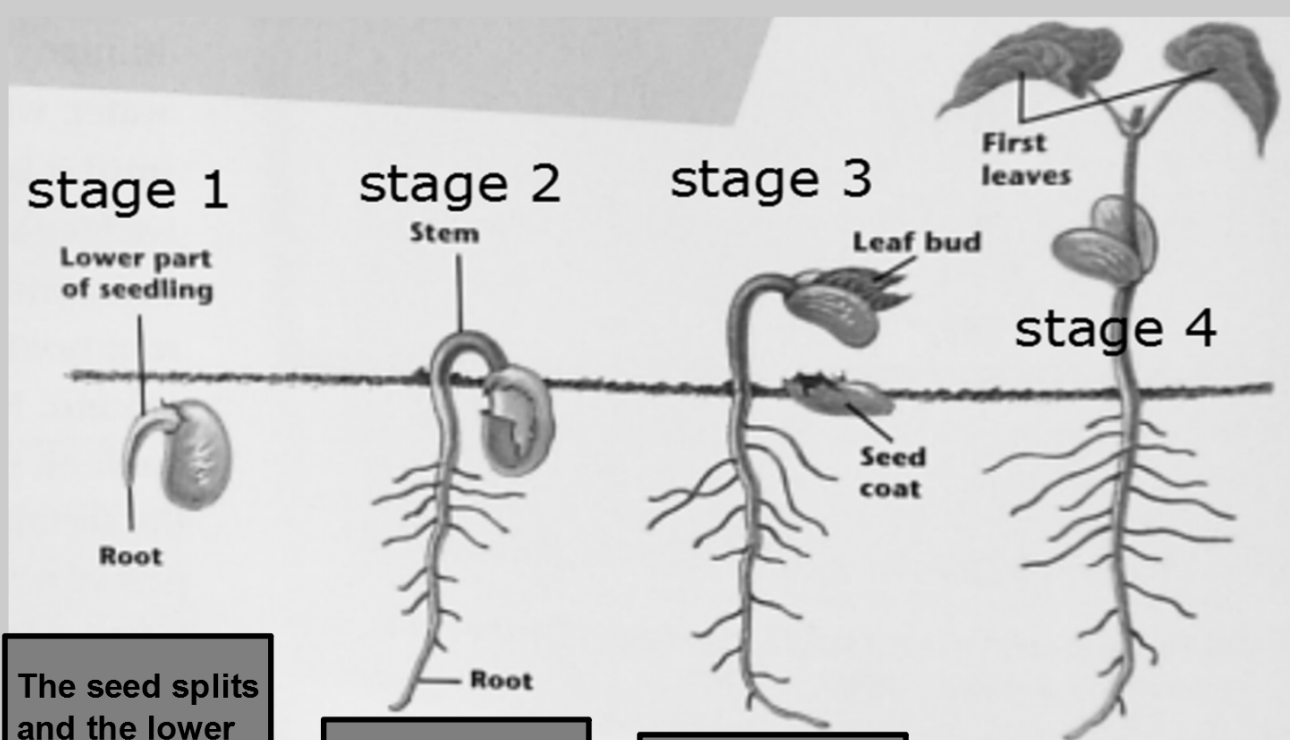# 03/21   Producers   #3

In your journal list out the things (ingredients) that plants need to make food.

Exit goal
Write up the investigation to the data table.

Learning target: I can investigate what producers need to make their own food by planning a controlled investigation.

stage 1

Lower part
of seedling

Root

stage 2

Stem

Root

stage 3

Leaf bud

Seed
coat

First
leaves

stage 4

The seed splits
and the lower
part of the
seedling forms
roots.

As the roots
grow down the
stem breaks the
soil

The leaf bud
emerges and
the seed coat
drops off.

As the stem
grows upwards
the first leaves
develop

03/21   Producers   #3

With sun, water, and soil the plant will....

a. Not sprout
b. Sprout and then die
c. sprout and continue to grow

I can investigate what producers need to make their own
Learning target: food by planning a controlled investigation.

03/21   Producers   #3

With sun and water, but no soil the
plant will....

a. Not sprout
b. Sprout and then die
c. sprout and continue to grow

I can investigate what producers need to make their own
Learning target: food by planning a controlled investigation.

03/21   Producers   #3

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I can investigate what producers need to make their own
Learning target: food by planning a controlled investigation.

03/21   Producers   #3

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a. Not sprout
b. Sprout and then die
c. sprout and continue to grow

I can investigate what producers need to make their own
Learning target: food by planning a controlled investigation.

03/21   Producers   #3

How could we design an investigation
to test these ideas?

How would we focus the question?

I can investigate what producers need to make their own
Learning target: food by planning a controlled investigation.

03/21　Producers　　　　#3

Producer investigation:

Question: How will _____ affect plant growth?

(sun, water, air(co_2), soil (nurtients)

Hypothesis: If there is no_____ the plant will _____because_____

03/21   Producers   #3

Variables: MV: _____
RV: *Average Height*
CV: Air (CO2), _____, _____, _____,
____...

Materials: 200 ml soil /cotton balls.

Diagram

Procedure

Learning target: I can investigate what producers need to make their own food by planning a controlled investigation.

03/21   Producers   #3
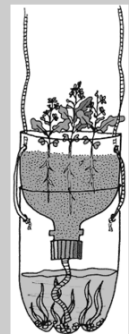
Diagram
(Label as per your group)

thread through hole in cap

?

Procedure

Learning target: I can investigate what producers need to make their own food by planning a controlled investigation.

03/21   Producers   #3

Data Tables

Control (sun, water, & soil)   No _____

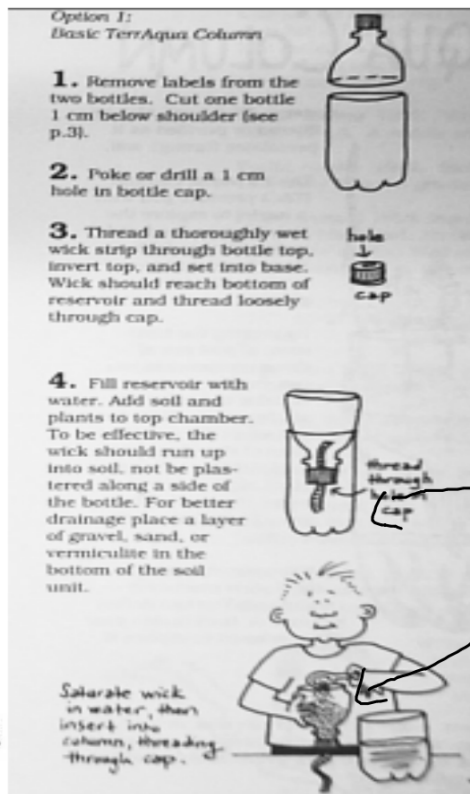| Date	Average Height (cm)	Observations (Color, strength, shape, leaf size and number...)

Date	Average Height (cm)	Observations (Color, strength, shape, leaf size and number...)

Learning target: I can investigate what producers need to make their own food by planning a controlled investigation.

Option 1:
Basic TerrAqua Column

1. Remove labels from the two bottles. Cut one bottle 1 cm below shoulder (see p.3).

2. Poke or drill a 1 cm hole in bottle cap.

3. Thread a thoroughly wet wick strip through bottle top, invert top, and set into base. Wick should reach bottom of reservoir and thread loosely through cap.

4. Fill reservoir with water. Add soil and plants to top chamber. To be effective, the wick should run up into soil, not be plastered along a side of the bottle. For better drainage place a layer of gravel, sand, or vermiculite in the bottom of the soil unit.

Saturate wick in water, then insert into column, threading through cap.

Cut the bottle 1cm below the top of the label.

make a wick strip from 1m strand of string

Fill the reservoir with 500ml water

Add 250ml soil

Damp the soil with 50 ml water

Plan   -ecosystem project progress
-Producer invetigation

Learning target:
I will investigate what producers need to make their own food