

Grade 8

Everything Else

Everything Is a System

38 sheets • seven subjects • input, process, output

THIS BOOK BELONGS TO



Language

what you bring to a text • sustained argument

Sheets 1–7



Français

year five • the decision point

Sheets 8–10



Science

cells • fluids • systems • water

Sheets 11–22



History

Confederation, and who was not in the room

Sheets 23–27



Geography

global settlement • global inequality

Sheets 28–32



Health & P.E.

consent • substances • asking for help

Sheets 33–35



The Arts

independent choices you can defend

Sheets 36–38

Grown-ups: this last year of elementary school , and several Health, French and the Arts carry strand names only . Full See sheet 40
is is sheets are written with that detail
the the in mind. on
the last
page.

Citations are deliberately uneven — Science, History



What you brought to it

Grade 6 asked what a text left out. Grade 7 asked who benefits. Grade 8 asks the hardest one — what did *you* bring?

- notice
- examine

Two people read the same article about a new housing development. One thinks it sounds hopeful. The other thinks it sounds threatening. Neither has misread it.

What the reader brings	How it could change the reading
They are looking for somewhere to live	
They already live on that street	
They have been moved on from somewhere before	
They build houses for a living	

Now turn it on yourself. Pick something you read or watched recently and felt strongly about. What did *you* bring to it that somebody else might not have?

This is not the same as saying every reading is equally good. A reader can still be wrong about what a text says. But two careful readers can disagree about what it *means*, and knowing why is the Grade 8 move.

Grown-ups: the distinction between misreading a text and reading it from a different position is subtle and worth talking through out loud.

Language · C3 Critical Thinking in Literacy



An argument that runs for four paragraphs

Secondary school assumes you can plan, draft and revise without being walked through it. This is the practice.

 plan

 draft

 **A shape that carries an argument**

1. Your position, in one sentence, at the top. No suspense.

2. Your strongest reason, with evidence.

3. The best objection — stated fairly — and your answer to it.

4. What follows if you are right. Not a summary; a consequence.

My question:

Paragraph	What goes in it
1 Position	
2 Strongest reason + evidence	
3 Best objection + answer	
4 What follows	

Check paragraph 3. Would somebody who disagrees with you say you had stated their objection fairly? If not, rewrite it before you go on.

.....

Paragraph 4 is the one people get wrong. A summary adds nothing — the reader has just read it. A consequence tells them why it mattered.



Sources, and where they came from

Four sources this time, and one of them has to disagree with the others.

🔍 research

✎ attribute

#	What it says, in your own words	Who made it, and when	Who paid for it?
1			
2			
3			
4		this one disagrees	

"Who paid for it" is a real research question. A study funded by an industry is not automatically wrong — but you should know. Did you manage to find out for all four?

Two sources that turn out to be the same source. Check whether any two of yours are quoting the same original. Did you find any?

Two websites copying one study are one source, twice. That is the commonest way a piece of research looks better supported than it is.

Grown-ups: tracing a claim back to its original study is a genuinely advanced skill and entirely doable at this age with one worked example.

Language · Strand D · A

The words secondary school assumes

Every one of these appears elsewhere in this book, and every one appears in Grade 9.

 define

 find it

Word	What it means	Where else in this book?
indicator		Geography
efficiency		Science
correlation		Mathematics, Geography
density		Science, Geography
dispossession		History
continuity		History
sustainability		Science, Geography
diffusion		Science

Density appears twice, meaning two different things. Find both — one is about matter and one is about people. What do the two uses have in common?

.....

.....

Both mean "how much of something in a given space". Mass per volume, or people per square kilometre. The word does the same job in both subjects.

Grown-ups: the two senses of "density" are a genuine cross-curricular link and worth spotting rather than being told.

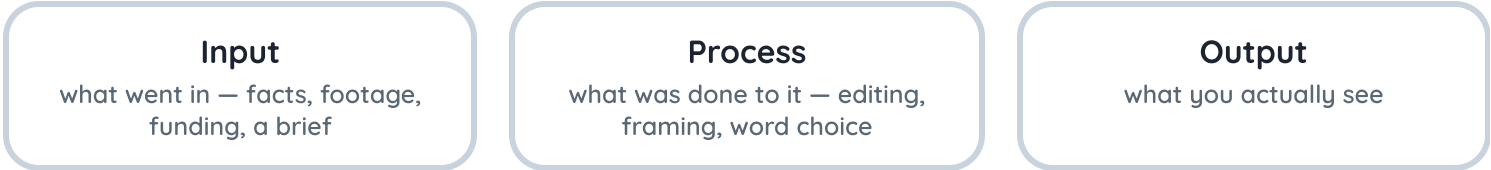
Language · Strand B Foundations



A text is a system too

Input, process, output. It works on media as well as on machines.

 analyse  connect



The thing	Input	Process	Output
A news report			
A short video that got recommended to you			
An advertisement			

Every system loses something in the process. In Science you will call it *efficiency*. For a news report, what gets lost between the input and the output?

.....

.....

The loss is not always dishonest. A two-hour event becomes ninety seconds because ninety seconds is what there is. But something was chosen, and something was dropped.

Reading something difficult on purpose

Grade 9 will hand you texts you cannot get through on one pass. Here is what to do instead of giving up.

read

work at it

Four moves for a hard text

1. Read the first and last paragraph first. They usually say what it is about.
2. Read once for the shape, not for every word. Do not stop.
3. Read again and mark the sentence in each paragraph that carries the point.
4. Write one sentence saying what the whole thing argues. If you cannot, go back to step 3.

The text I chose:

Step	What happened
After step 1, I thought it was about...	
After step 2, the shape was...	
The hardest paragraph was... because...	
In one sentence, it argues that...	

Step 2 is the one people skip. Stopping at every unfamiliar word means you never see the shape — and the shape is usually what makes the words make sense.

Grown-ups: "read once without stopping" feels wrong to careful students and is the single most useful habit for dense text.

Language · C2 Comprehension Strategies



Disagreeing well

The last oral communication sheet of elementary school. This is the skill worth taking with you.

 speak

 listen

Four things that make a disagreement useful

- Say their view back first, until they agree you have it right.
- Name what you agree on. There is almost always something.
- Locate the actual disagreement — a fact, a value, or what should be done about it.
- Say what would change your mind. If nothing would, say that instead.

Step	Mine
The topic	
Their view, said back in my words	
What we agree on	
Where we actually differ — and is it a fact, a value, or an action?	
What would change my mind	

Afterwards. Did locating the *kind* of disagreement change the conversation? How?

Most arguments are about values dressed up as facts. Once you notice which one you are actually having, the shouting usually stops.



Cinq ans de français

Roughly 600 hours by the end of this year. This is the point where you decide whether to keep going.

évaluer

décider

Ce que je peux faire maintenant

- | | |
|--|--|
| ☐ Je peux me présenter | ☐ Je peux décrire ma journée |
| ☐ Je peux donner mon opinion avec « parce que » | ☐ Je peux poser des questions |
| ☐ Je peux comprendre un texte simple | ☐ Je peux parler au passé |
| ☐ Je peux parler au futur | ☐ Je peux suivre un film avec sous-titres |

En français, en deux phrases : qu'est-ce que tu aimes le plus en français, et qu'est-ce qui est le plus difficile ?

The decision. Will you continue French in secondary school? Give one honest reason either way.

Five years is a real foundation, even if it does not feel like one. Most of what you have is passive — you understand more than you can say, and that flips fast once you use it.



Raconter au passé

Talking about what happened is what most real conversation actually is.

raconter

écrire

Pour parler du passé

« hier » — yesterday · « la semaine dernière » — last week · « d'abord » — first
« ensuite » — then · « après » — after · « enfin » — finally
« j'ai fait » — I did · « je suis allé(e) » — I went · « c'était » — it was

Raconte ta fin de semaine en cinq phrases. Utilise au moins trois mots de la boîte.

Maintenant, lis-le à voix haute. Where did you slow down? That is the bit worth practising.

Reading your own French out loud is the fastest way to find the weak spots. Your ear catches things your eye does not.

Le français et la Confédération

The History strand you are about to meet is the reason Canada has two official languages.

🔍 chercher 💬 relier

Question	Ce que j'ai trouvé
Why did the framers of Confederation have to make arrangements about language?	
When did Canada become officially bilingual?	
What rights do French-speaking Ontarians have to education in French?	
What is the Franco-Ontarian flag, and when was it created?	

The link to sheet 23. Confederation joined communities that did not share a language or a religion. Why would that make the arrangement harder to design — and why did they do it anyway?

French in Canada is not a school subject that happens to exist. It is a constitutional arrangement with a history you are studying this year in another book.

Grown-ups: the FSL intercultural component and the Grade 8 History strand are genuinely the same story from two directions. **FSL · intercultural understanding**



Everything alive is made of these

And almost all of them are too small to see. Grade 8 is the year you actually look.

👁 observe

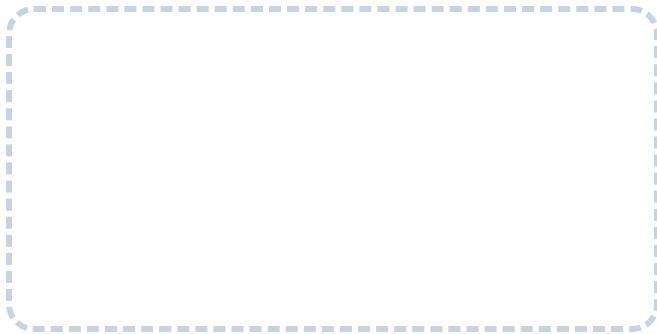
✍ draw

If you can get a microscope, use it. A leaf's underside, a thin slice of onion, pond water, or the inside of your own cheek on a cotton bud. Nothing you read replaces having seen it.

What I looked at

Sample:

Magnification:



Draw what you actually saw, not what a diagram shows.

The scale

A typical cell is about **20 micrometres** across — 20 millionths of a metre. A human hair is roughly **80 micrometres** thick.

So roughly how many cells across a hair?

.....

20 μm in nanometres:

This is Mathematics 'E2.1' arriving in biology.

Cells to systems. Put these in order from smallest to largest, then give an example of each: *organ · cell · organism · tissue · organ system*

.....
.....

Cell → tissue → organ → organ system → organism. Each level is made of the one below it, and each level can do something the one below cannot.

Grown-ups: the micrometre arithmetic connects straight to the Grade 8 mathematics prefix expectation. A hair is about four cells thick.

Science · Strand B



What each part is for

A cell is a system. Every organelle has a job, and the plant ones exist because plants cannot move.

match

compare

Part	What it does	Plant	Animal
nucleus		✓	✓
cell membrane		✓	✓
cytoplasm		✓	✓
mitochondria		✓	✓
cell wall		✓	✗
chloroplasts		✓	✗
large vacuole		✓	✗

Notice what is shared. Four of the seven are in both. Why does that matter more than the differences?

.....

.....

The three plant-only parts each solve a problem for something that cannot move. Take one and explain what problem it solves.

.....

Shared parts mean shared ancestry. Plants and animals run on the same basic machinery — the differences are additions, not different designs.

Grown-ups: "plant AND animal, not plant versus animal" is the framing that makes this a biology lesson rather than a memory test.

Science · Strand B



Things moving in and out

Diffusion and osmosis. This is Grade 7's particle theory arriving in biology, and both experiments take a day.

 set it up

 come back tomorrow

Two words

Diffusion — particles spread from where there are many to where there are few, all by themselves.

Osmosis — the same thing, but it is *water* moving through a membrane, towards the saltier side.

Experiment 1 — a raisin in water

Predict:

Next day:

Which way did the water move, and why?

Experiment 2 — a grape in salty water

Predict:

Next day:

Which way did the water move, and why?

Same process, opposite results. Explain how one idea produces a raisin that swells and a grape that shrivels.

Water always moves towards the saltier side. The raisin is saltier than plain water, so water goes in. The grape is less salty than brine, so water comes out.

Grown-ups: two glasses, a raisin, a grape and some salt. It is the cheapest genuinely convincing experiment in the Grade 8 programme.

Science · Strand B · A1



A fluid is anything that flows

Including air. Most people assume it means liquid, and the whole strand makes more sense once gases are in.

- ☐ classify
- ☒ test

Substance	Fluid?	How easily does it flow?
Water		
Honey		
Air		
Ice		
Cooking oil		
Sand		this one is arguable

Measure viscosity. Tip three liquids down the same slope and time how long each takes to travel 20 cm. Same slope, same distance, same starting point.

Liquid	Time (s)	Most viscous?

Sand is the interesting one. It pours, it takes the shape of its container, and it flows through an hourglass. Is it a fluid? Defend your answer.

Viscosity is resistance to flowing, and it changes with temperature. Warm honey pours; cold honey barely moves. Same substance.

Grown-ups: sand is a genuine borderline case — it flows but does not have a viscosity in the same sense. A well-defended answer either way is correct.

Science · Strand C



Why a steel ship floats

Density is mass divided by volume, and it settles every floating question without any hand-waving.

measure

calculate

✓ The rule

density = mass ÷ volume

Water is about 1 g/cm³. Anything less dense than that floats. Anything more sinks.

Object	Mass (g)	Volume (cm ³)	Density	Float or sink?
A	30	60		
B	120	40		
C	45	45		
Your object				

Find the volume of an odd shape by displacement — how much the water level rises when you put it in.

The steel ship problem. Steel is about 8 g/cm³, eight times denser than water. So how does a steel ship float? The answer is in the word *volume*.

Object C has a density of exactly 1. What would it actually do in water?

The ship is not made of steel — it is mostly air. Take the whole hull, air included, and its average density is well under 1. Crush it into a solid block and it sinks immediately.



Squeezing water, squeezing air

Two blocked syringes, five seconds, and the whole difference between hydraulics and pneumatics.



test



explain

✓ Do this first

Fill one syringe with water and one with air. Block the end of each with a finger and push.

Water: Air:

Hydraulic — uses a liquid

Liquids barely compress, so the force goes straight through. **Precise.**

Two examples:

.....

Pneumatic — uses a gas

Gases compress, so there is give in the system. **Springy.**

Two examples:

.....

Why are car brakes hydraulic and not pneumatic? Use what you felt in the syringes.

.....
.....

And why is a bicycle tyre pneumatic? Same reasoning, opposite conclusion.

.....

Using particle theory: in a gas the particles have big spaces between them, so they can be pushed closer. In a liquid they are already nearly touching.



Input, process, output

The strand that gives this book its title. Find those three parts and you have understood any system.

- 👁 identify
- ✍ apply it

 **What makes something a system**

A set of parts working together toward a purpose, with something going in, something happening to it, and something coming out. And always some loss along the way.

System	Input	Process	Output	What is lost
A bicycle				
A kettle				
Your digestive system				
A watershed				
A school				

Now find one in the room that nobody would normally call a system. Name its three parts.

The last two rows are the interesting ones. A watershed and a school are systems in exactly the same technical sense as a kettle — and both lose something in the process.



An honest trade

Mechanical advantage. A machine never creates energy — it lets you swap force for distance.

- measure
- calculate

✓ The ramp

Lifting a heavy box straight up needs a lot of force over a short distance. Pushing it up a ramp needs less force over a longer distance.

work = force × distance

The work stays roughly the same. The machine only changes how it is spread out.

Machine	What you gain	What you give up
A ramp		
A crowbar		
A pulley system		
Low gear on a bicycle		

So why is efficiency never 100%? The work in and the work out are nearly equal — but not quite. Where does the missing energy go?

Build and measure. Use a ramp to lift something. Measure the force needed and the distance travelled, both up the ramp and straight up. How close are the two amounts of work?

Friction turns some of the work into heat. That is where it goes — and it is why nothing is ever 100% efficient, no matter how well it is built.



When the system does the job instead

Automation is on the curriculum, not a digression. The strand names the impact of technological systems on society — including on work.

weigh it argue

Change	A job it created	A job it displaced
Self-checkout tills		
Automated warehouses		
Online mapping and directions		
Software that writes or draws		

Both columns are real. Pick one row and think it through: who gained, who lost, and were they the same people?

.....

.....

.....

The harder question. A new job created and an old job displaced are not automatically a fair swap. Name one reason why not.

.....

The usual reason is that they are not the same person. The warehouse worker does not become the robotics technician, and the retraining is not free or quick.

Grown-ups: this is a live question in every family. The curriculum asks for both sides, which makes it a good conversation rather than a lecture.

Science · Strand D · A2 · A3



A very thin slice

About 97% of Earth's water is salt. Most of the rest is frozen. What is left is what everything alive on land depends on.

⋮ calculate

~ show it

Where the water is	Roughly what share	As a fraction
Oceans — salt water	97%	
Glaciers and ice caps	2%	
Groundwater, lakes, rivers, atmosphere	1%	

Show it properly. Draw a circle graph of those three shares — and be honest about how hard the 1% slice is to draw.

Angle for the 1% slice: degrees

Canada holds a large share of the world's accessible fresh water. Find out roughly how much, and one responsibility you think that creates.

.....

.....

The 1% slice is 3.6 degrees wide. On a circle graph it is almost invisible — which is a fair picture of how much accessible fresh water there actually is.



Which watershed are you in?

Every place on land drains somewhere. Find out where your street's rain ends up.

- 👁 find out
- 🗺 map it

Words for this strand

Watershed — all the land that drains into one river or lake.
Groundwater — water held underground in soil and rock. **Aquifer** — a layer that holds a lot of it.
Divide — the high ground where one watershed ends and the next begins.

Question	What I found
Which watershed do I live in?	
Which river or lake does it drain into?	
And where does that water go after that?	
Does my drinking water come from surface water or groundwater?	

Draw your watershed — roughly is fine. Mark your home, the water it drains to, and where that water goes next.

Follow it far enough and most Ontario water reaches the Atlantic — usually by way of the Great Lakes and the St Lawrence. Some of northern Ontario drains to Hudson Bay instead.

Grown-ups: Ontario conservation authorities publish watershed maps online. Finding your own turns the diagram into local geography. Science · Strand E



What we put in it

A watershed is a system, so anything you add upstream arrives somewhere downstream.

- investigate
- propose

What goes in	Where it ends up	One way to reduce it
Road salt in winter		
Fertiliser from farmland		
Microplastics from laundry		
Rain running off tarmac instead of soaking in		

The last row is the one people miss. Why is a car park a water problem, and not just a parking problem?

Find out one thing about how First Nations, Métis or Inuit communities understand responsibilities toward water. What does it ask of people?

Hard surfaces send rain straight to the storm drain instead of letting it soak in — so floods get worse and groundwater gets less. That is why new developments are asked to include permeable ground.

Grown-ups: the strand names Indigenous knowledge of and relationships with water. It belongs in the strand, not as an add-on.

Science · Strand E · A3



Building a country

Confederation is a system too. Somebody designed it, in rooms, and the design decided who got what.

orient

note

Strand A

Creating Canada, 1850–1890

Political deadlock · the Charlottetown, Quebec and London conferences · **Confederation in 1867** and the British North America Act · westward expansion · the Red River and North-West Resistances and **Louis Riel** · the numbered Treaties · the **Indian Act of 1876** · the beginning of residential schools · the Canadian Pacific Railway

Strand B

Canada, 1890–1914: A Changing Society

Mass immigration and the settling of the West · urbanisation and industrial working conditions including **child labour** · the labour movement · women and the early suffrage campaign · the Chinese head tax and the *Komagata Maru* · Canada and Britain

The four historical thinking concepts

Significance — why does this matter, and to whom? · Cause and consequence
Continuity and change — what stayed the same? · Perspective

Confederation as a system. What went in, what came out, and — as with every system on sheet 17 — what was lost?

Input:

Output:

Lost:

The curriculum asks students to assess the impact of inequality in this period. The creation of Canada was also the dispossession of others, and both belong in the same account.



Who was in the room

Thirty-six men attended the Quebec Conference of 1864. That fact is the beginning of an argument, not the end of one.

consider argue

Group	Were they represented at Confederation?	What happened to them as a result
English-speaking colonial politicians		
French-speaking Canadiens		
First Nations peoples		
The Métis of Red River		
Women		
Black communities in the colonies		

The Indian Act of 1876 and the residential school system both come after 1867. What does it tell you that they were possible under the new arrangement?

.....

.....

Louis Riel's story is where the two halves meet. Depending on who was telling it, he was a traitor, a defender of a people, or a founder of a province — and the accounts have never been reconciled.

Grown-ups: Riel is genuinely contested in Canadian historiography, which makes him an honest example rather than a settled one. History · Strand A



Then and now

Grade 8’s new move: compare this period with the present day, and argue about what has actually changed.

compare

judge

Around 1900	Today	Changed, or the same in a new form?
Children worked in factories and mines		
Immigration was restricted by nationality		
Women could not vote federally		
Workers had no legal right to organise		
Cities grew faster than their housing		

The middle column is easy. The right-hand one is the assessment. Pick the row you found hardest to judge and explain why it resisted a simple answer.

Child labour did not disappear from the world. Does that change how you fill in the first row? Say why or why not.

"Changed" and "moved somewhere else" are not the same thing — and telling them apart is exactly what the concept of continuity and change is for.



Facts, or what they meant

Two accounts disagree. Sort the disagreements into two piles — only one pile can be settled.

☒ compare☐ sort

My event:

	Source 1	Source 2
Who made it, and when?		
Who was it made for?		
What does it claim happened?		
What does it say it meant?		

Disagreements about facts could a third source settle these?

.....
.....

Disagreements about meaning could anything settle these?

.....
.....

Your position on the event — and it must account for both sources, not just the one you prefer.

.....
.....

This is the same move as Language sheet 7. Once you know whether you are arguing about a fact or about a value, you know whether the argument can be won.



Find your family, or find your street

This is the period when Canadian record-keeping gets good. Census records and passenger lists are online and free.

 search record

Two routes, and either is fine. Look for **your own family** in this period — a census entry, a ship's list, an arrival record. Or, if your family was not here then, look for **the place you live**: who was on your street in 1901, and what did they do?

What I looked for	Where I looked	What I found

What surprised you? Occupations, household sizes and ages at work are usually the surprising part.

And what could you not find out? Whose lives are missing from the records you searched, and why might that be?

The gaps are evidence too. A record exists because somebody with authority decided to make it — and decided what was worth writing down.



Why there, at global scale

Grade 7 asked why physical features are where they are. Grade 8 asks why people are.

- read the map
- explain

The pattern	What draws people	What pushes them away
Huge populations along the great river valleys of Asia		
Almost nobody in the Sahara or central Australia		
Most Canadians within 200 km of the US border		
Coastal cities on nearly every continent		

Two words worth having
Population density — how many people per square kilometre. *The same word as in Science, doing the same job.*
Distribution — where they are spread, and how evenly.

Density and distribution are not the same thing. Describe a country that could have low density and very uneven distribution. Canada is one — explain why.

Canada averages about 4 people per square kilometre — one of the lowest densities on Earth. And most of them live in a thin band along one border. Both facts are true at once.



Design a place people could live

"Sustainable community" is a design brief, not a slogan. Sketch one and defend three decisions.

- design
- defend

Your brief. A neighbourhood for about 2 000 people. It has to handle housing, getting around, water, energy, waste, food and somewhere to be outside — and it has to still work in fifty years.

Include a scale and a legend. This is Mathematics `E1.3` doing real work.

Decision I made	Why	What I gave up

Every design decision costs something. Higher density means less private space. More parkland means longer distances. A design with no trade-offs has not been thought about.

Grown-ups: the "what I gave up" column is what separates a plan from a wish list, and it is where the assessment lives.



What an indicator measures

And what it misses. Every development indicator is a choice about what counts.

- investigate
- critique

Indicator	What it measures	What it misses
GDP per capita		
Literacy rate		
Life expectancy		
Human Development Index		
Access to clean water		

GDP per capita is an average. Using what you know about the mean from Mathematics, explain how a country could have a high GDP per capita and most people still be poor.

Invent a better indicator. Name one thing you would measure that none of the five above captures, and say how you would measure it.

An average hides distribution completely. That is the same point as the outlier and the mean in Mathematics — and here it has real consequences for who gets counted as poor.



Plot two variables and look

This is where the Grade 8 scatter plot earns its keep. Thirty countries, two numbers each.

⋮ collect

~ plot

My two variables: and

Good pairs: literacy against life expectancy · GDP per capita against access to clean water · years of schooling against child mortality

Country	Variable 1	Variable 2

Plot it. Label both axes and say where each one starts.

Describe it in the five words: strong or weak, positive or negative, or none. Then the crucial question — does one *cause* the other?

Almost certainly not, in either direction. Wealth, health and education move together because they all depend on each other and on a great deal else. A scatter plot cannot untangle that, and honest analysts say so.

Grown-ups: this is the single best cross-curricular task in the Grade 8 programme — the mathematics expectation and the geography expectation are doing the same job.



Causes, and responses

The curriculum asks for both. A tour of other people's poverty is not geography.

- investigate
- evaluate

The four economic sectors

- Primary — taking things from the earth: farming, fishing, mining, forestry.
- Secondary — making things: manufacturing, construction.
- Tertiary — services: shops, transport, health, teaching.
- Quaternary — knowledge: research, design, information.

Which sector pays best, and where does each one tend to be located? What does that pattern have to do with global inequality?

A cause of inequality	A response to it	Who does the response depend on?

The honest question. Name one thing wealthy countries do that helps, and one thing they do that makes inequality harder to change.

The last column matters most. A response that depends entirely on other people's generosity is fragile. One that changes a rule, a price or a trade arrangement is not.

Grown-ups: the curriculum names **and** responses. Keeping both in view is what stops the strand becoming either causes despairing or complacent.



Consent, and what makes a relationship healthy

This is the last year school will raise this before secondary. It is worth being plain.

discuss

✓ recognise

Consent

Freely given — not pressured, not worn down, not because saying no felt impossible.

Ongoing — it can be withdrawn at any time, including after it was given.

Specific — agreeing to one thing is not agreeing to anything else.

Informed — you know what you are agreeing to. And silence is not consent.

In a healthy relationship...	A sign something is wrong
You can disagree without it becoming a crisis	
You still see your other friends	
You are not asked to keep it secret from everyone	
You do not feel monitored	
You are not scared of how they will react	

Two things that are always true. Somebody who cares about you does not pressure you. And if you are being pressured, it is on them, not you — telling a trusted adult is the fastest way it stops.

Two people I could talk to if something did not feel right — write their names down now, on a day when nothing is wrong.

The right-hand column is the useful one. The signs that something is wrong are usually about isolation and fear, not about arguments.



Substances, and the decision before the decision

The choice is almost never made in the moment. It is made earlier, by deciding what you will do if.

think ahead

plan

What people say	What is actually true
"Vaping is just water vapour."	
"Everyone in our year does it."	
"It's legal for adults, so it must be fine."	
"I can stop whenever I want."	

Check the second column against a reliable source — a public health site, not an advertisement or a forum.

"Everyone does it" is worth checking. Surveys consistently find that young people *overestimate* how many of their peers use substances. Why would that misjudgement matter?

The decision before the decision. Write one sentence you could actually say out loud, in the moment, that gets you out of it without a speech.

A short line you have already decided on beats a good argument you have to invent on the spot. "No thanks, I'm good" is a complete sentence.

Grown-ups: the overestimation finding is robust and genuinely useful — young people think usage is far more common than it is.

HPE · Strand D · A



Asking for help is a skill

The last health sheet of elementary school. This is the one worth taking with you.

notice

practise

Ordinary stress

Has a cause you can name · lifts when the thing is over · you can still sleep, eat and enjoy other things

Worth telling someone

Lasts for weeks · no clear cause, or it does not lift · you have stopped doing things you used to like

Asking is a skill, so here are the words. Fill one in that you could actually say.

"Can I talk to you about something? I don't need you to fix it, I just need to say it out loud."

Mine, in my own words:

And for a friend. What would you say to somebody who has gone quiet for a few weeks and keeps insisting they are fine?

If things ever feel like too much, you can talk to someone at any hour. In Canada, Kids Help Phone is free and confidential: 1-800-668-6868, or text CONNECT to 686868. You do not need a reason good enough.

"I don't need you to fix it" is the part that makes it easier to say. Most people freeze because they think asking commits them to a whole conversation. It does not.

Grown-ups: giving a young person the actual words is more useful than encouraging them to talk. The script lowers the cost of starting.

HPE · Strand D · A

Choices you can defend

That is the difference between a Grade 8 portfolio and a Grade 6 one. Not more skill — more intention.

make

defend

The Grade 8 focus: movement. Grades 1 to 6 each had one named principle, ending with balance in Grade 6; Grade 7's is unity and harmony. Grade 8's is movement: real lines that lead the eye, or an implied path made with shape, value and colour — large shapes to small, dark to light. The principle about where a work sends you.

Make something on this book's theme: *everything is a system*. Visual art, drama, music or dance — your choice, and your form.

Choice I made	Why I made it	What I rejected

"What I rejected" is the column that shows intention. A choice is only a choice if something else was possible.



Where the disagreement is

The five steps, run without prompting — and then the question this whole book keeps asking.

👁 analyse

💬 compare

What I am looking at or listening to:

Step	Mine	Somebody else's
1. Initial reaction		
2. Description only what is there		
3. Analysis		
4. Interpretation		
5. Judgement and why		

Compare the two columns. At which step did you first disagree? And was that disagreement about a fact, or about what it meant?

.....

.....

If you disagreed at step 2, one of you missed something. If you agreed all the way to step 5 and then split, neither of you is wrong — and that is what art is for.



Where the form came from

Every art form was invented by somebody, somewhere, usually for a reason. That is the third overall expectation.

research

trace it

A form I actually like:

Question	What I found
Where and when did it come from?	
Who made it first, and why?	
What did it mean to that community?	
How has it changed since?	
Who profits from it now?	

The last row is the Grade 8 question. A form can travel a long way from the people who made it. Is that a problem? Say what you think and why.

.....

.....

There is no settled answer here — people who study this disagree, and they disagree at step 5, not step 2. What matters is that you can say why you landed where you did.

Grown-ups: this is a real and contested question in cultural criticism. A student who can hold it open rather than resolving it quickly is doing Level 4 work.

The Arts · Exploring Forms and Cultural Contexts



Input, process, output – seven times

One frame, seven subjects. And every single one of them loses something in the middle.

connect

name it

Sheet	The system	In	Out	What was lost
5	A news report			
11	A cell in a body			
18	A ramp			
21	A watershed			
23	Confederation			
30	GDP per capita as a measure			
37	You, reading a work of art			

So what is the frame actually good for? One sentence, your own words. Not "everything is a system" – say what asking those three questions lets you notice.

And the last column. Why is "what was lost" the most useful question of the four?

Because nobody advertises the loss. Every system's output is what gets shown to you. Asking what went in, and what did not come out, is how you find the rest.

Grown-ups: transfer of one analytical frame across seven subjects is the strongest possible Level 4 evidence. This sheet makes it nameable. All strands

What was verified, and what wasn't

Please read this before citing anything here in a report card comment, a lesson plan or an IEP.

Subject	Document	What was actually checked
Science and Technology	Science and Technology, 2022	✅ All five strand names — Cells, Fluids, Systems in Action, Water Systems — confirmed across several independent 2022-aligned sources. For once there was no 2007/2022 renaming discrepancy , unlike Grades 5, 6 and 7. Specific codes not checked one by one ; cited at strand level.
History	Social Studies 1–6; History and Geography 7–8, 2018	✅ Both Grade 8 strand names verified, including from TVO Learn. Specific codes not verified — cited at strand level. Content under each strand reflects standard Grade 8 coverage, not a verified expectation list.
Geography	Same document	✅ Both Grade 8 strand names verified, including from TVO Learn. Same caveat as History.
Language	Language, 2023	⚠️ Overall expectations `B1`, `C1`, `C2`, `C3` confirmed from a secondary source reproducing the Ministry text. Grade 8 specific expectations not verified.
Health and P.E.	HPE, 2019	⚠️ Strand names only. No codes cited anywhere for Health — deliberate, not an oversight.
Core French	FSL, 2013	⚠️ Strand names only. No codes cited.
The Arts	The Arts, 2009	✅ Strand structure, and the Grade 8 principle-of-design focus — movement , read from the Visual Arts pages of <i>The Arts, 2009</i> . Earlier editions named no Grade 7 or Grade 8 focus, saying neither could be confirmed; both have since been read from the document (Grade 7 is unity and harmony). Other Arts specifics remain strand-level.

Why the citations look uneven. Where you see an overall expectation code, it was verified. Where you see only a strand name, it wasn't. The companion **Grade 8 Mathematics** book is verified expectation by expectation and cites all 44.

For teachers: the Ministry's curriculum is at dcp.edu.gov.on.ca. If you confirm the Language, Health, French or Arts Grade 8 specifics against it, those sheets can carry proper codes — the content is already aligned to the right strands.

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Grown-ups: this page exists because these materials are used in real classrooms, and a wrong expectation code in a report card is worse than no code at all.

Verification notice