research nest

LESSON 1 · RESEARCH NEST COURSE

From Curiosity to a Research Topic

> *What is something you noticed this week that made you ask "Why does that happen?"*

Every research project starts as a question someone could not stop thinking about.

Today: turn that curiosity into a topic you can actually finish.

LEARNING OBJECTIVES

What you will be able to do

By the end you will have a one-page Topic Proposal ready to take into Lesson 2.

- Map your interests and spot ones worth researching.
- Narrow a broad topic using place, time, group and aspect.
- Check feasibility: time, access, skills, ethics and resources.
- Write a clear topic statement and a working research question.
- Explain why topics change as you research — and why that is normal.

CONCEPT 1

Curiosity, topic, question: three different things

Researchers move step by step from a broad interest to a question they can answer.

1
Curiosity
Something you wonder about: “Why do I lose focus at lunch?”

→

2
Broad topic
A general area: noise and concentration

→

3
Narrowed topic
A specific place, group, time or aspect

→

4
Working question
What exactly you want to find out — open, not yes/no

Adapted from: Booth et al. (2024), The Craft of Research; GMU Writing Center

CONCEPT 2

Four ways to narrow a topic

Add one or two limits at a time until the topic fits your time and resources.

Place

Smaller area, sharper focus: “cities” → “our town centre”.

Time

Shorter period: “20th-century music” → “UK protest songs, 1980–1985”.

Group or type

A specific group or kind: “students” → “Year 9 students who commute by bus”.

Aspect

One angle: “video games” → “how puzzle games present failure to players”.

CONCEPT 3

Feasibility: can you actually do it?

A brilliant topic is useless if you cannot finish it. Check five factors before you commit.

Factor	Ask yourself
Time	Can I collect and analyse what I need in about 4–6 weeks?
Access	Can I reach the people, places, texts or data I need?
Skills	Do I have, or can I quickly learn, the methods required?
Ethics	Is it safe and respectful? Do I need consent or approval?
Resources	Does it need equipment, money or a lab I do not have?

Adapted from: Farrugia et al. (2010), FINER criteria; Society for Science, ISEF rules

WORKED EXAMPLE · STEP 1 INVENTED EXAMPLE

Noor’s curiosity: “Why can’t I focus at lunch?”

Noor (Grade 11) keeps losing focus when studying at lunchtime. She brainstorms possible causes.

Phones

Notifications and scrolling. Interesting, but she suspects many studies exist already.

Hunger and timing

Studying before eating. Hard to measure without diet details.

Noise

People talking nearby. She notices it most in the cafeteria. Strong pull ✓

Friends

Social interruptions. Linked to noise — keep as a related idea.

WORKED EXAMPLE · STEP 2 INVENTED EXAMPLE

Narrowing “noise” into a topic Noor can study

Narrowed with place + group + aspect.

Working question (draft): How does background noise in our school’s study spaces relate to how well students concentrate?

BEFORE: BROAD TOPIC

Noise and concentration. (Whose? Where? What kind of noise? This covers airports, offices, hospitals and every age group.)

AFTER: NARROWED TOPIC

Background noise in our school’s study spaces and students’ concentration. (Place: our school. Group: students. Aspect: everyday study spaces.)

WORKED EXAMPLE · STEP 3 INVENTED EXAMPLE

Noor checks feasibility

Result: feasible, with one action — get supervisor and school approval before collecting any data.

Factor	Noor's situation	Verdict
Time	About 4 weeks around lessons	✓ if one school only
Access	Students in 3 study spaces; open to all	✓
Skills	Can run a short survey; phone sound app	✓ learn basics
Ethics	Survey of peers; Ms Rahman supervises	⚠ needs approval + consent
Resources	Phone + free tools; no lab	✓

FRAMEWORK

Decision guide: is my topic ready?

Run your topic through this check. Most topics loop back at least once — that is normal.

Can I explain my topic in one sentence that names a place, group, time or aspect?

No — it is one or two broad words	→ Narrow: add place, time, group or aspect, then check again.
Yes, but I find almost nothing to read	→ Broaden slightly or try other search terms; ask a librarian.
Yes, but a feasibility factor fails	→ Adjust scope or method (e.g. fewer sites, public data, no participants).
Yes, and all five factors pass	→ Ready: write your working question and start reading (Lesson 2).

Adapted from: USC Libraries, Narrowing a Topic Idea; Purdue OWL, Choosing a Topic

AVOID THESE

Common mistakes and how to fix them

Mistake	Fix
Topic is too broad (“social media”)	Add place, group, time or aspect until it fits 4–6 weeks
Question can be answered by a quick search	Ask how, why or to what extent; aim for analysis, not one fact
Assuming it must be an experiment	Consider surveys, interviews, texts, archives, public data or a design
Ignoring ethics until data collection	Check consent, privacy and approval with your supervisor first
Picking what sounds impressive, not what interests you	Choose a question you will still care about in week 5

See also: USC Libraries, Types of Research Designs

GUIDED PRACTICE · 20 MINUTES

Practice: from sticky note to Topic Proposal

Work alone, then in pairs. Paper or laptop is fine. Do not collect any data from people today.

1

1 · Map (4 min)

List 5 curiosities; circle the one you care about most.

→

2

2 · Name the topic (2 min)

Write the broad topic area in 1–4 words.

→

3

3 · Narrow (5 min)

Add at least two limits: place, time, group or aspect.

→

4

4 · Feasibility (5 min)

Rate time, access, skills, ethics, resources: ✓ / ⚠ / ✗.

→

5

5 · Pair check (4 min)

Partner runs the decision guide; revise once.

MODEL RESPONSE INVENTED EXAMPLE

Model answer: a history topic, annotated

FROM “WORLD WAR I” TO A WORKABLE TOPIC

Curiosity: “There is a war memorial near my school. Who were these people?” [1] Narrowed topic: How soldiers from our town described daily life in letters printed in the local newspaper, 1915–1916. [2] Feasibility: digitised newspaper available free; ~5 weeks; no participants. [3] Working question: What themes appear most often in these letters, and how do they change over the two years? [4]

Personal and specific starting point

Place + group + time + aspect; no experiment needed

Access and ethics checked; low risk

Open, analytical and answerable

REUSABLE TEMPLATE

Your one-page Topic Proposal

- [ ] Interest map: 5 curiosities, one circled
- [ ] Broad topic (1–4 words)
- [ ] Narrowed topic: one sentence naming place, time, group and/or aspect
- [ ] Feasibility: time, access, skills, ethics, resources rated ✓ / ⚠ / ✗
- [ ] Plan for each ⚠ or ✗ (adjust scope, method or approval)
- [ ] Working question (how / why / to what extent …?)
- [ ] Why it matters: “so that readers understand …”

Statement frame adapted from: Booth et al. (2024), The Craft of Research

KNOWLEDGE CHECK

Quick check and next step

Next step: finish your Topic Proposal and show it to your supervisor.

Bring 3–5 search words for your topic to Lesson 2 (finding sources).

Which is a narrowed topic?

A Pollution **B** Air pollution in Asia **C** Air quality near our school gate at drop-off times **D** Is pollution bad?

Name two of the five feasibility factors and give one question for each.

True or false: every research project needs an experiment and a hypothesis.

Your topic passes everything except access. What could you do instead of giving up?

REFERENCES

Sources

Booth, W. C., Colomb, G. G., Williams, J. M., Bizup, J., & FitzGerald, W. T. (2024). The craft of research (5th ed.). University of Chicago Press. press.uchicago.edu/ucp/books/book/chicago/C/bo215874008.html

Farrugia, P., Petrisor, B. A., Farrokhyar, F., & Bhandari, M. (2010). Practical tips for surgical research: Research questions, hypotheses and objectives. Canadian Journal of Surgery, 53(4), 278–281. canjsurg.ca/content/53/4/278

George Mason University Writing Center. (n.d.). How to write a research question. writingcenter.gmu.edu/writing-resources/research-based-writing

Purdue Online Writing Lab. (n.d.). Choosing a topic. owl.purdue.edu/owl/general_writing/common_writing_assignments/research_papers/choosing_a_topic.html

Sacred Heart University Library. (n.d.). Broadening a topic idea. Organizing academic research papers. library.sacredheart.edu/c.php?g=29803&p=185907

Society for Science. (n.d.). International rules for pre-college science research. societyforscience.org/isef/international-rules

The Writing Center, University of North Carolina at Chapel Hill. (n.d.). Brainstorming. writingcenter.unc.edu/tips-and-tools/brainstorming

USC Libraries. (n.d.). Narrowing a topic idea. Organizing your social sciences research paper. libguides.usc.edu/writingguide/narrowtopic

USC Libraries. (n.d.). Types of research designs. Organizing your social sciences research paper. libguides.usc.edu/writingguide/researchdesigns