Lab Report – Soil Glue & Respiration Activity

Group Members:
Date(s):
Class/Period:
Location:

Objective

What are you trying to find out in this investigation?
(Write a short statement explaining the goal of this activity — e.g., to compare how soils differ in stability and biological activity, and what that reveals about soil health.)

Safety Precautions

List at least three safety or hygiene rules you followed during this activity.

Materials Used

List all equipment and supplies used during the activity.

Procedure Summary
Briefly describe the main steps your group followed to complete the Soil Glue and Respiration tests.

Data Collection
Soil Glue Test Observations
(Record how each soil behaved in water and note water clarity or sediment.)

Soil Sample	Did the clod hold together?	Water clarity (clear, cloudy, sediment)	Notes (aggregation, stability)
A			
B			

Respiration Reveal (Fizz Test)
(Observe fizzing when vinegar reacts with baking soda in the jar near the soil sample.)

Soil Sample	Fizz Intensity (none, weak, moderate, strong)	Notes (speed, bubble size, smell)
A		
B		

Guiding Questions
Which soil held together better in the Soil Glue test?

Which soil produced stronger fizz (more microbial respiration)?

Why do soils with more life tend to be both more stable and more active?

What land management practices could increase soil stability and biological activity?

Reflection and Analysis

1. Summary of Findings

Describe what you discovered from your soil comparison.

2. Soil Health Connections

Explain how your results relate to soil structure, organic matter, and microbial life.

Why is soil organic matter a key indicator of soil health?

3. Recommendations

If you were advising a farmer, which soil would you recommend for crops, and why?

What specific practices could improve the poorer soil's stability and activity?

Conclusion

Summarize what you learned about how soil biology and structure work together to create healthy, resilient soils.

Appendix
Attach:

- Photos or sketches of your jars and soil samples
- Completed data sheets
- Graphs or charts of your results (optional)
- Any additional notes or observations