



## SCENT NOTES

EXTRACT AND BLEND FRAGRANCES TO MAKE AN APPEALING PERFUME!

### You'll Need:

- ★ materials with a nice smell (flowers, spices, potpourri, sage and mint leaves, fruits, etc.)
- ★ mortar and pestle or a knife and cutting board
- ★ a medium-sized pot
- ★ stove
- ★ water
- ★ measuring cups
- ★ glass containers (at least 4)
- ★ funnel
- ★ coffee filters (at least 4 pieces)
- ★ small spray bottles or other containers to hold your fragrances (at least 4)
- ★ tape and permanent marker
- ★ construction paper and scissors
- ★ paper and pencil

### Duration:

1-2 hours

### Good to Know:

Perfumes have been around for thousands of years. Most fragrances are not single chemicals, however, but a mixture of substances. A perfume typically consists of at least 70% alcohol, a small percentage of water (less than 5%) and essential oils (the scents!). Fragrance experts talk about "notes" of a scent—fruity, flowery, aromatic, earthy, musky, and so on. There are three main notes in a perfume: top, middle (or heart) and base. When you first apply a perfume, the top notes create a first impression, but do not last long, evaporating in less than 30 minutes.

The heart notes make up the majority of the blend, lasting several hours, and bring to mind those adjectives of fruity and flowery. Base notes last the longest and are chemically the heaviest scents, described with adjectives like "mossy," "musky" and "woody." The same perfume can smell different on two people though because they each have unique body chemistry reacting with the fragrances.

Making a perfume requires science. Cosmetics and toiletry companies hire chemists to extract fragrant compounds from flowers, herbs, etc. to concoct the essential oils and perfumers to put scents together in creative ways by using their keen senses of smell. In this activity, design your own perfumes and find out what smells good!

### Here's How:

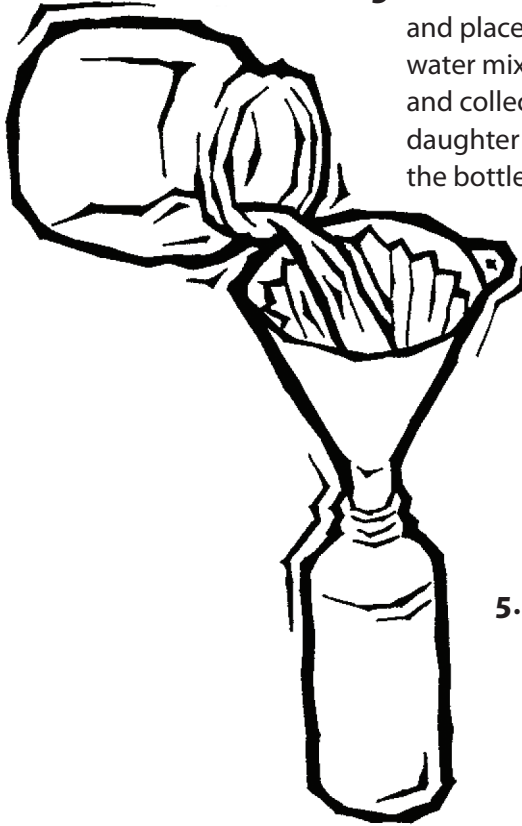
1. Start by putting a pot on the stove and boiling about 3 cups of water. While you wait, talk with your daughter about how perfumes work and help her decide what materials she wants to put in her perfume. Remember, some scents are stronger than others so the amount of each material may vary to produce the desired scent. Keep track of how much you add. Combine all ingredients and use a mortar and pestle to grind them into a pulp, or a knife and cutting board to finely chop them.
2. Have your daughter place the ingredients into a glass container. Then you should add about  $\frac{1}{2}$  cup of boiling water. Let the water and materials sit for 5 minutes to extract the fragrances.





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3. Put a funnel in a small spray bottle (or desired container) and place a coffee filter in the funnel. Carefully pour the water mixture into the funnel to strain out the materials and collect the scented water in the bottle. Have your daughter decide what to name the perfume and label the bottle.

4. Keep experimenting with different combinations. Once you've made several different perfumes, do some market research with family and friends to see which perfumes people like. Cut a piece of construction paper into strips and spray some perfume on each strip. Give these testing strips to your customers and record which perfumes they like. What were the ingredients of that perfume? The scent of the top notes is important in getting people to buy perfumes!

5. Have your daughter spray the perfume she liked the best on her wrist. How does the fragrance of the perfume on her body compare to smelling the perfume on a piece of paper? Wait one hour or more and then have her smell her wrist again and compare this to a newly scented strip of paper. Does the perfume on her wrist smell any different from the paper strip now?

\*Note that a water-based perfume won't last long—throw away the contents after a few days as the water can become contaminated. If you'd like to experiment with longer-lasting perfumes you'll find numerous recipes on the Web.

