

Research Project Proposal

Question:

How will a rose's lifespan be affected if the rose is kept in a number of different solutions?

Introduction:

We are trying to find out what substance mixed in with water will benefit the growth of a rose the best. The substances that we are planning to mix in are sugar, salt, iced tea powder, pepper, and baking soda. We are going to be examining six different roses over a three day period of time. We will add two teaspoons of the each substance to each of the roses water at the beginning of the experiment. At the end of our testing we will record which substance was best for roses. We will have one rose that remains status quo and is nurtured to become a healthy rose. Over the three day period of the experiment we will check on the roses condition once at 8 am and once at 3pm each day.

Variables:

Manipulated: Different substances

Responding: Health of each rose

Controlled: Type of flower

Material:

-2 tsp sugar

-2tsp cocoa

-2 tsp salt

- 2 tsp ice tea power

-2 tsp pepper

-2 tsp Baking soda

-7 Roses

-6 test tube

-500ml of water per tube

Procedure:

1. Start with six roses, the six different substances and six flower vases
2. Put each rose in a vase and add in 500ml of water
3. Mix in each of the six substances into separate vases that contain roses
4. Leave the roses to sit in the solution
5. Check on roses at 8 am and 3pm everyday and record the condition of each rose
6. After the third day, compare the state of the roses and determine which solution helped the rose grow best

Observations:

- Roses were planted on Friday November 10th
- After the weekend (on Monday November 13th):
 - The rose in water stayed completely healthy
 - The rose in sugar blackened, its stem weakened and it overall looked very unhealthy
 - The rose in baking soda had a blackened and weakened stem and dried up
 - The rose in iced tea had a weakened stem and dried up
 - The rose in cocoa dried up, had a weakened stem and dried up
 - The rose in pepper had a weakened stem, dried up and died
 - The rose in salt was healthy and living (only one alive)
- No further developments for the next week
- On the morning of Monday November 20th all of the roses were found to be shriveled up and dead
- All roses had blackened stems, weakened stems and dried up flowers

Predictions:

When we started the experiment we thought that the rose in water would obviously survive the longest. We predicted that the rose's with salt and sugar would not too bad either. We thought that they would outlive the others but not the rose in water. The reason we thought that the rose in sugar would thrive was because all living organisms need natural sugars for energy and that our sugar would suffice. We thought that the rose in salt would thrive for similar reasons.

Conclusion:

The tests we conducted seemed to be unique in regards of the controlled test subject, and the manipulated variables. We experienced the observations of many different changes which were spectacular. We have concluded that sugar and water was the safest solution for the flower to live in, as the flower lived the longest, faced discolouration last, and was able to refrain from lacking nutrients, and becoming a crunch flower. All the other flowers experienced discolouration, lack of nutrients, and other characteristics quickly which identified the harm of the substance. A inconsistency we met in this experiment was the observation dates, due to a weekend interfering with the time of our experiment. Some flowers experienced very unique, and engaging change. Such as the rose in the baking soda solution quickly transitioned its stem to a black colour. This differed from all the other plants and proved the toxicity of baking soda in plants. None of the roses in the test were able to outlive the rose in plain water, this was a huge indicator which proved the harm of all the substances. Although the harm of some was minor, the harm of others was major, it was indeed present.

Speech

Bold-Karman

Not Bold-Mohammad

What our experiment was testing was to find what solution would be best for the nutrition of a rose. Essentially what we did was make six different solutions and test them against a rose that was being nurtured normally, in water. Our solutions were water and, salt, sugar, pepper, cocoa, iced tea powder, and baking powder.

The variables in this experiment were different solutions as the manipulated, health of each rose as responding and type of flower as the controlled.

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