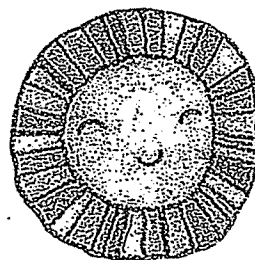


GROWING PLANTS

Grow seeds in soil.

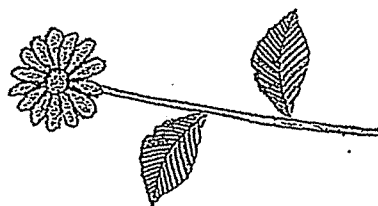


MATERIALS

Empty paper egg carton
Tray or baking sheet
Potting soil mix
4 seeds each of 3 different types
3 Post-it notes (optional)
3 toothpicks (optional)
Pen or pencil
Water

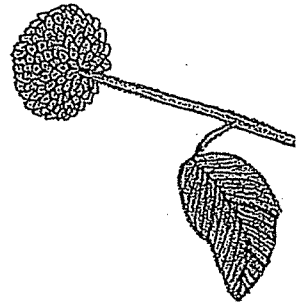
1. Place the egg carton on a tray or baking sheet.
2. Fill each cavity three-quarters full of potting soil mix.
3. Place 1 seed of the first type in each of four cavities.
4. Cover each seed lightly with additional soil.
5. Repeat with the remaining seed types and egg carton cavities.

6. Make labels for each set of seeds by folding Post-it notes around the toothpicks. Write the names of one type of seed on each label. Put a label in one of the cavities holding that type of seed. Or you can write the name of each type of seed on the cover of the egg carton instead.



7. Water the seeds daily or as needed to keep the soil in the carton moist.

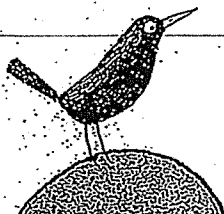
8. Observe the changes daily. Keep checking and observing for at least fifteen days. Refer to the seed packet to learn about the expected sprouting time for each type of seed. (If your seeds grow mold and do not sprout, throw them away and repeat the entire experiment with a new packet of seeds.)



9. Record your observations here.

After the seedlings sprout and grow to 4 cm tall, you can transplant them. To do so, prepare a flower pot with potting soil or dig a spot in the garden. Tear or cut the egg crate apart gently, separating each cavity. Pinch off the paper at the bottom of the egg carton so it is easy for the roots to grow. Place the bit of carton with each seedling into flower pots or your garden. Take care not to disturb the roots of your seedlings. Cover each with 2 cm of soil. Continue watering them regularly as they grow!

Continue making notes as your plants grow. What do you observe?



Some varieties of seedlings transplant well, but others do not. Which variety of seeds grew best after transplanting?

The Fourteenth Goldfish Vocabulary

Frazzled (p. 10): exhausted and stressed

Banner (p. 12): unusually good; outstanding

Frond (p. 12): leaf

PhD (p. 14): an advanced graduate degree

Elope (p. 15): to run away and secretly get married

Senescence (p. 17): the natural process of growing older

Patent (p. 20): a document proving that someone invented something

Revert (p. 25): to go back to how something was in the past

Truant (p. 29): a student who is absent from school without permission

Charlatan (p. 38): someone who lies about having a special skill

Pioneered (p. 46): created or invented

Immortal (p. 53): something that never dies

Transcripts (p. 61): similar to a report card

Premises (p. 64): land and the buildings on it

Blunt (p. 79): saying exactly what you mean; speaking in a direct way

Diversion (p. 93): an act that causes someone to be distracted

Aptitude (p. 99): natural ability

Drivel (p. 105): a worthless message

Reciprocate (p. 140): to do the same thing as someone else

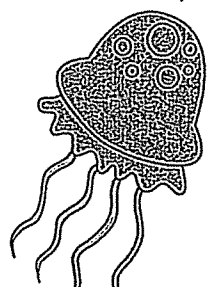
Impromptu (p. 152): without planning ahead of time

Refine (p. 156): improve or make better



[illegible]

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



[illegible]

Research TWO AWESOME SCIENTISTS or ENGINEERS:

After reading The Fourteenth Goldfish, we hope you are inspired to learn more about some of the scientists mentioned in the novel and about so many other great thinkers, designers and inventors. Here are a few of the scientists mentioned in the book as well as others. Pick two from here or explore on your own. Fill in the graphic organizers.

Albert Einstein
Jonas Salk
Louis Pasteur

Isaac Newton
Thomas Edison
Galileo



MARIE CURIE:
Physicist and chemist.
Two-time Nobel
Prize winner
(once in each field!).



CHARLES H. TURNER:
Zoologist. Discovered
that insects can hear.



HAYAT SINDI:
Science entrepreneur.
Brings affordable medical
tests to the world's
poorest people.



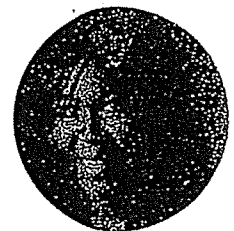
JANE GOODALL:
Wildlife researcher and
conservationist. Taught the
world about chimpanzees.



WANGARI MAATHAI:
Environmentalist and founder
of the Green Belt Movement.
In Kenya, the group has planted
10,000,000 (ten million) trees
to prevent erosion.



HEDY LAMARR:
Inventor and Hollywood movie
star. Invented the technology
that led to cell phones.



MAGGIE ADERIN-POCOCK:
Space scientist and science
educator. Cohost of BBC
show *Sky at Night*.



STEPHEN HAWKING:
Theoretical physicist
and cosmologist.

Scientists look like this. Join the crowd!

FAMOUS SCIENTISTS AND ENGINEERS

scientist's name here

field of study

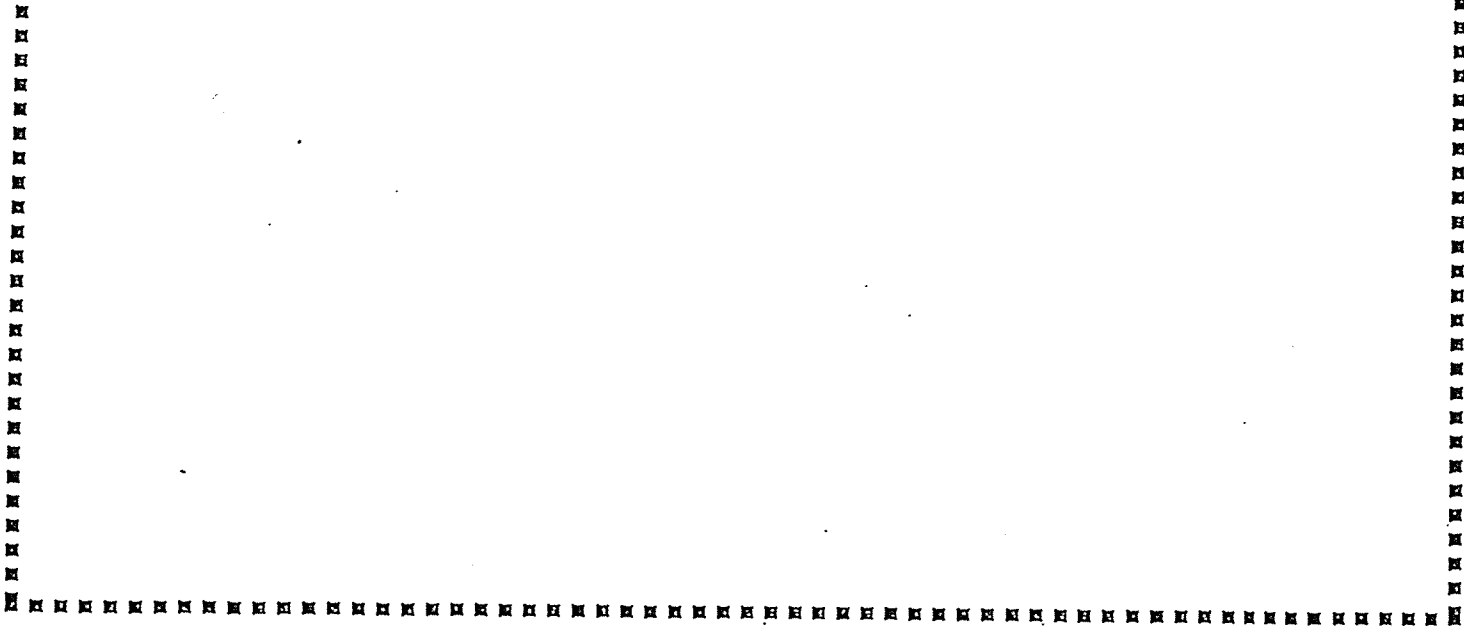
sketch the scientist

EDUCATION

PERSONAL
LIFE

NOTABLE WORK

draw a sketch or comic strip



FAMOUS SCIENTISTS AND ENGINEERS

scientist's name here

sketch the scientist

field of study

EDUCATION

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NOTABLE WORK

draw a sketch or comic strip

