

Teaching Students to Develop Ideas Through Experimentation

A printable teacher pack for GCSE and A Level Art and Design

This resource helps students move beyond disconnected material trials. It structures experimentation as a purposeful cycle in which students ask a question, control a change, compare evidence and use the result to make the next creative decision.

What is included

- Teacher guidance for modelling purposeful experimentation without prescribing outcomes
- Reusable planning, testing, comparison, annotation and development sheets
- Prompts that connect practical decisions to AO1, AO2, AO3 and AO4
- Adaptable pathways for Fine Art, Photography and Graphic Communication
- A final critique and next-action record for independent student use

Core process

1 QUESTION	2 TEST	3 COMPARE	4 DEVELOP
What do I need to find out?	What will I change and keep constant?	What does the evidence show?	What will I refine, combine or reject?

Print the whole pack or select only the pages needed for a project, lesson, tutorial or intervention.

Teacher guidance

Use this pack to make practical decision-making visible while keeping ownership of ideas with the student.

Purposeful experimentation

Experimentation is strongest when it answers a live question within a student's developing idea. A successful test does not have to look resolved. It needs to produce usable evidence about materials, processes, visual language, meaning or audience.

LOOK FOR	AVOID
A clear question or intention	A fixed number of experiments completed for compliance
One deliberate change that can be observed	Many variables changed at once with no comparison
Specific noticing supported by visual evidence	Generic comments such as 'I like it' or 'it worked'
Selection, rejection, combination or refinement	Keeping every outcome without explaining its value
A next step that follows from the result	A teacher-prescribed outcome copied by the student

A useful teaching sequence

- Model one short test and think aloud: state the question, name the variable and notice concrete evidence.
- Ask students to predict before testing, then compare the prediction with the result.
- Use paired critique to identify what should be carried forward, changed or left behind.
- Fade the prompts as students become more independent; retain only the questions they still need.

Assessment note: these prompts support evidence across the assessment objectives, but no single sheet, sentence or experiment guarantees a particular grade.

The experimentation cycle

Introduce the cycle as a way of thinking rather than a checklist. Students may move backwards, repeat a stage or combine tests when the evidence justifies it.

STAGE	STUDENT ACTION	USEFUL TEACHER QUESTION	VISIBLE EVIDENCE
QUESTION	Identify something worth finding out	What decision are you trying to make?	Question, prediction, reference or intention
TEST	Change one significant variable	What will change and what will stay constant?	Material trial, contact sheet, study or prototype
NOTICE	Describe specific visual or technical effects	What can you point to that supports that judgement?	Labels, crops, close-ups and process notes
COMPARE	Place outcomes together and identify differences	Which result best serves the idea, and why?	Side-by-side comparison and selection
DEVELOP	Refine, combine, scale, edit or redirect	How will this evidence change the next outcome?	A reasoned next step and further practical work

Three questions to keep visible

CHANGE	PURPOSE	EVIDENCE
What is different in this test?	Why is that difference relevant to the idea?	What can be seen, measured or compared?

Teacher planning notes

PROMPT	YOUR NOTES
Where in the current project will a real decision benefit from testing?	
Which prompts can be removed for students ready to work independently?	
What materials, equipment or safety guidance will be needed?	

Starting with a useful question

A useful experimentation question is focused enough to test but open enough to lead somewhere unexpected.

STUDENT	PROJECT	DATE
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My current idea

PROMPT	YOUR NOTES
What am I investigating, communicating or trying to make the viewer notice?	
What is not yet resolved in my work?	

Turn the uncertainty into a question

QUESTION STEM	MY QUESTION
How might changing ... affect ...?	
Which material, process or viewpoint best communicates ...?	
What happens if I combine, remove, repeat, crop or distort ...?	
How can I develop an aspect of an artist's approach without copying the outcome?	

My most useful question is:

WRITE ONE FOCUSED QUESTION

Planning a controlled comparison

Change one significant variable at a time when you need to understand cause and effect. Keep other conditions consistent enough for the comparison to be meaningful.

STUDENT	QUESTION	DATE
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VARIABLE	WHAT I WILL CHANGE	WHAT I WILL KEEP CONSISTENT	WHY THIS MATTERS
Material			
Colour or tone			
Tool or process			
Surface or scale			
Composition, crop or viewpoint			
Time, light or exposure			

Prediction

PROMPT	YOUR NOTES
I predict that the change will ...	
I will know the test is useful if I can compare ...	

Safety and access check

	CHECK
☐	Equipment and processes have been risk assessed
☐	An accessible alternative or adaptation is available where needed
☐	Materials, ventilation, lighting and cleanup are prepared

Test compare develop planning sheet

Plan a short sequence in which each practical action produces evidence for the next decision.

STUDENT	PROJECT	LESSON OR SESSION
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STAGE	WHAT I WILL DO	WHAT I NEED	EVIDENCE I WILL RECORD
TEST 1			
TEST 2			
COMPARE			
DEVELOP			

Keep the purpose visible

PROMPT	YOUR NOTES
The idea, question or intention that connects these tests is ...	
The decision I expect this sequence to help me make is ...	

Experiment record

Record enough information to understand what happened and to repeat, adapt or reject the process later.

STUDENT	EXPERIMENT	DATE
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QUESTION	PREDICTION

Process and evidence

WHAT I CHANGED	WHAT I KEPT CONSISTENT	MATERIALS AND PROCESS
PLACE, ATTACH OR SKETCH VISUAL EVIDENCE HERE		
TRY	NOTICE	SELECT
What did I do?	What specific effect can I see?	What is worth carrying forward?

Experiment record continuation

Use a second record for a comparison test, refinement or unexpected direction.

STUDENT	EXPERIMENT	DATE
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QUESTION	WHAT CHANGED FROM THE PREVIOUS TEST
PLACE, ATTACH OR SKETCH VISUAL EVIDENCE HERE	
PROMPT	YOUR NOTES
The most significant difference is ...	
This matters to my idea because ...	
My next test or development will ...	

Compare select and justify

Place outcomes side by side. Select according to the purpose of the work, not simply the neatest or most technically controlled result.

STUDENT	PROJECT	DATE
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COMPARISON CRITERION	OUTCOME A	OUTCOME B	OUTCOME C
Visual effect			
Connection to intention			
Connection to artist or contextual research			
Technical potential			
Risk, surprise or originality			
Limitation or problem			

Decision

PROMPT	YOUR NOTES
I will carry forward ... because the evidence shows ...	
I will leave behind or change ... because ...	
I could combine ... with ... to ...	

Using unexpected results

An accident, failure or technical limitation can become useful when the student notices its effect and decides whether it serves the developing idea.

STUDENT	EXPERIMENT	DATE
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WHAT I EXPECTED	WHAT ACTUALLY HAPPENED

Examine the result

PROMPT		YOUR NOTES	
What caused or may have caused the difference?			
Which visual, material or conceptual quality is worth noticing?			
Does the result support, complicate or redirect my intention?			
Should I repeat it, control it, combine it, scale it up or reject it? Why?			
NEXT STEP	PURPOSE	EVIDENCE I WILL COLLECT	

Writing specific experimental annotation

Write about decisions and visible evidence. Avoid generic evaluation that could describe any piece of work.

INSTEAD OF	WRITE ABOUT	USEFUL LANGUAGE
It worked well	The precise visual or technical effect	created, reduced, intensified, disrupted, revealed
I like this one	Why it serves the intention or audience	communicates, suggests, directs, contrasts, unsettles
I used paint	The material, handling, surface and control	diluted, layered, scraped, absorbed, resisted
Next I will improve it	The exact change and reason for it	crop, repeat, isolate, enlarge, combine, simplify
The artist inspired me	The specific approach tested and transformed	adapted, challenged, reinterpreted, extended

Build one useful annotation

PROMPT	YOUR NOTES
Question: I wanted to find out whether ...	
Test: I changed ... while keeping ... consistent because ...	
Result: The evidence shows ...	
Judgement: This is useful or limited because ...	
Next step: I will ... so that ...	

Choose only the prompts that clarify your thinking. A shorter, specific annotation is more useful than a long generic description.

Connecting experimentation to AO1 AO2 AO3 and AO4

Experimentation is often most visible in AO2, but its value increases when students show how research, recording and refinement contribute to a personal response.

ASSESSMENT OBJECTIVE	WHAT EXPERIMENTATION CAN MAKE VISIBLE	STUDENT PROMPT
AO1	A relevant connection to artists, designers, photographers, cultures or contexts	Which specific approach am I investigating, and how will I transform it for my own purpose?
AO2	Systematic exploration, purposeful selection, refinement and control of media and processes	What did I change, compare, learn and carry forward?
AO3	Recording of observations, intentions, processes and judgements that informs development	What evidence captures the result accurately enough to support my next decision?
AO4	A personal and meaningful outcome informed by the strongest experimental evidence	How has this testing changed the way I will realise my intention?

Evidence connection map

RESEARCH OR STARTING POINT	EXPERIMENT AND RECORDING	DECISION AND REFINEMENT	OUTCOME IMPLICATION

Use current awarding-body assessment language for the specification being taught. This page is a planning aid, not a mark scheme.

Fine Art experimentation pathway

Use these prompts as starting points. Students should select variables that genuinely relate to their subject, intention and way of working.

AREA TO TEST	POSSIBLE VARIABLES	QUESTION TO ASK
Surface	absorbent, resistant, found, prepared, layered, damaged	How does the surface change the meaning or handling of the image?
Material	wet, dry, transparent, opaque, fluid, constructed	Which material quality best supports the atmosphere or idea?
Gesture and control	rapid, repeated, precise, erased, automatic, restricted	What balance of control and chance is most productive?
Scale and format	miniature, enlarged, cropped, panoramic, fragmented, serial	How does format affect attention, physicality or narrative?
Combination	drawing with print, paint with collage, image with object	What becomes possible when two processes are combined?

Plan a Fine Art test

PROMPT	YOUR NOTES
My question	
The variable I will change	
The quality I will observe	
How this test connects to my intention or contextual research	
What I may develop next	

Photography experimentation pathway

Move beyond effects for their own sake. Test how choices in capture, lighting, sequence and editing change meaning and viewer response.

AREA TO TEST	POSSIBLE VARIABLES	QUESTION TO ASK
Viewpoint and framing	distance, angle, crop, obstruction, reflection, negative space	How does framing control what the viewer knows or notices?
Light and time	direction, hardness, colour, duration, movement, time of day	Which lighting choice best communicates the intended atmosphere?
Camera control	shutter, aperture, focus, depth, lens, intentional movement	What does technical control reveal, conceal or transform?
Sequence	single image, pair, grid, typology, narrative order, repetition	How does the relationship between images affect interpretation?
Post-production and presentation	tone, colour, layering, print surface, scale, projection	When does editing strengthen the idea, and when does it distract?

Plan a Photography test

PROMPT	YOUR NOTES
My question	
The variable I will change	
The camera or editing settings I need to record	
How I will compare contact sheets or outcomes	
What I may develop next	

Graphic Communication experimentation pathway

Test communication decisions against a clear purpose, message and audience. Record iterations so that development is visible.

AREA TO TEST	POSSIBLE VARIABLES	QUESTION TO ASK
Typography	family, weight, scale, spacing, hierarchy, hand-made type	How does typography change tone, pace or accessibility?
Composition	grid, alignment, contrast, proximity, white space, disruption	Which structure directs the viewer through the message most effectively?
Image and mark	photograph, illustration, symbol, texture, crop, abstraction	What kind of image-making best supports the intended message?
Colour	limited palette, contrast, saturation, association, legibility	How does colour affect emphasis, meaning and readability?
Format and interaction	poster, editorial, packaging, screen, motion, sequence	How should the communication change for its real context of use?

Plan a Graphic Communication test

PROMPT	YOUR NOTES
Audience and communication goal	
The variable I will change	
What will remain consistent for comparison	
How I will gather or judge evidence	
What I may develop next	

From experiment to development

Turn experimental evidence into a practical sequence of decisions. The strongest next step may refine, combine, enlarge, simplify, repeat or redirect an idea.

STUDENT	PROJECT	REVIEW DATE
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EVIDENCE FROM MY TESTS	DECISION	REASON LINKED TO INTENTION
Strongest visual or technical quality		
Most useful contextual connection		
Problem or limitation to address		
Unexpected possibility to explore		

My development sequence

NEXT ACTION	WHAT WILL CHANGE	PURPOSE	EVIDENCE TO RECORD	WHEN
1				
2				
3				
4				
PROMPT		YOUR NOTES		
The point at which I will pause and review is ...				
I will know the development is ready to move towards an outcome when ...				

Experimentation critique and feedback record

Use precise questions to protect student ownership. Feedback should identify evidence and open a decision, not prescribe the finished outcome.

STUDENT	REVIEWER	DATE
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REVIEW FOCUS	EVIDENCE NOTICED	QUESTION OR SUGGESTION
Clarity of the experimentation question		
Purposeful control of variables		
Specific comparison and annotation		
Connection to intention and context		
Potential for further development		

Student response

PROMPT	YOUR NOTES
The feedback that helps me see my work differently is ...	
The decision remains mine. My next action will be ... because ...	
Evidence I will bring to the next review ...	

Planning use adaptation and independence

Select, adapt and remove scaffolds according to the learner, project stage and teaching purpose. Do not require every student to complete every page.

Choose the lightest useful support

STUDENT NEED	POSSIBLE SUPPORT	PLAN TO REDUCE SUPPORT
Unclear starting point	Use the question stems on page 4 and model one example	Remove stems once the student can frame a focused question
Disconnected material trials	Use the controlled comparison and record sheets	Move to brief sketchbook labels when decisions become visible
Generic annotation	Use the Question Test Result Next step structure	Retain only one or two prompts that sharpen judgement
Difficulty selecting	Use the comparison criteria on page 9	Ask the student to choose their own criteria for later reviews
Ready for greater independence	Use only the final development plan or a blank sketchbook page	Agree review points rather than prescribing steps

Teacher implementation notes

PROMPT	YOUR NOTES
Pages to print or share	
Students or groups who may benefit	
Adaptations, vocabulary or access arrangements	
When prompts will be faded	
How student decisions and evidence will be reviewed	

Examples and prompts in this pack are illustrative. Adapt terminology and assessment references to the course specification and centre context.