Plant Parts Investigation

This activity can take a couple of weeks to get the expected results. We would suggest running it as an ongoing experiment in the classroom and when all plants (except the control and flowerless plant) have died, review the investigation.

Equipment Needed:

- 5 non-toxic, flowering, potted plants.
- A window ledge/side in a bright part of the classroom
- Water
- Plastic container – to hold the plant without roots
- Worksheets

Running the Experiment:

1. Explain to the children that they will be looking at what happens to a plant when certain parts are removed.
2. Get the children to predict if they think the plant will survive or die.
3. Then remove the **leaves** from one plant.
4. Remove the **flowers** from another plant.
5. Remove the **roots** from another plant and place it in the plastic container.
6. Remove the **stem** from another plant.
7. Leave the final plant intact – **discuss with the children why we keep this plant intact (it's the control)**.
8. Give all the plants the same amount of water – **make sure the stem of the rootless plant is always in water**.
9. Put the plants in the **same space** and ask the children why all the plants should be treated the same – **to keep it a fair test**.
10. Leave the plants for around **2 weeks** and record and discuss the results.

Plant Parts Investigation

Does a plant need all of its parts to survive?

You are going to be investigating this question.
Let's make some predictions – tick the box to show your predictions:

Predictions	Will Survive	Will Not Survive
No Flowers		
No Leaves		
No Roots		
No Stem		
Complete Plant		

1. What is being changed in this investigation?

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2. What is staying the same in this investigation?

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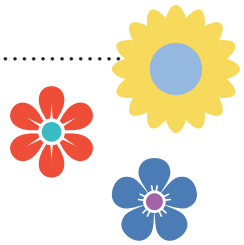

3. Why is only one thing being changed in this investigation?

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4. Why is there a plant that is not being changed?

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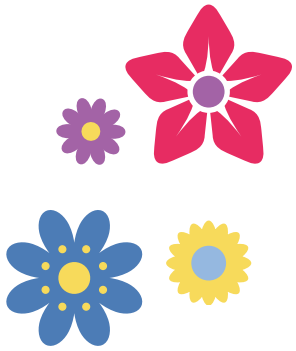
Plant Parts Investigation

5. What did you find out? – Fill in the table.

Results	Survived	Didn't Survive
No Flower		
No Leaves		
No Roots		
No Stem		
Complete Plant		



Use what you have learnt about the different parts of plants to explain your results:

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Plant Parts Investigation

Answers

Does a plant need all of its parts to survive?

You are going to be investigating this question.
Let's make some predictions – tick the box to show your predictions:

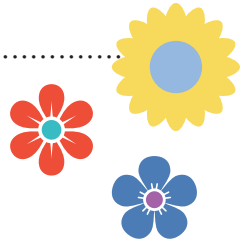
Predictions	Will Survive	Will Not Survive
No Flowers		
No Leaves		
No Roots		
No Stem		
Complete Plant		

1. What is being changed in this investigation?

   The part of the plant being removed.

2. What is staying the same in this investigation?

   The amount of light, the temperature, the amount of water etc.



3. Why is only one thing being changed in this investigation?

   To keep it a fair test.

4. Why is there a plant that is not being changed?

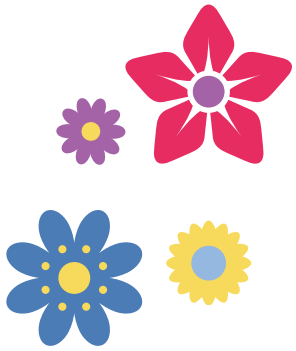
   To use as a control – so we can compare our results to something that we haven't changed.

Plant Parts Investigation

Answers

5. What did you find out? – Fill in the table.

Results	Survived	Didn't Survive
No Flower	x	
No Leaves		x
No Roots		x
No Stem		x
Complete Plant	x	



Use what you have learnt about the different parts of plants to explain your results:

A plant can survive without flowers because flowers are needed to produce seeds (so the plant can reproduce). They are not needed to keep the plant alive.

A plant will die without leaves, because leaves use sunlight and water to produce food for the plant through photosynthesis. If there are no leaves, the plant cannot get any food and will die.

Plants get water and nutrients from the soil through their roots. If a plant doesn't have its roots it will eventually die because it won't be getting enough water or nutrients.

The plant will die without a stem because the stem carries water and nutrients from the roots to the rest of the plant. Without the stem the leaves and flowers will not get any water or nutrients.

Complete plant – this will survive (hopefully!) because nothing has been removed so it has everything it needs to survive.