



Growing Nightshade Family Plants and Comparing Their Features

The nightshade family (Solanaceae) includes many common plants. In this experiment, you will grow several nightshade plants and compare their features.

QUESTIONS

1. What features do nightshade family plants have in common?
2. How are the plants in this family different from one another?

MATERIALS

- Seeds or starter plants (choose 3 or more nightshade plants)
- Potting soil
- Pots or containers with drainage holes
- Water
- Ruler
- Notebook or lab sheet (this sheet)
- Magnifying glass (optional)
- Camera or phone (optional)



PLANTS TO GROW

Grow at least 3 different nightshade family plants. Here are some good choices:



Tomato
(*Solanum lycopersicum*)



Bell Pepper
(*Capsicum annuum*)



Eggplant
(*Solanum melongena*)



Potato
(*Solanum tuberosum*)



PROCEDURE

1. Plant the seeds or starter plants in separate pots. Label each pot.
2. Place the plants in a spot with plenty of sunlight.
3. Water the plants regularly and care for them as they grow.
4. Observe your plants at least once a week.
5. Record your observations in the table below.
6. When your plants have flowers and/or fruits (or tubers for potatoes), make final observations and compare their features.



OBSERVATION TABLE

Plant Name	Leaves		Stem (hairy, smooth, thick, thin, etc.)	Flowers (color, shape, number of petals)	Fruit or Tuber (type, color, where it grows)	Other Features (thorns, smell, hairy leaves, etc.)
	Shape	Edge (smooth, toothed, etc.)				



CONCLUSION

1. What features are the same in the plants you grew? _____
2. What features are different? _____
3. What did you learn about the nightshade family? _____