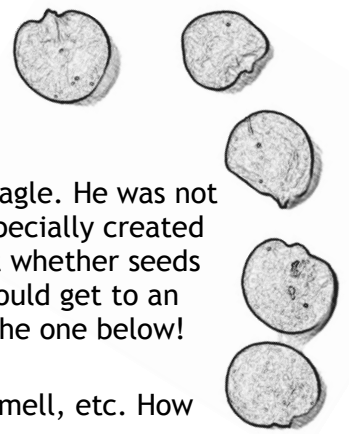


SURVIVOR SEEDS



Why would plants on islands be similar to those on the mainland?

Charles Darwin asked this question while he was going around the world on the HMS Beagle. He was not satisfied by the explanation given by some naturalists of his day that organisms were specially created for their geographic location. So in the 1850s he started a series of experiments to test whether seeds could survive being soaked in salt water. If he was right, it would suggest that plants could get to an island from the mainland and continue to evolve. Recreate Darwin's experiment, like the one below!

Observe: Describe the seed your group has chosen: colour, size, hardness, texture, smell, etc. How well do you think it will survive in salt water?

Pea seed: dry hard green. I do not think it will do well in salt water.

Experiment:

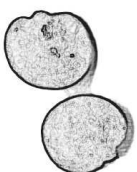
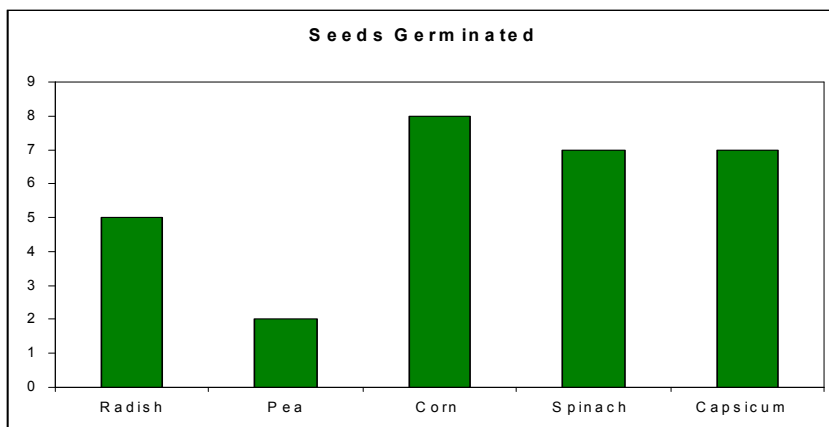
Part One: Place the seeds in salt water vials. Record observations (floating, change in appearance) Check at regular intervals for 1 week.

| Seed Type | Date: 8 Oct | Date: 12 Oct | Date: 15 Oct |
|-----------|---------------|--|--------------|
| Pea | Seeds sinking | Edges of seed breaking up in saltwater | No change |

Part Two: Plant the seed about twice its size in depth in small pots of compost. Check regularly and record observations. How many seeds germinated after 2 weeks?

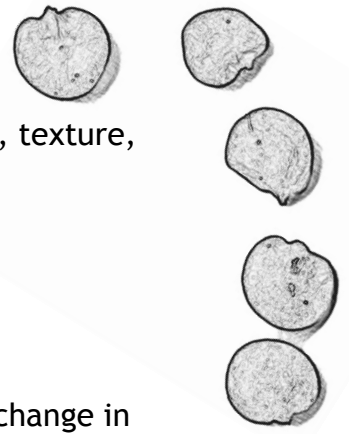
| Seed Type | Date: 17 Oct | Date: 21 Oct | Date: 25 Oct | Date: 29 Oct | Date: 2 Nov |
|-----------|---------------------|-----------------------------|-------------------|--------------------------------------|--------------------------|
| Pea | No seeds germinated | 1 seed started to germinate | 1 seed germinated | 1 seed germinated, another beginning | 2 seeds total germinated |

Results: Collect the results from the other groups. Make a bar graph of the number of each type of seed that grew successfully.



Darwin used this experiment to think about how evolution works.

SURVIVOR SEEDS



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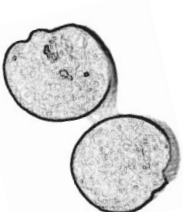
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|-----------|-------------|--------------|--------------|
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| | | | | | |

Results: Collect the results from the other groups. Make a bar graph of the number of each type of seed that grew successfully.

Discussion: What type of seeds germinated the best? What is the significance of this experiment for Darwin's ideas?



Darwin used this experiment to think about how evolution works.