all the same. B and C are different from A and from each other. It works because coming back to something familiar feels satisfying — the same reason a chorus in a pop song keeps returning.

Make your own rondo

You do not need an instrument. Use body percussion: clapping, stamping, patting knees, clicking, tapping a table.

Section	What you do (4 beats each)
A	
B	
A	the same as the first A
C	
A	the same again

Perform the whole thing to somebody. Ask them afterwards: **how many times did the same bit come back?**

Two things at once

When two different parts sound at the same time, that is called **two-part texture**. It is very different from everybody singing the identical thing.

A round. Everybody sings the same tune but starts at different times — like "Row, Row, Row Your Boat" or "Frère Jacques".

Tune and accompaniment. One person sings the melody while another keeps a steady beat or plays chords underneath.

Try a round with at least three people. **The hard part is not singing your own part — it is not being pulled onto somebody else's.** That is genuinely difficult, and it is a real musical skill.

Listen for the shape

Put on any song you like. Listen right through once without doing anything else, then map its shape with letters.

□ ▶ □ ▶ □ ▶ □ ▶ □

The song I chose:

.....

Which section comes back most often?

Is it a rondo? If not, what shape is it?

Most pop songs go something like **A B A B C B** — verse, chorus, verse, chorus, a different bit, chorus. Not quite a rondo, but built on the same idea: **keep bringing back the bit people want to hear again.**

For the grown-up Mapping a familiar pop song with letters is the exercise that makes form click, and it usually produces the realisation that the chorus is doing exactly what the A section does in a rondo. Singing a round needs three people minimum and is much harder than it sounds — failing at it a few times is part of the point.

C1.4 · C1.5 · C2.3



Tension is what makes a scene worth watching

★ brand new

Most of this sheet is done standing up, with at least one other person.

→ get up

act it out

notice what works

✓ Being in role

Being **in role** is not putting on a silly voice. It is deciding **what this person wants** and then behaving like somebody who wants that.

Three questions get you into role: **Who am I? What do I want? What is stopping me?**

That third one is the most useful. A character who gets what they want immediately is not interesting to watch.

What tension is

Tension is the feeling that something might happen. It is what makes you lean forward. Without it, a scene is just people talking.

No tension

Two people wait for a bus. The bus comes. They get on.

Nothing is at stake. There is nowhere for it to go.

Tension

Two people wait for a bus. One of them is late for something enormous. The other one knows the bus is not coming, and has not said so yet.

Same bus stop. Now you want to watch.

Four ways to put tension in

A secret

One character knows something the other does not. The audience can know it too — that often makes it worse, in a good way.

A deadline

Something has to happen before a certain moment. Time running out creates tension all by itself.

Wanting opposite things

Two characters both want something, and they cannot both have it.

Waiting

Something is about to be found out, arrive, or be decided — and nobody can do anything but wait.

Act these out

Two people, about one minute each. Before you start, each of you decides **who you are, what you want, and what is stopping you.**

You have broken something that belongs to the other person. They have not noticed yet.

You are both lost. One of you is pretending not to be worried.

One of you has found something on the ground. The other one thinks it belongs to them.

Afterwards: which kind of tension was in each one? **Notice how much more interesting a scene gets when somebody is not saying something.**

Freeze frame

Make a still picture with your bodies — no moving, no talking.
Hold it for five seconds.

The moment just **before** something goes wrong.

The moment just **after** it did.

Somebody finding out a secret.

Freeze frames make you think about **faces, distance and height**. Who is close to whom? Who is turned away? Who is higher up? All of that says something before anybody speaks.

Hot seat a character

One person stays in role and sits down. Everybody else asks them questions, and they answer **as the character**.

Try it with a character from a book you are reading, or with Nel from the story on sheet 11.

Good questions to ask:

Why did you do that?

What were you afraid of?

What did you not say out loud, and why?

You will find yourself inventing answers the book never gave you. **That is allowed, and it is how actors work.**

For the grown-up Tension is the Grade 3 drama element and the bus-stop pair makes it concrete in two sentences. "What is stopping me?" is the question that turns showing off into acting. Hot-seating Nel from sheet 11 is worth doing — it forces exactly the inferential thinking that the comprehension questions were asking for, but from the inside.

B1.1 · B1.2 · B1.3



Moving on purpose

Dance is not about knowing steps. It is about deciding **how** to move and meaning it.

[→ move](#)[👁 watch](#)[✎ write it down](#)

Space

Levels — low, middle, high.

Directions — forwards, back, sideways, turning.

Pathways — straight, curved, zigzag across the floor.

Time

Fast or slow. Steady or stopping and starting.

A sudden stop is one of the strongest things in dance — far stronger than moving faster.

Energy

Sharp or smooth. Heavy or light. Tight or floppy.

The same step done sharply and then smoothly becomes two different moves.

Relationship

Near or far from another dancer. Facing them or turned away.

Copying them, mirroring them, or doing the opposite.

Same move, four ways

Do a simple arm reach. Now do it four times, changing only one thing each time. Notice how different it feels.

Slow and smooth

how does it feel?

Fast and sharp

Very low down

As high as you can

One arm reach, four completely different meanings. **You did not learn a single new step to get that.**

Build a short dance

Four moves, in order. Do the whole thing three times through until you can remember it without thinking. That is called a **phrase**.

	The move	Level, speed and energy
1		
2		
3		
4		

Make sure your four moves are not all at the same level and the same speed. **That is variety again** — the same idea as sheet 58, but with a body instead of a pencil.

Dance something that is not a feeling

Dances do not have to be about happy or sad. Try moving like one of these:

- a seed growing into a plant (sheet 21)
- soil being washed down a slope (sheet 35)
- a bridge holding, then failing (sheet 33)
- a magnet pulling something in (sheet 28)

Do one without telling anybody which. **Can they guess?** If not, which part was unclear?

Watching well

Watch somebody else's phrase and say something useful about it. Not "that was good" — that helps nobody.

Try sentences like:

"I noticed you went really low on the third move."

"The sudden stop at the end surprised me."

"I couldn't tell what the second move was."

Describe what you saw, then say what it made you think.

That is how dancers, artists and writers actually help each other — and it is the same skill as the art feedback on sheet 59.

For the grown-up

The one-arm-reach-four-ways exercise is the whole sheet in miniature: it shows that dance is about choices rather than learned steps, which is a relief to children who think they can't dance. Describing what you saw before judging it is a transferable feedback habit and shows up three times in this book.

A1.1 · A1.2 · A1.4

What EQAO actually is

If somebody has mentioned this and it made your stomach drop, read this sheet. It is smaller than it sounds.

 read

 ask questions

 put it in proportion

✓ The short version

In Ontario, children do an assessment called **EQAO** in Grade 3 and again in Grade 6. It covers **reading, writing and mathematics**, and it usually happens in the spring, over a few sessions rather than all in one go.

Here is the part nobody tells you clearly enough: **it is mostly a test of how well schools across the province are doing**. It is not a test of whether you are clever, and it does not decide anything about your future.

What it is

A check on how the whole province is doing.

Made of things you have already been taught.

Done over several shorter sessions.

Something almost every Grade 3 in Ontario does.

Over in a few days, and then finished.

What it is not

A measure of how clever you are.

Something you pass or fail.

A decision about what class you go into.

Something that follows you around.

Worth losing sleep over.

Things that genuinely help

Sleep

Being tired affects how well you think far more than any amount of last-minute practice.

Breakfast

Something to eat, and water. A hungry brain is a slow brain.

Knowing what to expect

Ask your teacher how long it is, what the room will be like, what happens if you finish early. Surprises are the worrying part.

Saying you are nervous

Out loud, to somebody. It genuinely makes the feeling smaller — you found that on sheet 55.

Ask about anything you are unsure of

Write down what you would like to know, then actually ask your teacher. Nearly every worry is about not knowing what will happen.

.....

.....

.....

If you get extra time, a quieter room, breaks, or anything else that helps you at school, **you normally get those during the assessment too**. Ask, so you know in advance rather than on the day.



One honest thing. Some people find tests genuinely hard, for reasons that have nothing to do with knowing the answers — the room, the quiet, the clock, the pressure. If that is you, it is worth saying so to a grown-up **before** the day, not after. There is usually something that can be done about it, and it is a completely ordinary thing to ask for.

For the grown-up Children pick up adult anxiety about EQAO with great accuracy, so the tone you take about it matters more than anything on this page. Accommodations that are part of a student's regular programming generally carry over to the assessment; the school can confirm what applies. Format details change from year to year, so check with the teacher rather than relying on how it worked before.

A1 · D3

Reading a question properly

Most marks lost on any test are lost by answering a question nobody asked.

 read twice

 underline

 check

Underline what it is actually asking

Before you do anything else, find the words that tell you **what to do** and **what with**. Underline them.

Maya had 45 stickers. She gave 18 to her brother. How many stickers does she have left?

Look at the graph. Which two fruits were chosen by the same number of children?

Explain why the author wrote this text. Use two details from the text in your answer.

That last one asks for **two things**: a reason, and two details to back it up. An answer with a reason and no details has done half the job. **Count the parts of the question before you start writing.**

Multiple choice

Read every option before choosing. The first one that looks right is often a near miss, with a better answer two lines below.

Cross out the ones that are clearly wrong. Even if you end up guessing, you are guessing between two instead of four.

Watch for words like *not*, *except* and *most*. They flip the whole question round.

Written answers

Answer the question in the first sentence. Do not build up to it.

Then give your evidence. If it says "use details from the text", go back and find them — do not do it from memory.

Plan for thirty seconds before writing. Even three scribbled words. That is the planning from sheet 15, done fast.

If you get stuck

Move on

Leave it and come back. Sitting on a hard question costs you the easy ones further down.

Mark it

Put a small dot beside anything you skipped so you can find it again.

Write something

A partly right answer is worth more than a blank. A blank

Breathe

In for four, out for six. Six times. It works, and nobody can

is worth nothing at all.

tell you are doing it.

Practise on these

Do not answer them. Just **underline what each one is asking for**, and write how many separate parts it has.

A bus holds 32 people. Two buses are full and a third has 9 people on it. How many people are on the buses altogether?
parts:

*Which of these is **not** a property of a cube?* parts:

Describe how the character felt at the end of the story, and explain what made them feel that way. parts:

The first one has a hidden step: you have to work out **two full buses** before you can add anything. Questions often bury one step inside another, which is exactly what the two-step problems on sheet 14 of the maths book were training you for.

For the grown-up Counting the parts of a question is the single most transferable habit here and is worth applying to ordinary homework long before any test. The advice to write something rather than nothing is worth stating plainly — careful children often leave blanks rather than risk being wrong, and that costs them more than errors do.

A1 · C3 · D1



Puzzles that use the whole book

Every one of these needs something from a different subject. Skip any you don't fancy.

🔍 think hard

✍ write

💬 argue about it

1 · Build the word

Use the prefixes and suffixes from sheet 2. Each answer is one word made of three parts.

not + help + full of =

care + without + in that way =

not + kind + the state of being =

Now make up one of your own and give it to somebody else to solve:

.....

2 · What's wrong with this test?

Ravi wants to find out whether plants grow better with music playing. He puts one plant in the kitchen with the radio on, and one in the garden shed with no radio. Three weeks later the kitchen plant is taller. Ravi says music makes plants grow.

What has Ravi done wrong?

.....

How would you fix his test?

.....

3 · Across the years

Use the timeline on sheet 37.

How many years between the Haldimand Proclamation and the rebellion in Upper Canada?

Somebody was 10 years old in 1784. How old would they be in 1837?

Would that person have been alive when slavery was abolished across the Empire?

Somebody who watched the Loyalists arrive as a child could still have been alive to see slavery abolished. **Seventy years** is one long lifetime, not ancient history.

4 · Who studied what?

Four children each chose a different topic: **plants, soil, forces, structures**. Work out who chose which.

Nel did not choose plants or soil.

Amira chose soil.

Jonah did not choose structures.

Priya chose plants.

Nel	
Amira	
Jonah	
Priya	

Start with the clues that **tell you something for certain**, not the ones that only rule things out.

5 · The big one: design a bridge that is also good to look at

Use sheet 31 for the **struts and ties**, sheet 32 for the **stability**, and sheet 58 for the **variety**. It has to actually stand up *and* be worth looking at.

Where are the **struts**?

Where are the **ties**?

What did you **vary**?

What did you keep the **same**?

Real bridge designers do exactly this. A bridge has to hold, and it also has to sit in a place where people will look at it every day for a hundred years. **Both of those are the engineer's job.**

For the grown-up

Puzzle 2 is the one worth pushing on: Ravi changed two things at once, so his result is uninterpretable no matter which plant grew taller. Puzzle 3's closing observation — that this whole period fits inside one lifetime — does more for historical perspective than the dates themselves. If only one gets done, make it the bridge.

B2.3 · A1.2 · A3.1 · D2.4 · D1.3



Twelve things to go and do

None of these need this book. Most of them need boots, a jar, or another person.

go outside

make things

talk to people

1 • Sock walk

Old socks over your shoes, through long grass, then plant the sock in a tray of soil and wait.

2 • Settling jar

Soil and water in a jar, shaken hard, left overnight. The layers in the morning are the best thing in the science section.

3 • Egg drop

Build something that lets a raw egg survive a fall. Outside. Expect several failures.

4 • Magnet hunt

Go round the house predicting first, testing second. The drinks can and the soup tin are the good bit.

5 • Follow the rain

Next downpour, follow the water downhill as far as you safely can. Where does your street's rain end up?

6 • Take a flower apart

A lily or a big daisy on a plate. Find the stamens and count them.

7 • Ask an old person

Three questions about how this place has changed. Write down their actual words.

8 • Send the letter

The one from sheet 48, to your actual councillor, about something you actually want changed.

9 • Sing a round

Three people minimum. Hold your own part. Much harder than it sounds.

10 • Cook something

Start to finish, with a grown-up nearby rather than doing it. Something will go wrong. Good.

11 • Freeze frame

Three people, five seconds, no talking: the moment just before something goes wrong.

12 • Find a strut

Out in the street. A crane, a pylon, a bike, a bridge. Point at the bits being squashed and the bits being stretched.

You got to the end of this one too

Sixty-eight sheets, and five subjects that have almost nothing to do with each other — except that they turned out to keep connecting anyway.

Sentences have structure and so do bridges. Soil comes in layers and so does history. Variety makes a picture worth looking at, and it makes writing worth reading. The dotted half note exists because of a fraction. **None of that was planned. It is just what happens when you learn enough things.**



The sheets you found hardest are the ones where you learnt most. Complex sentences, revising instead of correcting, struts and ties, two points of view at once, the plate with no numbers on it. None of those are easy, and you did them.

Come back to any sheet whenever you like. Doing one twice is not cheating — the second time is usually when it clicks.

For the grown-up

These twelve are the activities from across the book most likely to still be happening in six months, and between them they cover more of the curriculum than any single worksheet does. Numbers 1, 2 and 3 are the ones children ask to repeat. Number 8 is the one that occasionally changes something real.

all strands

Answers — Language, sheets 1 to 18

1 ight: flight, tight, frightening. **tion:** nation, attention, celebration.
ould: should, would, could. **ought:** thought, brought, fought. Three in each family. The build-a-word boxes are open.

2 unlock = open something that was locked · rewrite = write again · painless = without pain · preheat = heat beforehand · gardener = a person who gardens · sadness = the state of being sad.
Opposites: unhappy, disagree, careless, unkind, disobey.
Word families: careful, careless, carefully, carelessly · helpful, helpless, helper · hopeful, hopeless, hopefully.

3 1 They're · 2 there · 3 two · 4 too · 5 hear · 6 its · 7 You're.
Then: **write** a letter · turn **right** · a **new** bike · he **knew** the answer.

4 garden 2 · elephant 3 · butterfly 3 · caterpillar 4 · information 4 · **jump** 1.
Sort: **1 beat** dog, bright, school · **2 pencil**, happy · **3 wonderful**, computer · **4 celebration**.

5 Sensible joins: *The dog barked **because** someone knocked.* · ***After** I finished my homework, I went outside.* · ***Although** it was cold, she did not wear a coat.* · *We can go to the park **if** it stops raining.*
Rewritten: ***Because** the path was muddy, he wore his boots.*
Proper sentences: the **second** and **fourth**. The other two are unfinished.

6 S · CD · CX · S · CX · CD. The three written sentences are open.

7 1 "Where are my boots?" asked Jo. · 2 "The bus is here!" shouted Dad. · 3 Nan said, "I made you a cake." · 4 "Look out!" cried Sam.

8 *We need bread, milk, eggs and butter.* · *Later that evening, the lights went out.* · *Although she was nervous, she put her hand up.*
Fixes: 1 *I **don't** know where my **shoes** are.* · 2 *The cat's bowl is empty and **it's** dirty.* · 3 *Two **birds** landed on **Sam's** window.*

9 1 muddy **ADJ**, ran **V**, quickly **ADV**, garden **N**. 2 Yesterday **ADV**, little **ADJ**, painted **V**, picture **N**.
Same word: water = **V** then **N**; book = **V** then **N**.

10 -ed: jumped, painted, climbed, shouted, watched, helped.
Irregular: took, came, wrote, swam, brought, caught, thought, taught.
Tense drift: **see** should be **saw**, and **run** should be **ran**.

11 1 A small dry scratching inside the woodpile. 2 A mouse. 3 Four small grey shapes in a nest of bark and dry grass.
4 So the nest was not disturbed — she put it back exactly as it was. 5 To protect them. If she said what was in there, somebody might go and look. 6 He worked out what she had found, and moved the woodpile so the nest would be left alone.
Character words: **protective**, **kind** and **careful** all work if she can point at the sentence that shows it. The father shows what he thinks by **what he does**, not what he says.

12 1 The capybara. 2 Branches, mud and stones. 3 Underwater. 4 The five-cent coin.

5 Nothing that cannot swim can get in. 6 Beavers build in response to the **sound** of running water, so a quiet pipe does not set them off. 7 **Woodpeckers**, which move into the dead standing trees.
Good: fish, frogs and insects arrive · herons and ducks come · woodpeckers get homes · wetland is created. Problems: floods roads · floods farmers' fields.

13 1 title · 2 heading · 3 bold word · 4 diagram · 5 caption · 6 fact box.
Humus is bold because it is an important word, and it will be in the glossary. The caption adds the depth of the topsoil, which the picture alone does not say. To find out what soil is made of, read the **heading** first.

Worms → **index**. How the book is organised → **contents**.

14 F · O · F · O · F · O.

Advert → to sell · textbook → to teach · comic → to make you laugh · road sign → to keep you safe.

CRUNCH: **best** is the opinion word. The **vitamin C** claim is the one you could check. "Nine out of ten kids" *sounds* like a fact, but you would need to know who was asked and how — a good thing to notice.

15 Lost cat → poster · pancakes → numbered instructions · persuading about a dog → letter or list of reasons · holiday → story or recount. Everything else is open.

16 Topic sentence: *Beavers are extremely well suited to life in water.*
Three details. The closing sentence draws a **conclusion** (land versus water) instead of repeating the opening.
The sentence that does not belong: *My grandmother has a vegetable garden.*

17 ADD — "so high that you can see the school roof". CUT — "It is fun" and "It is good", which say nothing. MOVE — the best detail is saved for the end. SWAP — "I like the park" becomes "the best place I know".

The dog paragraph is open. The test is whether she **added something only she could know**.

18 Nine mistakes: *Last Saturday we went to my **cousin's** house. It was raining so we stayed inside and played **cards**. My cousin won three times but I **didn't** mind.*

A note on sheet 17. If one Language sheet is worth coming back to, it is this one. Asked to improve a piece of writing, nearly every child corrects the spelling and stops, because that is the only change they can see how to make. The four moves — add, cut, move, swap — give them something else to do, and they transfer to every piece of writing from here on.

Answers — Science, sheets 19 to 36

19 Keep the same: the paper, the person throwing, how hard, where they stand, indoors or out. Measure: how far it flew. Try it several times.

The three throws were 6, 9 and 7 m — all the same plane. Use the **mean**, which evens out the flukes.

Testable versions: *Are dogs good?* cannot be tested — try *Do dogs learn a new command faster than cats?* *Is ice cold?* → *What temperature does ice melt at?* *Which paper towel is best?* → *Which paper towel soaks up the most water?*

20 Rolls into a ball and bends without cracking = **clay**. Falls apart when squeezed = **sandy**. Sandy is found after just **one** question.

21 1 flower · 2 stem · 3 leaf · 4 roots.

Jobs: roots anchor the plant and take up water · stem holds the leaves up to the light and carries water · leaves make food · flower makes seeds.

Leaves are flat and wide to catch as much light as possible. A dandelion's long tap root snaps off and regrows if you don't get all of it.

What we eat: carrot **root** · lettuce **leaf** · celery **stem** · broccoli **flower buds** · tomato **fruit** · peas **seeds**.

22 stamen = the whole pollen-making stalk · anther = makes the pollen · stigma = sticky top that catches pollen · ovary = where seeds form · sepal = protected the bud before it opened.

Wind-pollinated flowers are dull because **the wind does not care what colour they are** — there is nothing to attract, so bright petals would be wasted effort.

Most flowers have many stamens and one pistil.

23 In: sunlight, water, carbon dioxide. Out: sugar and oxygen.

A plant in a dark cupboard cannot photosynthesise, so it uses up its stored food and dies.

A sealed jar works because the plant **recycles its own air** — it releases oxygen, takes back carbon dioxide, and the water goes round again.

24 dandelion **wind** · blackberry **eaten** · burdock **hitching a lift** · maple **wind** · coconut **water**.

A maple key spins like a helicopter and falls slowly; a stone lands first. **Falling slowly is the whole point** — more time in the air means further from the parent tree.

25 Three Sisters: corn gives the beans a pole · beans put goodness back into the soil · squash shades the ground and keeps weeds down. Maple syrup: 5 litres of syrup needs about **200 litres** of sap, because it takes roughly 40 to 1.

26 Pot A is the control. Pot B usually grows **tall, pale and floppy** before it gives up: the seed's stored food is all spent stretching upward looking for light. **Growing tall is not growing well**. Everything else depends on what actually happened, and wrong predictions are the valuable part.

27 opening a drawer **pull** (starts it moving) · squeezing clay **push** (changes shape) · catching a shot **push** (stops it) · pedalling faster **push** (speeds it up) · steering round a corner **push or pull** (changes direction).

On carpet the ball travels less far — more friction.

28 A magnet pulls iron and steel: paper clip, nail, tin lid, scissors, fridge door. It ignores aluminium foil, a drinks can, copper, gold and silver.

The **soup tin** is steel and sticks; the **fizzy drink can** is aluminium and does not.

Contact or not: book falling **non-contact** · kicking a ball **contact** · fridge magnet **non-contact** · wind on leaves **contact** · compass needle **non-contact**.

Coins are the surprise — most modern Canadian coins have a steel core, so they do stick.

29 The flat sheet and the paper ball weigh exactly the same. The **flat sheet catches far more air**, so air resistance slows it down and the ball lands first.

Heavy box → **reduce** friction: wheels, sliders, a smoother floor. Icy path → **increase** friction: grit, sand or salt. Sticking drawer → **reduce** friction: wax or soap on the runners.

30 bike helmet **both** · seat belt **spreads the force** · air bag **both** · winter tyres **adds grip** · crash mat **slows the stop** · handrail **adds grip**. A completely rigid car is **more** dangerous: it stops instantly, so the people inside stop instantly too, and the force on them is far greater. The crumple zone is weak on purpose.

31 tent pole **strut** · guy rope **tie** · chair leg **strut** · suspension bridge cables **tie** · the diagonal on a shelf bracket **strut**.

The test: could you swap it for a piece of string? String can only pull, so anything that would collapse is a strut.

The square folds into a leaning shape; the triangle cannot change shape at all without one of its sides changing length.

32 A lamp has a heavy base to keep the weight **low down**. You spread your feet on a bus to make your **base wider**. A billboard is far bigger and catches much more wind than a road sign, so it needs a much wider, heavier frame.

The half-full bottle is **heavier and yet harder to tip**, because the extra weight all sits at the bottom.

33 Open, but a working bridge nearly always ends up folded, rolled or triangulated — all three stop the paper bending. The failure point is the information: where it broke is where it was weakest.

34 Soil holds broken rock, humus, water, air and living things. Layers from the top: topsoil, subsoil, broken rock, bedrock.

Clay — holds water and can waterlog; heavy to dig but rich. **Silty** — holds water well and drains reasonably; very fertile, good for most crops.

Not every crop grows everywhere because soil **and** climate both differ: Niagara is milder because of the lake, and the north is colder with much thinner soil.

35 The **bare** tray gives muddier water and loses more soil. Roots hold soil together like thousands of tiny ropes, and leaves take the force out of falling rain.

Replacing 5 cm of lost topsoil would take roughly **500 years**.

36 IN: banana skin, apple core, coffee grounds, fallen leaves, eggshell.

OUT: chicken bone, crisp packet, cheese rind.

Meat and dairy are kept out because they smell and attract rats.

Plastic never breaks down at all — the decomposers cannot eat it.

A note on the practical sheets. Sheets 24, 26, 34, 35 and 36 are written round activities that need a jar, a spade or a pair of old socks, and they do not work as reading. If time is short, the settling jar (34) and the sock walk (24) give the most for the least effort, and both can be started in five minutes and left alone.

Answers — sheets 37 to 68

37 1850 – 1783 = **67** years. Upper Canada to the War of 1812 = **21** years. The Act to Limit Slavery to full abolition = **41** years. How long ago 1834 was depends on the year you are reading this.

Why groups were here: First Nations, already here for thousands of years · Métis, a distinct people who emerged during the fur trade · Loyalists, driven north after 1783 · Black Loyalists and freedom seekers, coming to be free · settlers from Britain and Ireland, coming for land and work.

38 Place names from Indigenous languages include Ontario, Toronto, Ottawa, Mississauga, Niagara and Canada itself. The land-acknowledgement questions depend on where you live — your municipality or school board website is the place to check.

39 Around forty thousand Loyalists went north; several thousand settled in what became Upper Canada. Many took an **axe** before anything else — you could not build, burn or clear without one. The packing list and the two-points-of-view question are open.

40 They travelled at night to avoid being seen and caught. Code words kept the network secret if a message was overheard. Harriet Tubman went back repeatedly to guide others out, at enormous personal risk.

The 1793 Act **limited** slavery rather than ending it; full abolition across the British Empire came in **1834**. Arriving in Canada meant legal freedom but not equal treatment — both are true.

41–42 Open. The comparison table depends on her own day. In 1830 there were few doctors and almost no medicines that worked, and winter food was whatever had been salted, smoked, dried or stored in the autumn. The oral history interview is the most valuable part of these two sheets.

43 Canadian Shield — ancient hard rock, thin soil, thousands of lakes, forest and minerals. **Great Lakes – St. Lawrence Lowlands** — deep rich soil, warmer, most of Ontario's people and farms. Corn and soybeans → Lowlands (good soil, flat, warm) · nickel at Sudbury → Shield (the minerals are in the rock) · canoeing among lakes → Shield · Niagara peaches → Lowlands (the lake keeps winters mild).

Most people live in the south because the soil is better, the climate milder, the land flatter, and the Great Lakes made trade and transport easy.

44–45 Sheet 44 is open, and the farmland-versus-housing question deliberately has no right answer — what matters is a reason, and being able to state the strongest argument against yourself.

Sheet 45: pothole **municipal** · passport **federal** · park bin **municipal** · length of the school year **provincial** · bus timetable **municipal**.

46 Out of the earth: farmer, logger, miner. **Making things:** car factory worker, baker. **Helping people:** nurse, librarian, bus driver.

Niagara → fruit growing and wine · Oshawa and Windsor → building cars · Northern Ontario → forestry and timber.

47–48 Open. Rain that cannot soak into paved ground runs off all at once, which is why cities flood in heavy rain and forests do not. The letter on sheet 48 is the one worth actually sending.

49–51 Open. Balancing with your eyes shut is far harder because your eyes were doing most of the work. On sheet 51, throwing usually improves once the **opposite foot** steps forward — and it often gets worse for a few days first, which is normal. You throw to where somebody is **going to be**.

52 The emergency number is **911**. The three trusted grown-ups are the important part of the page, and at least one should be outside the household.

53 About **half** the plate vegetables and fruit, **a quarter** protein foods, **a quarter** whole grains, with water to drink. There is nothing to count or weigh. No food is a bad food; what matters is what you eat most of the time.

54 Safe: medicine your own parent gives you that was prescribed for you. Not safe: a tablet from a friend's bag · sweets found on the ground · taking two spoonfuls instead of one. Do **not** try to make somebody sick up — tell an adult and get help fast.

55–56 Open, and both are conversations rather than exercises. The three named grown-ups on sheet 56 are the part worth filling in properly.

57–59 Open. On sheet 57, the warm row (red, orange, yellow) feels hotter and comes forward; the cool row sits back. Things further away are drawn smaller, higher up, and overlapped by things in front.

58 Variety means deliberately mixing size, shape, colour, line and spacing — while keeping **one thing constant** so the picture still holds together. Variety without anything constant is just a mess.

60 whole **4** beats · dotted half **3** · half **2** · quarter **1** · eighth $\frac{1}{2}$. A dotted whole note would be **6**.

All five additions come to **4 beats**: 2 halves, 4 quarters, dotted half + quarter, half + 2 quarters, 8 eighths. Five different ways to fill the same bar.

Pattern **C** is the one using a dotted half note.

61 A bar of 4/4 with one note = a **whole note**. A bar of 3/4 = a **dotted half note**. A bar of 2/4 = a **half note**. A 4/4 bar with a half note needs another **half note**, or two quarters, or any mix worth two more beats. This is exactly why the dotted half exists: without the dot there is no single note worth three beats.

62 A rondo is **A B A C A** — the main tune returns between different sections. Most pop songs run something like A B A B C B: verse, chorus, verse, chorus, a different bit, chorus. Same underlying idea.

63–64 Open. The bus-stop pair shows what tension is: same setting, but a secret and a deadline make the second version worth watching. On sheet 64, one arm reach done four ways produces four different meanings without learning a single new step.

65–66 On sheet 66, the bus question hides a step — you must work out **two full buses** (64) before adding the 9, giving **73**. The cube question has one part but turns on the word **not**. The character question has **two** parts: how they felt, *and* what made them feel it.

67 1 **unhelpful** · **carelessly** · **unkindness**.

2 Ravi changed **two things at once** — the music and the location. The kitchen and the shed also differ in light and warmth, so he cannot say which caused anything. He should put both plants in the same place and change only the music.

3 $1837 - 1784 = 53$ years. Somebody aged 10 in 1784 would be **63** in 1837 — and **yes**, they would have been 60 when slavery was abolished in 1834.

4 Nel **structures** · Amira **soil** · Jonah **forces** · Priya **plants**.

5 Open — but it should stand up and it should have something varied about it.

If you only go back to a few sheets

Sixty-eight is a lot. If some of it needs a second pass, these five carry the most weight for the rest of primary school:

Sheet 5 — complex sentences. The single biggest change in Grade 3 writing.

Sheet 17 — revising is not editing. Almost nobody arrives at this on their own.

Sheet 19 — change one thing. Underneath every science sheet in this book, and most arguments about evidence for the rest of her life.

Sheet 39 — two points of view, both true at once. The hardest idea in the whole book.

Sheet 56 — your body is yours, and a secret about touching is always one to tell.

Everything else either rests on those five or can be picked up again later without much cost.