



Beauty Kit

**MANUAL WITH EDUCATIONAL INFORMATION
AND EXCITING EXPERIMENTS**



WARNING!



Not suitable for children under three years. To be used under the direct supervision of an adult. Choking hazard – small parts can be ingested or inhaled. Cut or stab wounds of the skin by sharp functional edges and points. Contains fragrances that may cause allergies (Hexyl Cinnamaldehyde, Benzyl Salicylate and Citronellol). Instructions for the parents or other responsible persons are included and must be followed. Keep Experiment Set out of reach of children under three years. Keep the packaging and manual because they contain important information!

General Warnings

- Read these instructions before use, follow them and keep them for reference.
- Keep young children and animals away from the experimental area.
- Store this experimental set out of reach of children under 8 years of age.
- Clean all equipment before and after use.
- Make sure that all containers and/or non-reclosable are fully closed and properly stored after use.
- Ensure that all empty containers and/or non-reclosable packaging are disposed of properly.
- Wash hands before and after carrying out experiments.
- Do not use any equipment which has not been supplied with the set or recommended in the instructions for use.
- Do not eat or drink in the experimental area.
- The made products should not be used anymore if they change their appearance, colour or scent.
- Contains fragrances that may cause allergies (Hexyl Cinnamaldehyde, Benzyl Salicylate and Citronellol).

Declaration of Conformity

 Bresser GmbH has issued a 'Declaration of Conformity' in accordance with applicable guidelines and corresponding standards. This can be viewed any time upon request.

DISPOSAL

 Dispose of the packaging materials properly, according to their type, such as paper or cardboard. Please take the current legal regulations into account when disposing of your device. You can get more information on the proper disposal from your local waste-disposal service or environmental authority.

Warranty & Service

 The regular guarantee period is 2 years and begins on the day of purchase. To benefit from an extended voluntary guarantee period as stated on the gift box, registration on our website is required. You can consult the full guarantee terms as well as information on extending the guarantee period and details of our services at www.bresser.de/warranty_terms.

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– only available online!**

Media about this product

You can download further media (Experimentos, manuals, etc.) from the BRESSER website over the following QR code/weblink, as soon as they are available*.



<http://www.bresser.de/download/8859497>

* Offer subject to the availability of media.

General first aid information

- **In case of contact with eyes:** wash out eye with plenty of water, holding eye open if necessary. Seek immediate medical advice.
- **If swallowed:** wash out mouth with water, drink some fresh water. Do not induce vomiting. Seek immediate medical advice.
- **In case of inhalation:** remove person to fresh air.
- **In case of skin contact and burns:** wash affected area with plenty of water for at least 10 minutes.
- In case of doubt, seek medical advice without delay. Take the chemical and its container with you.
- In case of injury always seek medical advice.

Write the telephone number of the local poison centre or hospital in the space below. They may be able to provide information on countermeasures in case of poisoning.

In case of emergency dial

**Europe 112 | UK 999
USA 911 | Australia 000**



Advice for supervising adults

- Read and follow these instructions, the safety rules and the first aid information, and keep them for reference.
- The incorrect use of chemicals can cause injury and damage to health. Only carry out those experiments which are listed in the instructions.
- This experimental set is for use only by children over 8 years.
- Because children's abilities vary so much, even within age groups, supervising adults should exercise discretion as to which experiments are suitable and safe for them. The instructions should enable supervisors to assess any experiment to establish its suitability for a particular child.
- The supervising adult should discuss the warnings and safety information with the child or children before commencing the experiments.
- The area surrounding the experiment should be kept clear of any obstructions and away from the storage of food. It should be well lit and ventilated and close to a water supply. A solid table with a heat resistant top should be provided.

List of chemical substances supplied

Liquid Glycerine 80%

INGREDIENTS: GLYCERINE, AQUA

Peach Fragrance

Hazard Statements:

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

Precautionary Statements:

P103 Read label before use.

P261 Avoid breathing vapours.

P391 Collect spillage.

Contains **Alpha-Hexylcinnamaldehyde**, **Benzyl Salicylate** and **3,7-Dimethyl-6-octen-1-ol**. May cause an allergic reaction.



WARNING

Vanilla Fragrance

Hazard Statements:

H302 Harmful if swallowed.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements:

P103 Read label before use.

Contains **Ethyl-3-phenyl-2,3-epoxybutanoate**, **Heliotropin**, **3-(4-tert-Butylphenyl)-propanal**, **Methylcinnamate** and **2,4-Dimethyl-3-cyclohexene-1-carboxaldehyde**. May cause an allergic reaction.



WARNING

Strawberry Fragrance

Hazard Statements:

H317 May cause an allergic skin reaction.

H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements:

P103 Read label before use.

Contains **Ethyl-2,3-epoxy-3-phenylbutyrate**. May cause an allergic reaction.



WARNING

Sodium Bicarbonate NaHCO₃ (CAS # 144-55-8)

Beeswax (CAS # 8006-40-4)

Precautionary Statements:

P233 Keep container tightly closed.

P234 Keep only in original container.

Castor Oil (CAS # 8001-79-4)

Precautionary Statements:

P233 Keep container tightly closed.

P234 Keep only in original container.

Carnauba Wax (CAS # 8015-86-9)

Orange Cosmetic Colouring

INGREDIENTS: PROPYLENE GLYCOL USP, FLUORESCENT ORANGE COLOUR

Sea Salt (Sodium Chloride) NaCl (CAS # 7647-14-5)

Blue Cosmetic Colouring (CI 42090)

INGREDIENTS: FOOD BLUE 2, METHYLISOTHIAZOLINONE, METHYLCHLOROISOTHIAZOLINONE, DIMETHYLOL GLYCOL

Precautionary Statements:

P233 Keep container tightly closed.

P234 Keep only in original container.

Red Cosmetic Colouring (CI 14720)

INGREDIENTS: FOOD RED 3, METHYLISOTHIAZOLINONE, METHYLCHLOROISOTHIAZOLINONE, DIMETHYLOL GLYCOL

Precautionary Statements:

P233 Keep container tightly closed.

P234 Keep only in original container.

Citric Acid C₆H₈O₇ (CAS # 77-92-9)

Hazard Statements:

H319 Causes serious eye irritation.



WARNING

Disposal of used chemicals

When you're disposing chemical substances, please refer to national and/or local regulations. Do not throw chemicals into sewers and garbage. For more details, please refer to a competent authority. For disposal of packaging, make use of specific collection points.



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Kit contents



Description:

- | | |
|-------------------------------|-----------------------------------|
| 1. Sea salt | 18. Red cosmetic colouring |
| 2. Plastic mould | 19. Protective gloves |
| 3. Test tubes with lid | 20. Large measuring cups |
| 4. Test tubes rack | 21. Wooden sticks |
| 5. Decorative stickers | 22. Spray bottle |
| 6. Lipstick mould | 23. Lipstick tube |
| 7. Castor oil | 24. Small measuring cups with lid |
| 8. Carnauba wax | 25. Funnel |
| 9. Peach fragrance | 26. Pasteur pipettes |
| 10. Vanilla fragrance | 27. Plastic spatula |
| 11. Sodium bicarbonate | 28. Soap base |
| 12. Liquid glycerine | 29. Lip gloss flask |
| 13. Beeswax | 30. Wooden spatulas |
| 14. Orange cosmetic colouring | 31. Green tea |
| 15. Strawberry fragrance | 32. Apple and cinnamon tea |
| 16. Citric acid | 33. Paper filters |
| 17. Blue cosmetic colouring | 34. Cosmetic bag |

Hello Scientist!
Welcome to this great
adventure with this
Super Beauty Kit. Are
you ready to become
a great cosmetic
scientist?



1. Before you begin

1.1. Basic rules in the laboratory

Every time you finish an experiment, you should wash and put in order all the material from your kit. This is the only way you can make sure that your reagents and materials last for the longest time possible.

During an experiment, don't use the same material for different reagentes without washing it first.

Use the right quantities recommended in each step, so that you can take the most of your reagents.

Always wash your hands, before and after each experiment.

If you want to do an experiment but the recommended material is being used in another experiment, you can use similar materials that you find at home.

Don't forget to put your protective gloves every time they are shown in the material list.



1.2. Dermatological test

In many cosmetic and hygiene products it is written 'dermatologically tested'!



This expression means that the compatibility between the product and the skin was demonstrated through tests, performed in volunteers, under the supervision of a dermatologist - doctor specialized in skin.

The word dermatologist comes from *dermis*, which is the name of one of the skin's layers!



All the components of this kit are made from natural compounds, so it is unlikely that they contain substances which provoke allergies. To be certain, test the products!

1. After you make any of the beauty products and before you use them, put a thin layer of it in the interior part of your wrist.



2. Wait 5 minutes.

3. Remove the product, washing the area with plentiful water and soap.

4. If there isn't any skin irritation, you can use your beauty products!

Note: every time that is recommended the use of the protective gloves, you should put them on! You should only take them out after you make the dermatology test and after making sure that it doesn't cause any type of allergy.

2. Experiments

Before you start,
learn how to use
the Pasteur pipette
correctly!

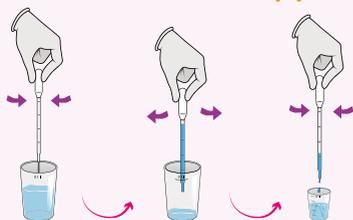


Pasteur pipettes are laboratory items used to measure and transfer small quantities of liquids between different containers.

With the Pasteur pipette it is possible to count drops and, therefore, it is many times also called dropper.



How to use the Pasteur pipette:



1st Press away from the liquid;

2nd Release pressure inside the liquid to fill it;

3rd Press slowly until drops start to fall, one by one.

Scientist, don't forget to wash all the material whenever you finish an experiment! You should also put it in order so that it is always ready whenever you want to begin a new experiment!

 Material included in the kit.

Perfumes

Perfumes are a complex mixture of organic compounds, alcohol and water.

The organic compounds are called fragrances. We call fragrances to the basic smells that we try to put together in order to create a perfume.

Perfumes are used to provide a pleasant and long-lasting scent to our bodies and different objects.

Experiment 1 My first perfume

INGREDIENTS: GLYCERINE AND AQUA

ATTENTION: ask an adult for help.

What you will need:

- Tea bag 
- Liquid glycerine 
- Small measuring cup 
- Large measuring cup 
- Funnel 
- Paper filter 
- Test tubes with lid 
- Test tube rack 
- Water
- Pasteur pipette 
- Wooden spatula 
- Wooden stick 



Steps:

Part I: The essence

1. Ask an adult to help you open a tea bag and put half its content in the large measuring cup.

Note: save the rest of the tea as you will need it for the next experiment.

2. Measure 10 millilitres (ml) of water in the small measuring cup.

3. Pour the water into the large measuring cup, where the tea is.

4. With a wooden spatula, stir the water with the tea and leave it to rest for 10 minutes. This way you make sure the water is well impregnated with tea.

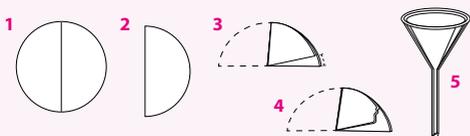


10 minutes

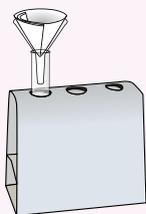
5. In this stage if you want you can add other elements to your perfume. Try adding a cinnamon stick or mint leaves!

Part II: Filtration

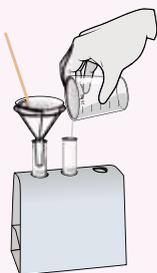
6. Fold the round filter paper, such as shown in the image, and place it in the funnel.



7. Place a test tube in the test tube rack. Now, insert the funnel in the test tube.

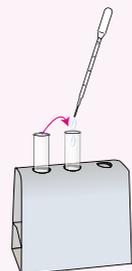


8. Carefully, pour the mixture of water with tea into the funnel. Use a wooden stick to guide the liquid.



Part III: Conclude the perfume

9. Measure 5 ml of liquid glycerine in the small measuring cup. Pour it into a new and clean test tube.



10. With a Pasteur pipette, collect a portion of the filtrated solution and add 10 drops to the test tube with the liquid glycerine.

11. Put the lid on the tube and shake it, so that the glycerine and the tea solution get mixed.

12. Your perfume is ready! If you like it, you can start using it. Remember to make the dermatologic test first.

Ideal Formulations

My first perfume (7.3 g)

Liquid glycerine (6.8 g), Tea infusion (0.5 g)

Suggestion: if the smell is too strong add more water. If you want a stronger smell, you can add some more drops of the tea solution.

ATTENTION: these perfumes are delicate so you must store them in a dry area which is out of direct sunlight. They will last for approximately 1 week before spoiling.

Explanation:

With this experiment you create a perfume through an infusion.



What is an infusion?

An infusion consists of a liquid impregnated with the soluble compounds of a substance. That is, in an infusion, the liquid absorbs and fixates certain characteristics of what is added to the liquid.

In this experiment, the liquid was water and it absorbed the characteristics of the tea.



So this is what happens when we prepare tea!

DID YOU KNOW...

That the best places to apply perfume are the areas on your skin where blood flow is the strongest?

This is why that behind ears, on wrists and neck, are the best places to apply perfume.



Experiment 2 A mixed perfume

INGREDIENTS: AQUA, HEXYL CINNAMAL, BENZYL SALICYLATE, CITRONELLOL AND PARFUM

What you will need:

- Test tube with lid 
- Test tube rack 
- 2 Pasteur pipettes 
- Peach fragrance 
- Vanilla fragrance 
- Small measuring cup 
- Funnel 
- Water
- Spray bottle 



Vanilla Fragrance

WARNING

Contains **Ethyl-3-phenyl-2,3-epoxy-butanoate, Heliotropin, 3-(4-tert-Butylphenyl)-propanal, Methyl-cinnamate and 2,4-Dimethyl-3-cyclohexene-1-carboxaldehyde**. May cause an allergic reaction. **Hazard Statements:** Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. Toxic to aquatic life with long lasting effects. **Precautionary Statements:** Read label before use.



Peach Fragrance

WARNING

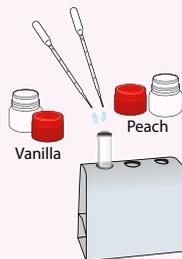
Contains **Alpha-Hexylcinnamaldehyde, Benzyl Salicylate and 3,7-Dimethyl-6-octen-1-ol**. May produce an allergic reaction. **Hazard Statements:** May cause an allergic skin reaction. Causes serious eye irritation. **Precautionary Statements:** Read label before use. Avoid breathing vapours. Collect spillage.



Steps:

1. Place a test tube on the rack.

2. With a Pasteur pipette for each fragrance, add to the test tube 6 drops of peach fragrance and 4 drops of vanilla fragrance.



3. Measure 5 ml of water in the small measuring cup.

4. With the help of the funnel, add the water to the test tube.

5. Place the lid on the test tube and shake it so that it mixes well.

6. Your mixed perfume is made!



7. Smell the fragrance. If you like it, then start using it! Remember to make the dermatologic test first! Do you want to take your perfume with you everywhere? Pour it into the spray bottle and use it whenever you want!

Ideal Formulations

A mixed perfume (5.5 g)

Water (5 g), Fragrances (0.5 g)



Suggestions:

- If the smell is too strong, you can add more water;
- If you want a stronger smell you can add more drops of the fragrances provided;
- If you want to change the smell of the perfume and make a secret one, try adding more or less drops of the fragrances provided.

Explanation:

One of the methods to make perfumes is by combining fragrances of different raw materials, such as you have done, by mixing two fragrances.



DID YOU KNOW...

That the smell of a perfume can vary on different people? The pH, the greasiness and sweat of our skin can influence the smell that stays on our skin.



Experiment 3

Perfume of aromatic raw-materials with fragrances and tea

INGREDIENTS: GLYCERINE, AQUA, HEXYL CINNAMAL, BENZYL SALICYLATE, CITRONELLOL AND PARFUM

What you will need:

- Material from experiment 1
- Peach fragrance 
- Vanilla fragrance 
- Spray bottle 

Vanilla Fragrance

WARNING

Contains **Ethyl-3-phenyl-2,3-epoxybutanoate, Heliotropin, 3-(4-tert-Butylphenyl)-propanal, Methyl-cinnamate and 2,4-Dimethyl-3-cyclohexene-1-carboxaldehyde**. May cause an allergic reaction. Hazard Statements: Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. Toxic to aquatic life with long lasting effects. Precautionary Statements: Read label before use.



Peach Fragrance

WARNING

Contains **Alpha-Hexylcinnamaldehyde, Benzyl Salicylate and 3,7-Dimethyl-6-octen-1-ol**. May produce an allergic reaction. Hazard Statements: May cause an allergic skin reaction. Causes serious eye irritation. Precautionary Statements: Read label before use. Avoid breathing vapours. Collect spillage.



Steps:

1. Repeat steps 1 to 7 from experiment
2. Depending on the type of tea you have used, you can choose which fragrance you would like to add (see the next table).
3. With the help of a Pasteur pipette, add X drops of your chosen fragrance.

The "X" means that you can choose how many drops of your fragrance to add, the number of drops will depend on your taste, and also on the original scent of your perfume (tea infusion) and the fragrance you've chosen.

Below are some suggestions for mixtures that smell great.

Tea	Fragrance
Apple and cinnamon	6 x  Peach 10 x  Vanilla
Green	10 x  Peach

4. Put the lid on the test tube and shake it so that it mixes well. Your perfume is made!
5. If you like it, then start using it! Remember to make the dermatologic test first!

Ideal Formulations

Perfume of aromatic raw-materials with fragrances and apple and cinnamon tea (8.1 g)

Liquid glycerine (6.8 g), Tea infusion (0.5 g), Fragrances (0.8 g)

Perfume of aromatic raw-materials with fragrance and green tea (7.8 g)

Liquid glycerine (6.8 g), Tea infusion (0.5 g), Fragrance (0.5 g)

Do you want to take your perfume with you everywhere? Pour it into the spray bottle and use it whenever you want!

Have fun creating fantastic perfumes.

ATTENTION: these perfumes are delicate so you must store them in a dry area which is out of direct sunlight. They will last for approximately 1 week before spoiling.

Lipsticks

Lipsticks are cosmetics to use on the lips, however, with different properties and also some different ingredients.

They are solids, usually used to give colour to the lips.



Experiment 4

Lipstick

INGREDIENTS: RICINUS COMMUNIS SEED OIL, CERA ALBA, COPERNICIA CERIFERA CERA PROPYLENE GLYCOL USP, FLUORESCENT ORANGE COLOUR AND PARFUM

ATTENTION: ask an adult for help.

What you will need:

- Beeswax
- Carnauba wax
- Castor oil
- Plastic spatula
- Lipstick mould
- Lipstick tube
- Orange cosmetic colouring
- Strawberry fragrance
- Small measuring cup
- Teacup (or another cup/container suitable for microwaves)
- Metal spoon
- Pasteur pipette



Strawberry Fragrance

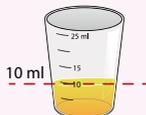
WARNING

Contains Ethyl-2,3-epoxy-3-phenylbutyrate. May cause an allergic reaction. **Hazard Statements:** May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects. **Precautionary Statements:** Read label before use.

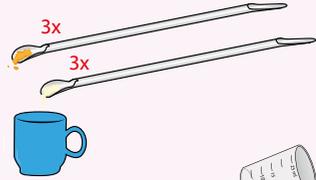


Steps:

1. Measure 10 ml of castor oil into the measuring cup.



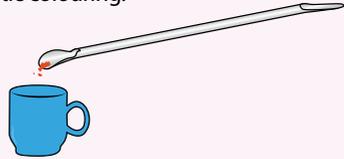
2. With the plastic spatula, put 3 spoons of carnauba wax and 3 spoons of beeswax inside the teacup.



3. Transfer the castor oil into the teacup.



4. With the plastic spatula add a little of orange cosmetic colouring.



Note: you just need to add a little bit of colouring so that your lipstick becomes coloured.



5. Mix all the ingredients well with a metal spoon.

6. After mixing the ingredients, ask an adult for help and place the cup in the microwave for 1 minute. This will melt the lipstick waxes.



Here you saw a change of state. Waxes went from solid into liquid, with the rise in temperature (when the cup was heated in the microwave). What's the name given to this change of state process?
Melting!



7. Ask an adult to remove the cup from the microwave.

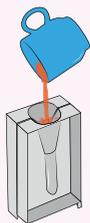
ATTENTION: the cup is hot.



Note: if after 1 minute the waxes aren't melted, stir the mixture again with the spoon and ask an adult to put it back in the microwave for 15 seconds more. Repeat this step until all waxes are melted.

ATTENTION: you have to be very fast while carrying out steps 8 and 9 so that the lipsticks don't solidify in the cup. However, if this happens, do not worry. You can melt the mixture again in the microwave.

8. With a Pasteur pipette, add 10 drops of strawberry fragrance to the mixture that you've just removed from the microwave.



9. Ask an adult for help and pour the melted mixture into the lipstick mould.

Note: make sure both sides of the mould are well attached before pouring the mixture, otherwise the liquid may drain.

10. Now you have to wait until your lipstick solidifies and cools. This can take 2 hours!



2 hours

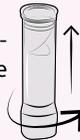
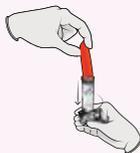
Your lipstick will now change its state of matter. You only need to wait and see! Your lipstick will go from liquid to solid (with the drop in temperature).

We call it **solidification**!



11. It's time to put on your gloves! After completely solidified and cooled, open the mould, remove the lipstick and place it in the tube.

Note: you must turn the swivel cylinder (to the end) before putting the lipstick inside the tube.



12. After this, roll down the cylinder and put the lid on.

Scientist, you have just made your first lipstick!

Suggestion: you can shape your lipstick as you like. If you want it with its common shape, ask an adult to cut it and give it the proper shape.

Ideal Formulations

Lipstick (5.35 g)

Castor oil (3.5 g), Beeswax (0.8 g), Carnauba wax (0.8 g), Fragrance (0.2 g), Cosmetic colouring (0.005g)

The science behind your lipsticks

DID YOU KNOW...

That many chemical ingredients are used to make a lipstick?



Waxes



You have two types of waxes to make your lipsticks: beeswax and carnauba wax.

Beeswax

Beeswax is produced by bees in order to build hives.

DID YOU KNOW...

That beeswax is made up of about 300 chemical compounds?



This wax can be used in the whole range of cosmetic products such as make-up, hair products, lotions and, of course, lipsticks.

Beeswax melts in between 61°C (141.8°F) and 66°C (150.8°F) - this is called the melting point!

Carnauba wax

Carnauba wax has a yellowish colour and is collected from leaves of a palm tree, Carnauba palm, that grows in the north of Brazil.

After picked and dried, the leaves are dipped in hot water in order to collect the wax.

Due to the food grade of this wax, it can be used in the cosmetic industry, food industry, in coating and in household products.

Carnauba wax is used in lipsticks to make them harder. As so, this wax isn't used in lip glosses, but only used to make lipsticks.



The melting point of carnauba wax is 83°C (181.4°F).

Carnauba wax has the highest melting point among all waxes, this is to say, it's the wax that needs the highest temperature in order to melt. This is why this wax is used to make your lipsticks, as it prevents them from melting easily.



Castor oil

The oil you will use to make your lipstick is castor oil.



Image 1. Castor oil on the left and castor seeds on the right.

Castor oil is extracted from a plant seed, '*Ricinus communis*'. The sprinkled and bean shape seeds are located inside the capsules with soft thorns of this plant.

This is the oil that gives shine to your lipstick!

Colourings



Colourings only give colour to lipsticks (and not to your lips). Pigments are responsible for giving colour to lipsticks and also your lips.



Colours are a very important feature when choosing a lipstick. Each person has their own favourite colours and, as so, there are several lipstick colours!

Fragrances



Lipsticks can also have fragrances.

Fragrances are added to disguise the smell of other ingredients.

There are a lot of lipsticks that smell like fruits!



Experiment 5 Crayon lipstick

ATTENTION: ask an adult for help.

Before using your crayon lipstick, make a dermatological test with vaseline. Put it on the inside of your wrist and wait 5 minutes.



What you will need:

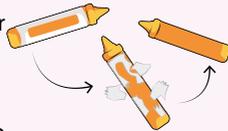
- 2/3 Face paint crayons
- Vaseline
- Large pan
- Small container
- Metal fork
- Empty lipstick tube



ATTENTION: use only vaseline of cosmetic or pharmaceutical grade.

Steps:

1. Remove the paper from the crayons that you've chosen to use.



Suggestion: you can use one colour or mix two or three, and make lipsticks in the colours you want!

2. Ask an adult to place the crayons inside the small container and put it in water bath, inside the large pan.



3. Stir the crayons while they melt.

4. Add to the crayons, 1 tablespoon of vaseline. Mix the ingredients using a fork.

Tip: the more vaseline you add the easier will be to put on the lipstick.

5. When the ingredients are melted and mixed, ask an adult to remove the pan from the stove.

Suggestion: you can add to the mixture essential oils or vanilla essence (the one used for cooking) to give off a scent to your lipsticks.

6. Pour the mixture directly into the lipstick tube.



7. Place the lipstick tube in the fridge for the lipstick to cool and solidify. This can take several hours!



3 to 8 hours

8. After this period, try on your crayon lipstick!





Experiment 6 Lip gloss

ATTENTION: ask an adult for help.

INGREDIENTS: RICINUS COMMUNIS SEED OIL, CERA ALBA, HEXYL CINNAMAL, BENZYL SALICYLATE, CITRONELLOL, PARFUM, PROPYLENE GLYCOL USP, FLUORESCENT ORANGE COLOUR, FOOD BLUE 2, FOOD RED 3, METHYLISOTHIAZOLINONE, METHYLCHLOROISO-THIAZOLINONE AND DIMETHYLOL GLYCOL

What you will need:

- Beeswax
- Castor oil
- Metal spoon
- Plastic spatula
- Teacup (or another cup/container suitable for microwaves)
- Small measuring cup
- Pasteur pipette
- Lip gloss flask
- Colourings
- Fragrances



Vanilla Fragrance

WARNING

Contains **Ethyl-3-phenyl-2,3-epoxybutanoate, Heliotropin, 3-(4-tert-Butylphenyl)-propanal, Methyl-cinnamate and 2,4-Dimethyl-3-cyclohexene-1-carboxaldehyde**. May cause an allergic reaction. **Hazard Statements:** Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. Toxic to aquatic life with long lasting effects. **Precautionary Statements:** Read label before use.



Peach Fragrance

WARNING

Contains **Alpha-Hexylcinnamaldehyde, Benzyl Salicylate and 3,7-Dimethyl-6-octen-1-ol**. May produce an allergic reaction. **Hazard Statements:** May cause an allergic skin reaction. Causes serious eye irritation. **Precautionary Statements:** Read label before use. Avoid breathing vapours. Collect spillage.



Strawberry Fragrance

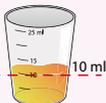
WARNING

Contains **Ethyl-2,3-epoxy-3-phenylbutyrate**. May cause an allergic reaction. **Hazard Statements:** May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects. **Precautionary Statements:** Read label before use.

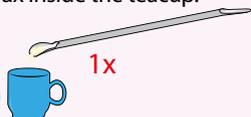


Steps:

1. Measure 10 ml of castor oil into the small measuring cup.



2. With the plastic spatula, put 1 spoon of beeswax inside the teacup.



3. Transfer the castor oil into the teacup.



4. Choose the colour you want for your lip gloss. With the plastic spatula add a little of colouring.

Note: you just need to add a little bit of colouring so that your lip gloss becomes coloured.



5. Mix all the ingredients well with a metal spoon.

6. After mixing the ingredients, ask an adult for help and place the cup in the microwave for 1 minute. This will melt the beeswax and help mixing the ingredients better.



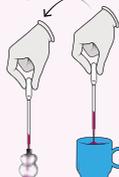
7. Ask an adult to remove the cup from the microwave.

ATTENTION: the cup is hot!



Note: if after 1 minute the wax isn't melted yet, stir the mixture again with the spoon and ask an adult to put it back in the microwave for 15 more seconds. Repeat this step until the wax is completely melted and the ingredients mixed.

8. It's time to choose the fragrance for your lip gloss. When chosen, use the Pasteur pipette to add 10 drops to the mixture that you've just removed from the microwave.



9. With the pipette, collect the mixture melted in the teacup and put it into the lip gloss flask. To make it easier, remove the part that's at the flask's opening, which makes it narrower. In the end, put the part back on.

ATTENTION: careful not to melt the pipette! The mixture mustn't be too hot when you carry out step 9.

10. Now you have to wait until your lip gloss cools. This can take a few hours!



2 hours

11. Put the lid on the flask and your lip gloss is ready to use!

Scientist, you have just made your first lip gloss!

Ideal Formulations

Lip gloss (5.38 g)

Castor oil (4.85 g), Beeswax (0.24 g), Fragrance (0.24 g), Cosmetic colouring (0.005 g)



Experiment 7

Home-made lipsticks

ATTENTION: ask an adult for help.

Before using your homemade lipstick, make a dermatological test with honey. Put it on the inside of your wrist and wait 5 minutes. There is a risk of occurrence of irritation and allergic reactions with sensible people.



What you will need:

- Honey
- Vaseline
- Face cosmetic (e.g. blush) or a lipstick almost at the end (to give colour to the lipstick)
- Large container for the ingredients mixture
- Microwave
- Metal spoon
- Small containers to place the lipstick

WARNING: use only vaseline of cosmetic or pharmaceutical grade.

Steps:

1. In a container, put 3 teaspoons of vaseline, 1/2 teaspoon of honey and a little of blush, eye shadow or a lipstick almost at the end.



Tip: instead of using the remains of a lipstick, blush or eye shadows, to give colour to the lipstick, you can use food colourings.

2. Ask an adult to melt the mixture in the microwave at regular breaks of 30 seconds. Stir the mixture in between each break with the metal spoon.



Tip: you can add to your lipsticks essences of vanilla, chocolate or strawberry so that they give off a pleasant smell.

3. When the mixture is melted and the ingredients all mixed, pour it into small containers.



4. Let your lipstick cool before using it!

DID YOU KNOW...

That lipsticks aren't recycled?

At each second four lipsticks are sold in the world! In 2013, an artist created a sculpture called 'Giant Lipstick' in order to present this problem. This sculpture is made from 5,000 used lipsticks, has 2.5 m tall and weighs 200 kg.



Image 2. 'Giant Lipstick' sculpture.



Experiment 8
More home-made lipsticks

ATTENTION: ask an adult for help.

Try recycling your lipsticks at home! Even when a lipstick is at the end and you can't use it anymore; it still has some remains that you can reuse. From old lipsticks we'll learn how to make new ones and with new colours!

What you will need:

- Metal spoon
- Empty lipstick tubes
- Toothpick or small spoon
- Lipstick remains
- Container

Steps:

1. Scrape with a toothpick or a small spoon the remains of a lipstick into a container.



Tip: you can use and mix remains of two or more lipsticks with different colours and, as so, create a recycled lipstick with a new colour, different from the original one!

2. Ask an adult to melt these remains in the microwave for 30 seconds.



Note: if it isn't completely melted, place the container in the microwave for 15 more seconds.

3. Stir it well with the metal spoon.

4. Pour the mixture into the tubes. Let it cool.



Use your cosmetic bag to store every products you made or others you want to have always with you.

Spa



Spa is the common name given for a place where a person may enjoy healthy activities, in contact with nature, related to health and well-being tourism. Its origin is related to water and its health benefits.

DID YOU KNOW...

That the origin of the word Spa isn't consensual?

One of the most common ones states that Spa comes from "Salus Per Aquam" or "Sanitas Per Aquam" meaning "health through water".



Experiment 9
Dried flowers soap

ATTENTION: ask an adult for help.

What you will need:

- Soap base
- Plastic mould
- Dried flowers
- Essential oil (or a fragrance from the kit)
- Wooden spatulas
- Pasteur pipette

Steps:

1. Choose flowers that you like. So that they may dry, place them in between 2 newspaper sheets for 3 weeks. Put a heavy object on top of them, for example a big book.

2. When your flowers are dry, melt around 20 grammes (g) of soap base in water bath (double boiler). If needed, ask an adult for help you cut the soap base.



3. With the Pasteur pipette add some drops of the essential oil that you've chosen and stir it with the wooden spatula. If you don't have essential oils you can use the fragrances of your kit.

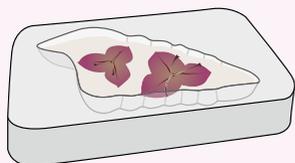


4. Pour the soap base into the plastic mould.

5. Place the dried flowers inside the plastic mould. Do not touch the soap base as it is hot. If you want to change or rearrange the flowers' positions use the wooden spatula.

6. Let it cool.

7. Remove it from the plastic mould and wait 24 hours, until you don't feel humidity when touching it.



Tip: You can replace the dried flowers by aromatic herbs. You may also add cosmetic colouring to colour your soap.



Image 3. Glycerine soap with herbs.

Experiment 10 Bath salts

INGREDIENTS: SODIUM CHLORIDE, HEXYL CINNAMAL, BENZYL SALICYLATE, CITRONELLOL AND PARFUM, PROPYLENE GLYCOL USP, FLUORESCENT ORANGE COLOUR, FOOD BLUE 2, FOOD RED 3, METHYLISOTHIAZOLINONE, METHYLCHLOROSUTHIAZOLINONE AND DIMETHYLOL GLYCOL

What you will need:

- Sea salt
- Large measuring cup
- Small measuring cup
- Fragrance(s) (of your choice)
- Cosmetic colouring(s) (of your choice)
- Wooden spatula
- Pasteur pipette
- Flask (to keep)



Vanilla Fragrance

WARNING

Contains **Ethyl-3-phenyl-2,3-epoxy-butanoate, Heliotropin, 3-(4-tert-Butylphenyl)-propanal, Methyl-cinnamate and 2,4-Dimethyl-3-cyclohexene-1-carboxaldehyde**. May cause an allergic reaction. **Hazard Statements:** Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. Toxic to aquatic life with long lasting effects. **Precautionary Statements:** Read label before use.



Peach Fragrance

WARNING

Contains **Alpha-Hexylcinnamaldehyde, Benzyl Salicylate and 3,7-Dimethyl-6-octen-1-ol**. May produce an allergic reaction. **Hazard Statements:** May cause an allergic skin reaction. Causes serious eye irritation. **Precautionary Statements:** Read label before use. Avoid breathing vapours. Collect spillage.



Strawberry Fragrance

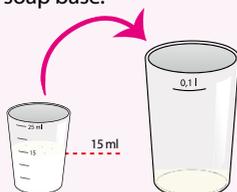
WARNING

Contains **Ethyl-2,3-epoxy-3-phenylbutyrate**. May cause an allergic reaction. **Hazard Statements:** May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects. **Precautionary Statements:** Read label before use.



Steps:

1. With the small measuring cup make two measures of 15 ml each of sea salt. Pour the 30 ml of sea salt into the large measuring cup help you cut the soap base.



2. With a Pasteur pipette, add 8 drops of the fragrance you like the most.

Tip: use always the same Pasteur pipette for the same reagents and change it everytime you change reagents too.

3. Choose the colouring that you want to use and with a Pasteur pipette add drops of the colouring until you reach the colour that you want.



Tip: you can also mix colours in the same amount or in different amounts, until you reach the colour that you want.



4. With the wooden spatula mix it well. Your scented bath salts are finished!

5. You can use your bath salts yourself for a lovely scented bath or you can give them to someone as a gift. Don't forget to put a label on the flask so you don't forget what is in it!

Ideal Formulations

Bath salts (18 g)

Salt (17.80 g), Fragrance (0.15 g), Cosmetic colouring (0.05 g)

Note: you can repeat this experiment many more times with different colours and different fragrances. You only need to repeat the previous steps, but using another fragrance and/or colouring.

Suggestion: you can make a colourful flask of salt baths! Use a transparent flask and put the different coloured bath salts in layers. You will see an amazing effect!

Explanation:

Bath salts are since ancient times known and used for calming or stimulating effects for the body.

In fact, for a long time salty water has been suggested as a treating method for different skin and blood circulation problems (salt activates blood flow).

As you already know, sea salt is obtained with the sea water evaporation, which makes it cheap to buy.

Putting together its price and its beneficial properties for the human body, sea salt is one of the most popular ingredients in the production of baths salts.



image 4. Bath salts.

Do you know how to use your bath salts? If you have a bathtub, add them to the water and stir until foam appears. If you don't have a bathtub, you can simple put them on a sponge and rub your body with it. This way, the salts have a double effect: relaxing and exfoliating.





Experiment 11 Fizzy bath bombs

INGREDIENTS: SODIUM BICARBONATE, CITRIC ACID, SODIUM CHLORIDE, AQUA, HEXYL CINNAMAL, BENZYL SALICYLATE, CITRONELLOL, PARFUM, FOOD YELLOW 4, METHYLISOTHIAZOLINONE, METHYLCHLOROISOTHIAZOLINONE AND DIMETHYLOL GLYCOL

ATTENTION: ask an adult for help.



What you will need:

- Fragrance (of your choice)
- Small measuring cup
- Cosmetic colouring (of your choice)
- Sodium bicarbonate
- Large measuring cup
- Wooden spatulas
- Citric acid
- Pasteur pipettes
- Plastic spatula
- Table salt

Citric Acid WARNING

Hazard Statements: Causes serious eye irritation.



Vanilla Fragrance

WARNING

Contains **Ethyl-3-phenyl-2,3-epoxybutanoate, Heliotropin, 3-(4-tert-Butylphenyl)propanal, Methyl-cinnamate and 2,4-Dimethyl-3-cyclohexene-1-carboxaldehyde**. May cause an allergic reaction. **Hazard Statements:** Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. Toxic to aquatic life with long lasting effects. **Precautionary Statements:** Read label before use.



Peach Fragrance

WARNING

Contains **Alpha-Hexylcinnamaldehyde, Benzyl Salicylate and 3,7-Dimethyl-6-octen-1-ol**. May produce an allergic reaction. **Hazard Statements:** May cause an allergic skin reaction. Causes serious eye irritation. **Precautionary Statements:** Read label before use. Avoid breathing vapours. Collect spillage.



Strawberry Fragrance

WARNING

Contains **Ethyl-2,3-epoxy-3-phenylbutyrate**. May cause an allergic reaction. **Hazard Statements:** May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects. **Precautionary Statements:** Read label before use.



Steps:

1. Put your protective gloves on and make sure that the working table is completely clear.

2. Fill 10 ml of citric acid in the small measuring cup.

Then pour it into the large measuring cup.



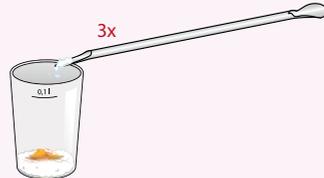
3. With a Pasteur pipette add 10 drops of the fragrance you like the most.



4. With other Pasteur pipette, add drops of a cosmetic colouring until you have the colour you wish for.



5. Ask an adult for table salt and add 3 plastic spoons of it (with the smaller part).



6. Stir it well with the wooden spatula.

7. Fill 10 ml of sodium bicarbonate in another small measuring cup. Then add it to the large measuring cup and stir it with the wooden spatula.



8. The dough must be dry, however slightly gooey. If it's too dry, add some drops of water.

9. With the dough, make small balls with your hands. Place them in a container, with some space in between them, so that they don't get stuck to each other.



Ideal Formulations

Fizzy bath bombs (6.55 g)

Sodium bicarbonate (2.4 g), Citric acid (2.4 g), Sodium chloride (1 g), Fragrance (0.5 g), Colouring (0.25 g)



Experiment 12

Aromatize your spa with natural essential oils

What you will need:

- Wooden spatula 
- Rosemary, lavender or another plant
- Cup
- 2 Jars
- Aluminum paper
- Strainer
- Olive oil
- Skewers

Steps:

1. Pick up some rosemary, lavender or another plant and break them in quantities enough to fill a jar.
2. Wash the pieces of the plants that you will use and let them dry completely in the open air for some days.
3. When these are dry, put the pieces inside the jar.
4. Fill the jar with olive oil until it covers all the plant pieces.
5. Cover the opening of the jar with aluminum paper and let the jar rest for at least 2 weeks.
6. Strain the olive oil with the plant infusion that you chose into a new jar.
7. You can throw away the plant remains. Your natural essential oil is ready.
8. To use it as flavouring, cover again the opening of the jar with aluminum.

9. Use the skewers to pierce the aluminum paper and let the sticks soak the olive oil.

Explanation:

In this experiment you made an infusion in oil (in this case olive oil), whose properties, like smell or colour, will depend on the plant you choose.



Image 5. Rosemary (upwards) and lavender (downwards).

This essential oil can work as a natural air freshener, since the skewers absorb the oil and spread the smell of the used plant in the air!

DID YOU KNOW...

That aromatherapy is a therapy, also present in spas, which takes advantage of the effects that some aromas have on individuals?

This technique uses essential oils.



Experiment 13

Lip exfoliating scrub

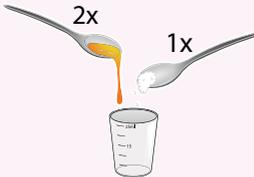
What you will need:

- Sugar
- Honey
- Teaspoon
- Small measuring cup with lid 
- Wooden spatula 



Steps:

1. Add 1 teaspoon of sugar to the small measuring cup.
2. Now add 2 teaspoon of honey to the same cup.



3. Stir this mixture well with the wooden spatula.



4. Cover the cup with its lid.

5. Your lip exfoliating scrub is ready to use! Remember to make the dermatologic test before you use it.

Tip: you can add some drops of an essential oil (or drops of lemon or orange juice) in order to create different types of exfoliating scrubs.

Explanation:

In this experiment you have done the same as in previous experiments. When putting this exfoliating scrub on your lips, you are eliminating dead cells and skin, making your lips healthier!



Image 6. Applying a lip exfoliating scrub.



Experiment 14 Rose tonic

ATTENTION: ask an adult for help.

What you will need:

- Rose petals (20 g)
- Jar with lid
- Hot or boiling water (200 ml)
- Strainer
- Large funnel
- Container with lid and heat-resistant

Steps:

1. Put the rose petals in a heat-resistant container.
2. Put the hot water over the rose petals.
3. Cover the container and let the mixture rest for 1-2 hours.
4. Strain the liquid into a cup.
5. Use the funnel to transfer the liquid into the jar with lid.
6. Save that liquid in the fridge for a week.

Explanation:

Rose tonic is very popular in cosmetics. It can be used in all types of skin, it has tranquilizing properties and it also helps to keep the balance in the skin.

SUPER SCIENTIST:

Make rose tonics with different types of roses and compare their fragrances!



Image 7. Roses of many colours.

DID YOU KNOW...

That to obtain a kilogram of rose essence around two tons of petals of these flowers are used?



Experiment 15
Eye treatment

ATTENTION: ask an adult for help.

What you will need:

- Cucumber
- Plate
- Knife

Steps:

1. Ask an adult to use a knife to cut two slices of cucumber.



3. Remove the slices from the fridge and put them on your eyes (shut) for 15 minutes.

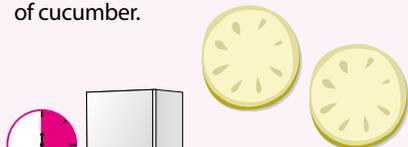
4. You can now remove the slices and observe the difference in the colour around your eyes.

Explanation:

Cucumber is a fruit made mainly of water (90%). The remaining 10% of its constitution are made of vitamin C, flavonoids, caffeic acid, and folates. All these nutrients are antioxidants.



Image 8. Cucumber.



2. Put these slices in the plate and then put the plate in the fridge for 30 minutes.



LEARN MORE...

Antioxidants are molecules which prevent or reduce the damage caused by substances called **free radicals**, which can lead to the malfunction of cells. Antioxidants block oxidation reactions, protecting the cells.

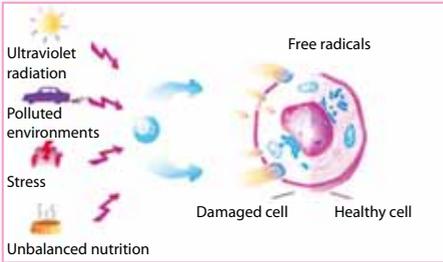


Image 9. Simplified illustration showing the action of antioxidants.

For this reason, using slices of cucumber in the eyes also works as a hydrant for those areas in the skin. Besides, cucumber is also a tranquilizer, anti-inflammatory, and works in the regeneration of cells.



Image 10. Putting cucumber slices in the eyes.

Experiment 16 Chocolate and banana facial mascara

ATTENTION: ask an adult for help.

What you will need:

- Cocoa powder
- Natural yogurt
- Lemon juice
- Banana
- Teaspoon
- Liquidizer
- Cup



Steps:

1. Put in the liquidizer half banana, 3 teaspoons of yogurt, 1 teaspoon of lemon juice, and 1 teaspoon of cocoa powder.



2. Ask an adult to switch on the liquidizer, so that you can mix all the ingredients.

 Pay attention and don't let the mixture become too liquid, so that it doesn't drip when you put it in your face. If that happens, put a bit more of banana.

3. Pour the mixture into a cup.

4. Make a dermatology test and, if noting happens, put the mascara on your face and relax for a while.



How to apply:

The mascara should be applied when the skin is dry and clean. Let the mascara take action for about 10-15 minutes. After that time, wash your face with tepid water. Finally, apply a facial moisturizing in the skin.



ATTENTION: if the skin has any cut or injury, using lemon juice can cause irritation. In this situation, the lemon juice can be replaced with honey.

Explanation:

Facial mascaras are extremely important to whoever wants to keep their skin hydrated and shiny.

Besides hydrating, mascaras are also capable of detoxifying, improving the blood circulation and restoring some nutrients.



Image 11. Chocolate facial mascara.

The mascara you make in this experiment is extremely hydrating because of the nutritional properties of the used ingredients.



Chocolate is made from cocoa and it has vitamins and antioxidant minerals.



Banana is rich in potassium, which makes it a great ingredient to prevent wrinkles.



Yogurt has antibacterial properties, reduces acne and, thanks to its lactic acid, it cleans deeply the skin and removes dead cells, favouring facial youth.



Lemon is rich in vitamin C, a very good antioxidant. Combined with yoghurt, it is great to illuminate the skin.

Images 12, 13, 14 and 15. Components of the chocolate and banana facial mascara and its effects on the skin.



Experiment 17

Home-made moisturizing cream

ATTENTION: ask an adult for help.

What you will need:

- Small measuring cup 
- Container



- Vaseline
- Almond oil
- Distilled water
- Dessert spoon
- Cup (suitable for the microwave)
- Fork
- Oven glove

Steps:

1. Add 25 ml of almond oil to a cup suitable for the microwave. Ask an adult and use the small measuring cup to help you.
2. Add also to the cup 2 dessert spoons of Vaseline.
3. Ask an adult to heat this mixture in the microwave.

Keep checking if your mixture is completely melted every 15 seconds. Use the oven glove so you don't get burned!



4. Keep adding distilled water and mixing with a fork, until you have a homogeneous mixture.
5. Let it cool down and, finally, put the mixture in the container.

Every time we suggest you to use the round container while it is being used for another product, put the result of your experiment in another container with lid.

How to apply:

Put a bit in the hands and then spread the cream in your body with circular movements, until it is absorbed by your skin.



Explanation:

It is very important to hydrate the skin so that it stays healthy.



DID YOU KNOW...

It was during the Roman empire that Galen of Pergamon created the father of modern creams?

This Greek doctor mixed water, beeswax and olive oil, creating the first basis for the creams that are produced today. The 'basic recipe' is still used today!



Image 16. Galeno (c. 130 AD - c. 210 AD).

Apart from having a very pleasant aroma, **almond oil** can soften dry skin.



Image 17. Almonds.

Almonds are a very nutritious fruit!

They are rich in fibres, proteins, vitamin E, magnesium, vitamin B2, etc.

The antioxidants present in the almonds protect the skin from free radicals and are also capable of creating a barrier against UV rays (ultraviolet). Therefore, they protect the skin against ageing!



Vitamin E also protects the collagen and elastin proteins, which are responsible for keeping the elasticity and brightness of the skin.



Image 18. Almond oil.

In turn, **vaseline** acts in this moisturizing cream as an emulsifier. These products are absorbed by the skin and have moisturizing powers.

LEARN MORE...

Learn how to keep the skin always hydrated!

- Avoid long baths and with very hot water;
- Don't scrub the skin with the towel;
- After having a bath, always apply a moisturizing cream;
- Apply a scrub at least twice per month;
- Drink between 1.5 and 2 litres of water per day.



Image 19. Moisturizing cream.

Experiment 18 Fairy hands

What you will need:

- Scrub
- Moisturizing cream

Steps:

1. Use the scrub you made in experiment 13 and apply it in your hands in circular movements.
2. Rinse with water.
3. Apply a moisturizing cream.



Experiment 19 Massage oil

INGREDIENTS: OLIVE OIL, HEXYL CINNAMAL, BENZYL SALICYLATE, CITRONELLOL AND PARFUM

What you will need:

- Small measuring cup 
- Wooden spatula 

- Fragrance (of your choice) 🍯
- Pasteur Pipette 🍯
- Olive oil
- Cup

Vanilla Fragrance

WARNING

Contains **Ethyl-3-phenyl-2,3-epoxy-butanoate, Heliotropin, 3-(4-tert-Butylphenyl)-propanal, Methyl-cinnamate and 2,4-Dimethyl-3-cyclohexene-1-carboxaldehyde**. May cause an allergic reaction. **Hazard Statements:** Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. Toxic to aquatic life with long lasting effects. **Precautionary Statements:** Read label before use.



Peach Fragrance

WARNING

Contains **Alpha-Hexylcinnamaldehyde, Benzyl Salicylate and 3,7-Dimethyl-6-octen-1-ol**. May produce an allergic reaction. **Hazard Statements:** May cause an allergic skin reaction. Causes serious eye irritation. **Precautionary Statements:** Read label before use. Avoid breathing vapours. Collect spillage.



Strawberry Fragrance

WARNING

Contains **Ethyl-2,3-epoxy-3-phenylbutyrate**. May cause an allergic reaction. **Hazard Statements:** May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects. **Precautionary Statements:** Read label before use.



Steps:

1. Measure 20 ml of olive oil in the small measuring cup and then transfer it to the cup.
2. Add to the olive oil some drops of the fragrance you like the most, using the Pasteur pipette. Mix well with the wooden spatula.
3. There you go! The massage oil is ready.

Ideal Formulations

Massage oil (20.5 g)

Olive oil (20 g), Fragrance (0.5 g)

Explanation:

Massages are an excellent way of regaining energy, but they feel even better when made with massage oil! Massage is the practice of applying force or vibration on the soft tissues of the body, including muscles, connective tissues, tendons, ligaments and articulations, in order to stimulate the circulation, mobility, elasticity or relieve pain in the body.



Image 20. Massage.

It can be applied in specific parts of the body or continuously in the whole body, to cure physical trauma, relieve psychological stress, manage pain, improve circulation or relieve tension.

LEARN MORE...

Olive oil is the oldest massage oil in the world.

It works as anti-wrinkles and moisturizing for dry skin.

It purifies, tranquillizes, and softens the impurities in the skin, making their removal easier.

It also improves skin elasticity, gives shine to the hair, and it is perfect for relaxing baths and massages.



Experiment 20 Perfumed painting

ATTENTION: ask an adult for help.

What you will need:

- Wheat flour
- Washing-up liquid
- Cosmetic colourings 🍯
- Pasteur pipettes 🍯
- Small measuring cup 🍯
- Fragrances 🍯
- Paintbrushes
- Bowls
- Sheets of paper
- Spoon



Vanilla Fragrance

WARNING

Contains **Ethyl-3-phenyl-2,3-epoxy-butanoate, Heliotropin, 3-(4-tert-Butylphenyl)-propanal, Methyl-cinnamate and 2,4-Dimethyl-3-cyclohexene-1-carboxaldehyde**. May cause an allergic reaction. **Hazard Statements:** Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. Toxic to aquatic life with long lasting effects. **Precautionary Statements:** Read label before use.



Peach Fragrance

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Strawberry Fragrance

WARNING

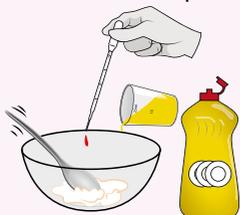
Contains **Ethyl-2,3-epoxy-3-phenylbutyrate**. May cause an allergic reaction. **Hazard Statements:** May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects. **Precautionary Statements:** Read label before use.



Note: you can use the colouring and fragrances supplied in your kit or you can use others that you may have at home.

Steps:

1. Add 2 spoons of flour in a bowl.
2. With help from an adult, measure 20 ml of washing-up liquid in the small measuring cup and add it to the bowl with flour.
3. Choose a colouring and pour some drops into the bowl. Use a Pasteur pipette to help you.
4. Using the spoon, stir it well. If you want a stronger colour, add more drops of colouring.



It is possible that the colour turns out light because the flour is white and absorbs the colour. If you want, add more drops of colouring until reaching the colour you want.



5. Now add a few drops of the fragrance you like the most and stir it again. If needed, use a Pasteur pipette.

6. Repeat these steps to make paints of different colours and fragrances: a bowl per paint!

If you want you can put together paints in new bowls and create other colours!



7. With paintbrushes and sheets of paper you can make perfumed drawings and paintings!



Create a fantastic spa environment using the experiments you did so far! Aromatize it with essential oils, give massages, scrub your skin, hydrate it... Use your imagination and show everyone what a fantastic scientist you are!



3. Worthknowing

3.1. Personal hygiene

Every day we are exposed to many germs of the environment and, if we aren't careful, we can get ill due to the contact with these germs.

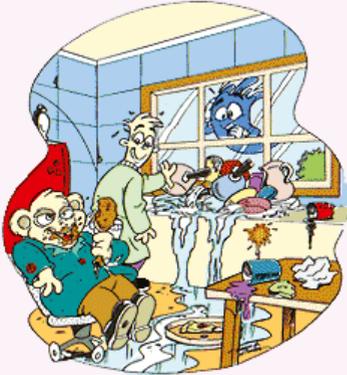


Image 21. Germs are really everywhere.

Germs (bacteria, protozoa, viruses and fungi) are little organisms visible only under a microscope and they are the main responsible for the appearance of most diseases.

The same way as there is many germs that can cause us diseases, there are also the ones that inhabit our organism and help us to keep healthy. For example, in our intestine, there are friendly bacteria that help us in the process of digestion!

So that we can protect ourselves from germs and avoid getting ill, we need to have a good **personal hygiene**.

Hygiene describes the things that you do to help keep yourself clean and if you are clean, you are more likely to be healthy. This way, it includes several routines that you must follow.

3.2. Skin hygiene

DID YOU KNOW...

That skin is an organ?

Scientists call **organ** to a set of **tissues** that, in turn, are a set of **cells**! Skin is the largest organ of the human body.

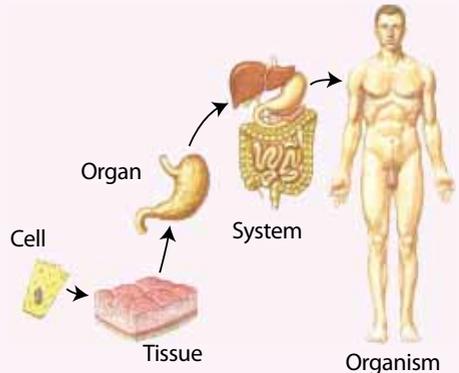


Image 22. Organisation level of living beings: from the cell to the organism.

The skin is one of the most important organs of our body. In addition to being part of the excretory system, as our skin releases sweat, it is also a protective barrier against germs and infections.



Image 23. Our skin is the largest organ of our body and it works like a protective barrier.

Sweat is a liquid created by the sweat glands. It has the important function to release toxic substances for our organism and to regulate our body temperature.



Image 24. A sportsman sweating, while practicing tennis, in a way to regulate his body temperature.

DID YOU KNOW...

That when you wash your hair, you should avoid products with too much oils in?

These make your hair greasy and they can create the perfect environment for the development of germs in your scalp (the skin coating your skull that has hair).



Image 25. Washing hair during a daily bath.

When washing our body, with water and soap, we are cleaning all the dusts, germs and other dirt that get stuck to the natural fat layer of our skin, created by the sebaceous glands.

This way, you should have a bath every day, always wash your hands before and after meals and whenever you go to the bathroom.

Our hands are in contact with many things that can seem clean but in fact are full of germs and dusts, so they get dirty too. When we touch our eyes, put our hands in our mouth or we eat without washing them, we are increasing the possibility of this dirt entering our organism and cause us diseases.



Image 26. Hands are a source of germs.

DID YOU KNOW...

That there is the Global Handwashing Day?

It happens on October 15!



So, when and how should we wash our hands?

- Before we eat or use food products;
- After going to the bathroom;
- After blowing our nose, coughing or sneezing;
- After touching animals or other objects;
- Before and after touching ill or injured people;
- After handling waste.

When our hands are visibly dirty or contaminated with organic matter, they must be washed with water and soap (for about 60 seconds)!



On the other hand, when our hands seem clean you can use an antibacterial gel, and you don't need water or a towel.



Image 27. Cleaning hands with antibacterial gel.

Observe the following image and learn how to wash your hands properly.



Image 28. Washing your hands properly.

3.3. Oral hygiene

The care with your teeth must start with your first tooth and then at three years old, when all your teeth are born, it is the time to visit a dentist and to brush them everyday.



Image 29. Child with her teeth in development.

It is very important to brush your teeth so that tiny bits of food don't build up in your mouth. The bacteria and sugars in the food you eat can begin to attack your teeth and this can cause tooth decay. Your teeth are important for chewing (and to have a great smile!) so it is important to have good oral hygiene.



Image 30. Tooth decay.

A dentist can prevent tooth decay, by cleaning the damaged part of your tooth with special instruments. If you visit regularly a dentist he can take care of your teeth and won't let them get worst.



Image 31. Dentist treating a tooth decay.

You should brush your teeth after each meal and after eating sweets. This way you prevent tooth decay and the formation of tartar that only a dentist can remove.



Image 32. How to wash your teeth properly.

After brushing your teeth you should also use dental floss, to remove bits of food that remain between your teeth and that the toothbrush can't reach.

3.4. Clothing hygiene

In order to have good body hygiene it is very important to wear clean clothes and shoes.

The more you wear a piece of clothing or a pair of shoes, the more they get dirty, so they need to be washed and cleaned regularly.

Throughout this book you will learn how to make many products that will help you with your hygiene and well-being, so that you can keep healthy!

3.5. The five senses

The way we see the world around us:

For sure there are foods you prefer and others that give you the chills! Do you like all the smells you feel?

Have you ever had goose bumps that would puff up your hair?

So why does this happen?

It happens because we have five senses!

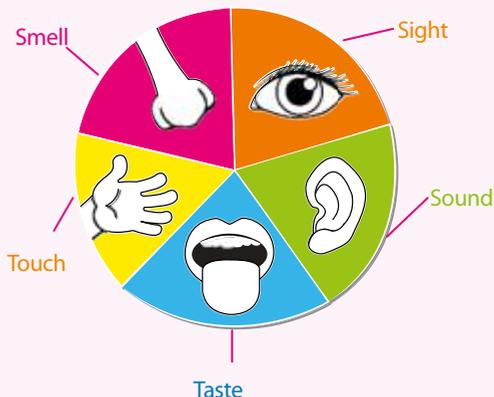


Image 33. The 5 senses of the human body.

With the sense of **sight** you can see everything around you, from colours to shapes.

With **sound** you can hear all the sounds around you, from a bird signing to a plane's noise.

With **touch** you can feel textures or the temperature of everything you touch!

With **taste**, you can enjoy all the flavours!



DID YOU KNOW...

That our tongue can distinguish 4 basic flavours?

The sense of taste perceives the chemical substances from food and drinks through receptors we have on our tongue. These receptors are called taste buds and they are small structures located on our tongue, responsible for detecting different flavours and then send these sensations to our brain, through nerve cells.

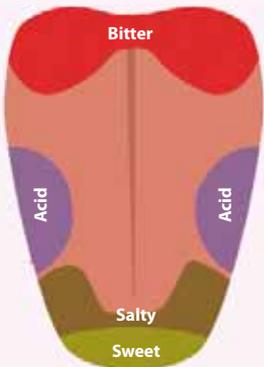


Image 34. The four flavours detected by taste buds of our tongue.

Finally, the **smell** allows you to feel the scent of a flour or a meal that is being prepared in the kitchen!

But there is more!

Flavours can only be perceived completely if we can smell too.

That is why, when we have a stuffy nose we can't know for sure the flavour of the food we eat.

Try covering your nose and swallowing! You'll see that you feel little the flavour of the food!



DID YOU KNOW...

That our body has olfactory memory?

If you look at a food product you know how it smells. This happens because all smells are memorised after the first time you smell them.



Image 35. The human body has olfactory memory.

So that is why when I smell sunscreen I always remember the beach!



It is through these senses that we can understand the world around us and have the most funny and different sensations!

Can you understand why we like soaps perfumes and shampoos so much? It is by using our senses that we choose them, by the sense of smell! Apart from this, its texture is also very important!



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