

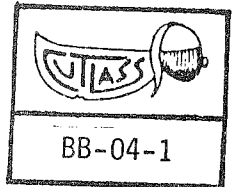
GROWING SEEDS

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1 Germination

→ First - copy this into your book.

- The first growth of a seed is called GERMINATION.
- Certain things are needed for seed germination.

COPY

IDIOT!!
I said GERMINATION
not GERMAN NATION



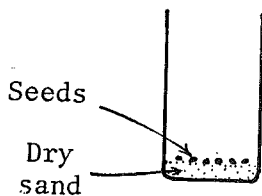
→ Now - set up the 4 experiments shown below. (Your teacher may have to set up experiment 3 for you.)

→ Leave the experiments for a few days to see if the seeds germinate.

→ Answer the questions about the experiments.

EXPERIMENT 1

Keep in classroom

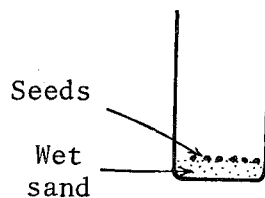


- Are the seeds:
 - warm? _____
 - damp? _____
 - getting air? _____

• Did the seeds germinate? _____

EXPERIMENT 2

Keep in refrigerator

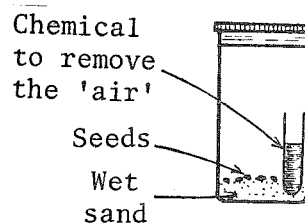


- Are the seeds:
 - warm? _____
 - damp? _____
 - getting air? _____

• Did the seeds germinate? _____

EXPERIMENT 3

Keep in classroom

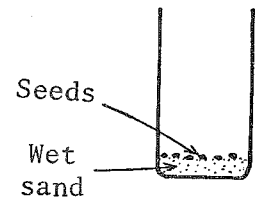


- Are the seeds:
 - warm? _____
 - damp? _____
 - getting air? _____

• Did the seeds germinate? _____

EXPERIMENT 4

Keep in classroom



- Are the seeds:
 - warm? _____
 - damp? _____
 - getting air? _____

• Did the seeds germinate? _____

CUT THIS OUT

→ Finally - cut out the box and glue it into your book.

2 Let's Germinate

Growing seeds can be fun.

Here are some ideas you may like to try.

ALWAYS
READ THE
INSTRUCTIONS
ON THE SEED
-PACKET

Grow Coleus Plants

Buy mixed seed to get different leaf colours.

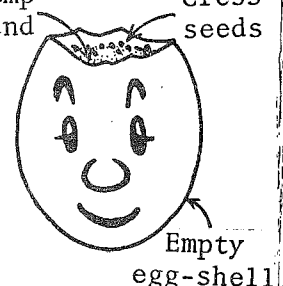


Grow strange plants - ones you have never heard of before.



Make an egg-head!

Damp sand Cress seeds



Now wait for 'green hair' to grow.

Grow a herb garden.

Try growing lots of different herbs.

Find out what the herbs can be used for, then try them out.



Try growing ornamental gourds.

Raise your own vegetable seedlings



VEGE PLANTS FOR SALE

There are many different flowers you could try growing.



GROWING SEEDS

BB-04-3



CUTLASS ACTIVITY SHEET
TEACHERS' GUIDE

AIM OF ACTIVITY SHEET

To make students aware of the conditions needed for seed germination.

(A BASIC SHEET)

OBJECTIVES

After completing this activity sheet, students should be able to:

- define the term "germination".
- set up experiments to investigate conditions required for seed germination.
- list the conditions needed for germination.
- apply this knowledge when growing various seeds.

MATERIALS REQUIRED

- Seeds. Cress or mustard seeds are suitable, as they germinate quickly.
- Sand (salt-free river sand). Instead of sand, you could use untreated sawdust, vermiculite, or soil.
- 4 glass vials (1 with a lid).
- A refrigerator.
- A microtesttube.
- Pyrogallol.
- Sodium hydroxide pellets.

(See notes opposite regarding experiment 3.)

EXTENSION WORK SUGGESTIONS

- See suggestions for growing seeds in section 2 of the Activity Sheet.

RESOURCES

- Visual Prod Unit filmstrip:
How seeds are spread. (69/166)

ADDITIONAL NOTES

- Setting up Experiment 3:

Place damp sand and the seeds in the vial.

Dissolve some pyrogallol in water.

Half fill the microtesttube with the pyrogallol solution, then place the testtube in the vial.

Add a sodium hydroxide pellet to the pyrogallol solution and seal the vial.

The pyrogallol becomes alkaline and absorbs oxygen (and CO₂) from the air in the vial.

You may like to explain to students that oxygen, and not all the air, has been removed from the vial.