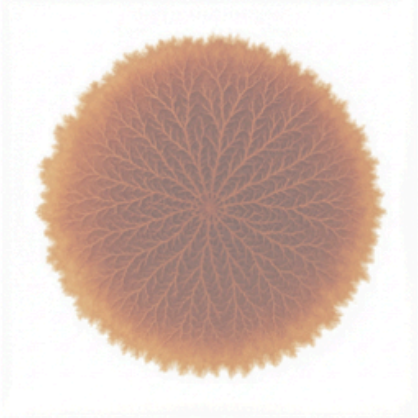
Reactive Surface Experiments (RSE)

Classroom Field Kit

A Shared Laboratory

Reactive Surface Experiments — Commons Edition

Program 9 — Repeatability



Program 9 — Repeatability

What Persists Across Attempts

Purpose of This Program

This program introduces repeatability as a tool for distinguishing pattern from coincidence. Participants repeat a single experiment under similar conditions to observe which aspects remain consistent and which vary.

Repeatability does not require identical outcomes. It reveals which behaviors persist despite minor differences.

The goal is not precision.
The goal is recognition.

What This Program Explores

Participants conduct the same experiment multiple times, observing:
- Which features recur
- Which features shift
- Which differences appear random
- Which differences appear structural

Chemistry, dilution, and method are repeated as closely as practical. Minor variation is expected.

Suggested Approach

Repeat an experiment two or more times.

Avoid correcting outcomes between attempts.

Compare results side by side, noting:
- Similarities in pattern or timing
- Differences in intensity or spread
- Recurring edge or failure zones

Participants are encouraged to record both confidence and doubt.

What to Pay Attention To

When documenting this program, give particular attention to:
- What repeats reliably
- What changes unpredictably
- Which variables were difficult to hold constant
- Confidence level in recorded data

Repeatability clarifies which observations matter.

Why This Program Comes Ninth

After failure is legitimized, repetition becomes meaningful.

This program teaches participants how to distinguish behavior from accident — a critical step toward shared understanding.

Reactive Surface Experiments (RSE)
Lab Sheet — Community Submission

Lab Sheet Code

QR placeholder

Experiment Title: _____

Section A — Experiment Identification

Field	Entry
Program Type	☐ Law of Entry ☐ Dilution ☐ Time-Series ☐ Atmosphere ☐ Application ☐ Substrate ☐ Failure ☐ Edge ☐ Repeatability ☐ Open
Date	_____
Contributor / Class Code	_____

Small type note: Not all fields are required. Record what is known.

Section B — Reactive Chemistry

Field	Entry
Reactive Substance (chemical name)	_____
Solution Type	☐ Aqueous ☐ Other
Dilution / Concentration	_____

Section C — Substrate & Surface Condition

Field	Entry
Substrate Type	☐ RSE Paper ☐ Other
Paper Batch / Source (if known)	_____
Surface Condition	☐ Dry ☐ Pre-wet ☐ Other
Surface Preparation Notes	_____

Section D — Application & Entry Method

Field	Entry
Method of Application	☐ Brush ☐ Mist ☐ Cascade ☐ Submersion ☐ Other
Estimated Volume	☐ Drops ☐ mL ☐ Light ☐ Heavy
Application Speed / Notes	_____

Not everything needs to be explained. Some things only need to be observed — together.

Section E — Environment

Field	Entry
Ambient Temperature	_____ °C / °F
Ambient Humidity	_____ % / □ Low □ Med □ High
Drying Condition	□ Open Air □ Boxed □ Covered □ Forced

Entry determines reaction. Everything above describes what was allowed to enter.

OBSERVATION & INTERPRETATION

(What happened, when, and how it was perceived)
This page privileges **language and attention**, not correctness.

Section F — Time & Change

Field	Entry
Time to First Visible Change	□ Seconds □ Minutes □ Hours □ Unknown
Total Observation Duration	_____

Section G — Visual Outcome (Descriptive, Not Evaluative)
Color Description (words, not codes):

Pattern / Behavior Observed:
□ Bloom
□ Migration
□ Edge Darkening
□ Collapse
□ Uniform
□ Other: _____
Uniformity:
□ Even □ Uneven □ Localized

Section H — Unexpected or Partial Outcomes
□ No
□ Yes → Describe:

Unexpected results are valid data.

Section I — Images (Uploaded Separately)

Field	Entry
Image Type	□ Still □ Time Series
Image Timing	□ Immediate □ Delayed □ Multiple
Notes on Images	_____

Section J — Confidence & Uncertainty

Field	Entry
Confidence in Recorded Data	□ High □ Moderate □ Low
Known Unknowns / Estimates	_____

Section K — Open Notes & Questions