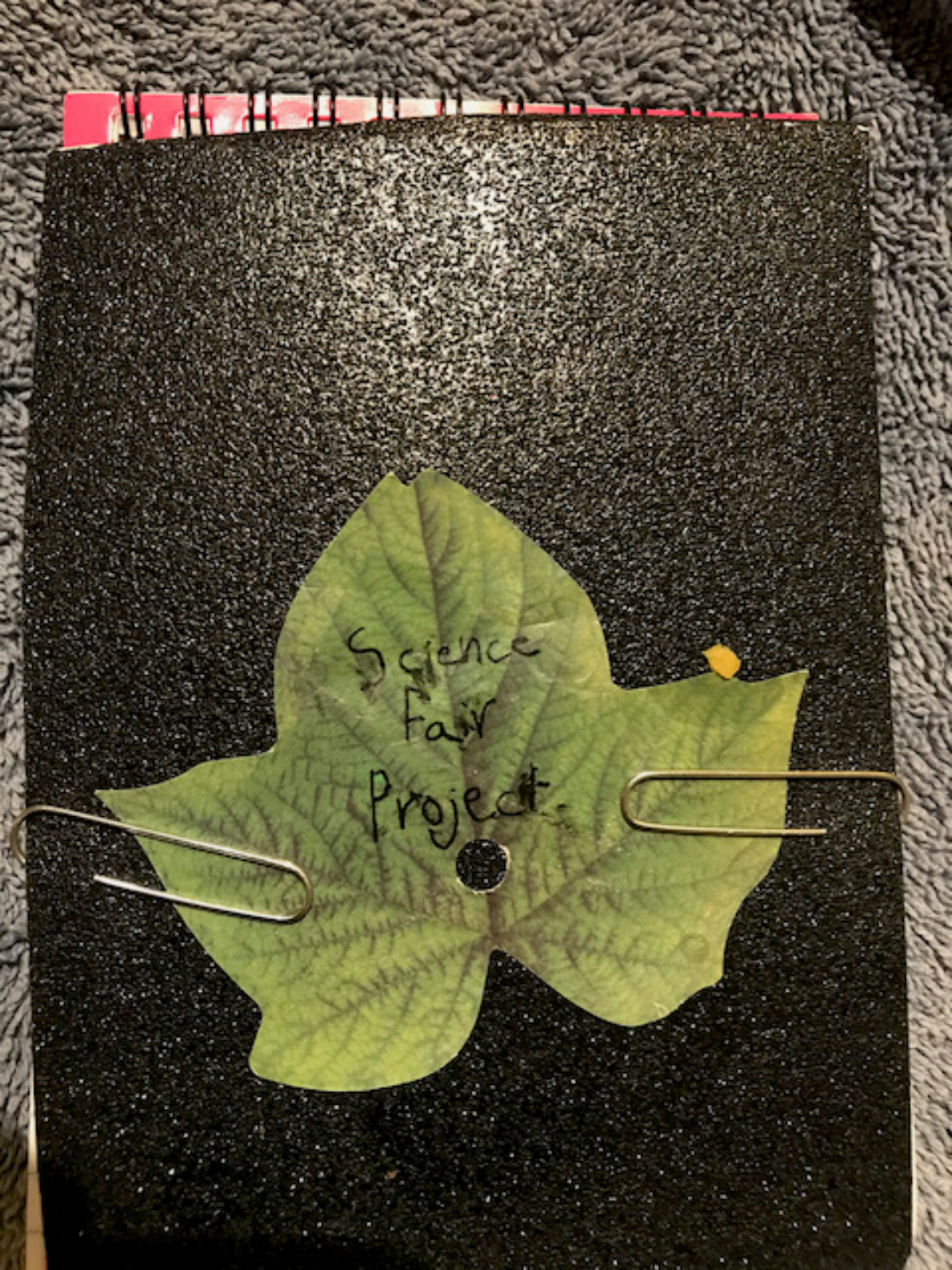
Science
Fair
Project

Question:

How do different types of organic matter affect soil chemistry

Materials:

- Potting soil
- Glass yogurt jars
- Mung bean seeds
- pH tests
- Nitrogen tests
- Phosphorus tests
- Potasium tests
- Rotten banana
- Rotten tomato
- Dog poo
- Old bread
- Pine needles
- Crushed dried leaves
- Arugula
- Carrot (cooked)

- Plastic shot glasses for measuring
- Distilled water

(cont'd on next page)

Materials (cont'd)

- Carrot (raw)
- Rotten kimi
- Shredded cheques
- Sardines, dried
- Spaghnum moss
- Sugar
- Rotten cabbage
- [illegible]

Rotten banana:
- Slightly acidic
- Low nitrogen
- Moderate phospoms
- High pottasium

Rotten tomato:
- Very acidic
- Moderate nitrogen
- Moderate phophorus
- Moderate pottasium

Dog poo
- Slightly acidic
- High Nitrogen
  High phosphorus
- High Pottasium

Old bread
- Slightly alkaline
- Moderate Nitrogen
- Low Phosphorus
- Moderate potassium

Pine needles
- Very acidic
- High Nitrogen
- Low Phosphorus
- Moderate Potassium

Crushed lilac leaves
- Slightly acidic
- High Nitrogen
- High Phosphorus
- Low Potassium

Arugula
- Slightly acidic
- Moderate Nitrogen

-Moderate Phosphprus
-Moderate Potassium
Carrot (cooked)
-Slightly acidic
-Low Nitrogen
-Low Phosphorus
-Moderate Potassium
Carrot (Raw)
-Slightly acidic
-Low Nitrogen
-Low Phosphorus
-Low Potassium
Rotten kiwi
-Very acidic
-Low Nitrogen
-High Phosphorus
-High Potassium

Shredded cheques
- Slightly alkaline
- High Nitrogen
- High Phosphorus
- High Potassium

Sunflower (Grated)
- High Nitrogen
- High Phosphorus
- High Potassium
- Near Neutral

Sawdust/Wood Mass
- Very acidic
- Low Nitrogen
- Low Phosphorus
- Low Potassium

Sugar
- Slightly acidic
- Low Nitrogen

- Low Phosphorus
- Low Potassium

Old cabbage

- Slightly alkaline
- High Nitrogen
- Moderate Phosphorus
- Moderate Potassium

Control

- Slightly acidic
- Moderate Nitrogen
- Moderate Phosphorus
- Moderate Potassium

Planned Procedure

Phase 1 (testing):

1. Fill each yogurt jar with 2 oz (volume) of soil.
2. Add 1oz (volume) of distilled water and 1oz (volume) of organic matter to the jar.
3. Repeat on all other jars EXCEPT the control jar. That jar gets 3oz (volume) of soil and 1oz (volume) of water.
4. Let sit for 3 or more days.
5. Perform pH, N, P, and K tests on soil. (See test kit for more info.)

Record

Timeline:

Come up with idea

Feb. 9-20

Feb. 21 -

Testing:

Rotten banana:
- pH - 6.5
- N - 0.5/4
- P - 0.5/4
- K - 2.5/4

Sardines
- pH - 6.7
- N - 0.5/4
- P - 2.5/4
- K - 1.25/4

Tuyula
- pH - 7.3
- N - 5/4
- P - 1.5/4
- K - 0.5/4

Sugar
- pH-6.75
- N-1/4
- P-0 1/4
- K-3/4

Cabbage
- pH-7.25
- N-5/4
- P-4/4
- K-3/4

Rotten tomato
- pH-7.25
- N-3/4
- P-1/4
- K-3/4

Old Kiwi
- pH-8.0
- N-1/4 - P-4.5/4 K+/4

Shredded cheques
Note: these did not fully decompose.
- pH - 6.75
- N - 5/4
- P - 3/4
- K - 1/4

Sphagnum moss
- pH - 5.75
- N - 5/4
- P - 2/4
- K - 5/4

Old bread
- pH - 6.25
- N - 0.5/4
- P - 2.5/4
- K - 3.5/4

Carrot (raw)
- pH - 5.0
- N - 0.5%
- P - 0.5%
- K - 5%

Pine needles
- pH - 6.75
- N - 5%
- P - 3%
- K - 1.3%

Lilac Leaves
- pH - 6.75
- N - 5%
- P - 2.5%
- K - 3%

Dog poo
- pH - 7.25
- N - 0.5% P - 2.5% - K - 3.5%

Carrot (cooked)
- pH - 6.75
- N - 1.5/4
- P - 2/4
- K - 4/4

Control
- pH - 6.75
- N - 5/4
- P - 1.5/4
- K - 2/4