

Science Investigator

Perfumes



1) Research books, magazines and the Internet for information on perfumes;

2) Make the perfect perfume yourself in the lab;



3) Record your results - so that all of your friends and families can find out what you've done!



Smells can bring back long lost memories.

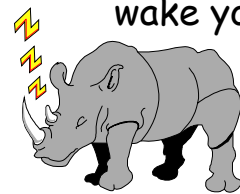
What or who does fresh bread, sun tan lotion or grass cuttings remind you of?



You nose can recognise many different smells - lucky really since this stops us eating food that's gone off!



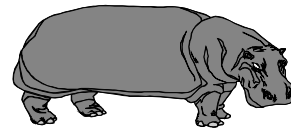
Falling asleep in class? A whiff of peppermint will wake you up!



Animals noses are amazing - they use them to sniff out and avoid being eaten by nasty predators!



Animals (and yes that includes us) produce natural scents in their sweat. They're called 'PHEROMONES' and they help animals to find a mate and fall in love. Even hippos fall in love!



Perfumes are so expensive because of the ingredients a drinks can of 'Oil of Rose' costs £1000! Most ingredients come from plants - flowers, leaves or fruit (mint, lavender)



Imagine you're an insect - the only way you'll find a boy or girlfriend is with your sense of smell!



Stressed? Vanilla will calm you down!



Individual Cards version for Perfume Facts - Part 1

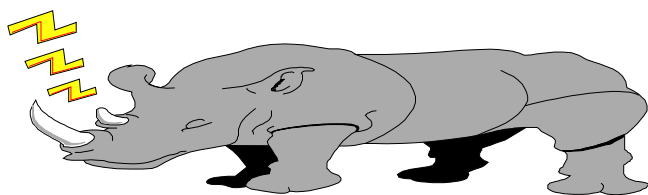
Smells can bring back long lost memories.
What does the smell of fresh bread remind you of?
What does the smell of grass cuttings remind you of?



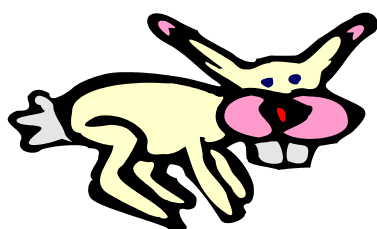
Your nose can sense many different smells.
This stops us eating
food that has gone off!



Falling asleep in class?
The smell of peppermint will wake you up!

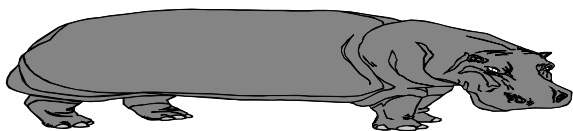


Animals are very clever - they use their noses to sniff
out nasty animals and avoid being eaten!



Individual Cards version for Perfume Facts - Part 2

Animals (even humans) produce natural smells in their sweat. They are called 'PHEROMONES' and they help animals to find a mate and fall in love. Even hippos fall in love!



Perfumes are so expensive because of the ingredients a drinks can of 'Oil of Rose' costs £1000! Ingredients come from plants - flowers, leaves or fruit (mint, lavender).



Imagine you are an insect,
The only way you will find
a boy or girlfriend is with
your sense of smell!





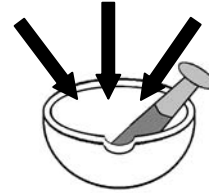
D.I.Y. Perfume making 1

Method 1 - Grinding & Filtering - extracting (removing) the smelly oils from leaves, flowers or fruits, by squeezing them (This method is called 'Expression').

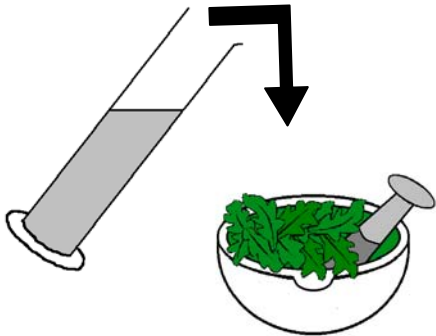
1) Pick some smelly plant material



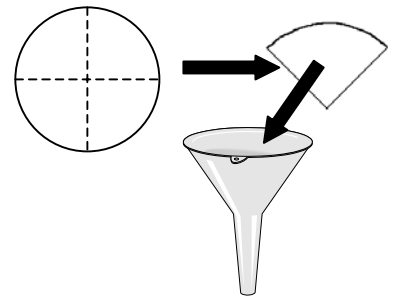
2) Grind it to a pulp using a pestle and mortar



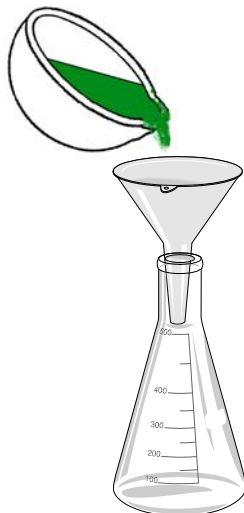
3) Use a measuring cylinder to add 20ml of water to the pulp



4) Put some folded filter paper into a filter funnel

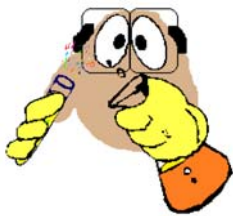


5) Pour the pulp and water mix into the funnel and collect the filtered liquid (filtrate) in a conical flask



6) Pour the filtrate into a small bottle and label with the plant material's name





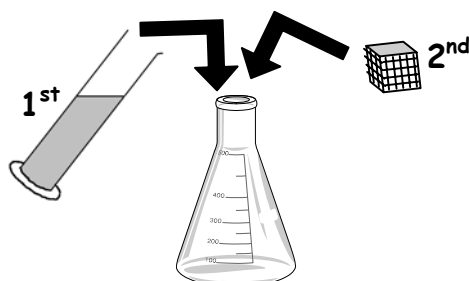
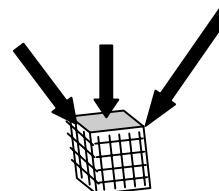
D.I.Y. Perfume making 2

Method 2 - Steam distillation - *extracting the smelly oils from plant materials using steam. The oils evaporate and turn back into liquid as they cool further along the apparatus.*

- 1) Put on your safety goggles
- 2) Pick some smelly plant material



- 3) Put the plant material into a small basket of string or gauze

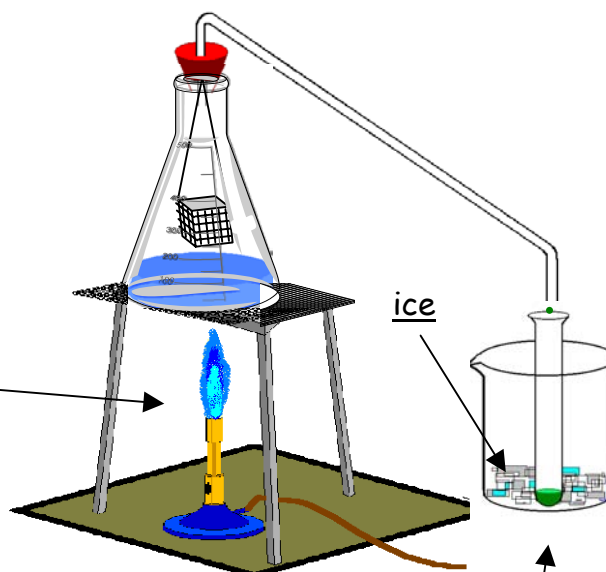


- 4) Put 100ml of water into a conical flask and suspend the basket above the water

- 5) Set up the rest of the apparatus as shown here

- 6) Turn the Bunsen burner on with a low blue flame: REMEMBER -YOU MUST WEAR GOGGLES

- 7) Use the Bunsen Burner to heat the flask gently to produce steam



- 9) Pour the collected perfume into a small bottle and label with the plant material's name:



- 8) Watch the perfume vapour cool as the ice helps it to turn back to droplets

Sequencing pictures for the Grinding and Filtering Method







D.I.Y. Perfume - Method 1

Grinding & Filtering

Introduction:

Which organ in the body do we use to smell?  _____


Why do we need a sense of smell?  _____

Where do perfumes come from?  _____

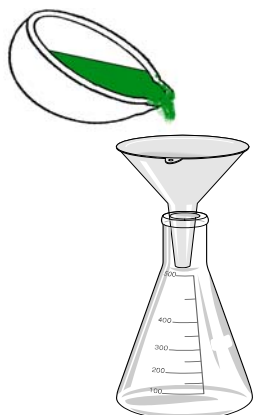
Step 1





1) What did you use the pestle and mortar for?  _____

2) Why did you need to do this?  _____

Step 2



1) What did you do with the filter paper and funnel?  _____


2) Why did you need to do this?  _____




D.I.Y. Perfume - Method 2

Steam distillation

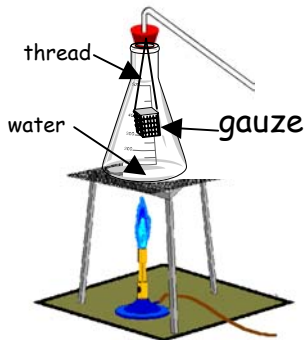
Introduction:


Which organ in the body do we use to smell? 


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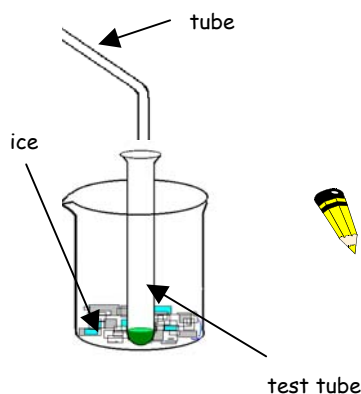
Step 1





3) What happened to the water in the beaker? 

4) Why did you need steam? 

Step 2



3) What happened to the vapour (warm, moist gas) when it came out of the tube? 

4) Why did you need a beaker with ice in it? 

Perfume Scientist Certificate



Awarded to: _____

For successfully making perfume
from plants and flowers

The material I used to make my perfume was: _____

My perfume smelt like: _____

Signed: _____ **Dated:** _____