**Assignment 2 — Method & Small Results**

**What & Why**

Assignment 2 asks you to design and test a simple method. You will connect your problem (A1) to a feasible final paper (A3) by building a method plan, running a minimal experiment or simulation, producing small results, and comparing them with a baseline.

**Do This**

* Declare your research type (e.g., simulation-based, quantitative).
* Fill out the Method Plan table (tools, inputs, outputs, success metric).
* Write a short action plan (step-by-step).
* Run at least one small test (simulation or collected data).
* Compare results against a baseline.
* Note limitations and reflect briefly.

**Method Plan Table**

| **Tools** | **Inputs** | **Outputs** | **Success Metric** |
| --- | --- | --- | --- |
| [student fills in] | [student fills in] | [student fills in] | [student fills in] |

**Tiny Results**

| **Metric** | **Baseline** | **After Method** |
| --- | --- | --- |
| [e.g., Energy Use (kWh/year)] | [10,000] | [6,000] |
| [e.g., Energy Savings (%)] | - | [40%] |
| [e.g., Carbon Reduction (tons/year)] | - | [1.5] |

*Hypothetical example shown; replace with your own results (simulated allowed if labeled).*  
Reflection: The simulation showed improved energy use, but accuracy is limited due to [limitations].

**Prompts (run these before submitting)**

**A2 Guidance Prompt (verbatim from pack)**

**Role:** Methodology design expert.  
**Objective:** Fully develop and execute methodology, run experiments, and report honest results.  
**Steps:**

1. Declare research type (quantitative, simulation-based, etc.).
2. Complete Methodology Plan Template:  
     - Tools to be used.  
     - Inputs.  
     - Outputs.  
     - Success metrics.
3. Create a step-by-step action plan.
4. Identify a minimal viable experiment.
5. Recommend clear result presentation (tables, graphs).  
   **Rules:** Honesty is critical; simulated experiments must be stated as such.

**A2 Evaluation Prompt (verbatim from pack)**

**Role:** Results auditor.  
**Input:** A2 draft (methodology, results, analysis).  
**Evaluation Criteria:**

* Method soundness (25%)
* Reproducibility (20%)
* Results clarity & evidence (30%)
* Baseline comparison & analysis (25%)  
  **Steps:**

1. Score each criterion.
2. Identify missing reproducibility details.
3. Suggest improvements for result clarity and analysis.  
   **Mandatory Check:** Compare results to baseline; verify data authenticity.

**Quick Checklist (mirror of Evaluation prompt)**

* Is the method logically sound and clearly explained?
* Could another student reproduce your steps?
* Are results shown clearly (table/graph)?
* Did you include a baseline for comparison?
* Did you analyze what the results mean?
* Are results marked as simulated if not real?

**What to Submit**

* Filename pattern: GC\_A2\_GroupX.pdf
* Deliverable: 1–2 page PDF with method plan + tiny results.
* Honesty note: Simulated data allowed if clearly labeled; no fabricated references.