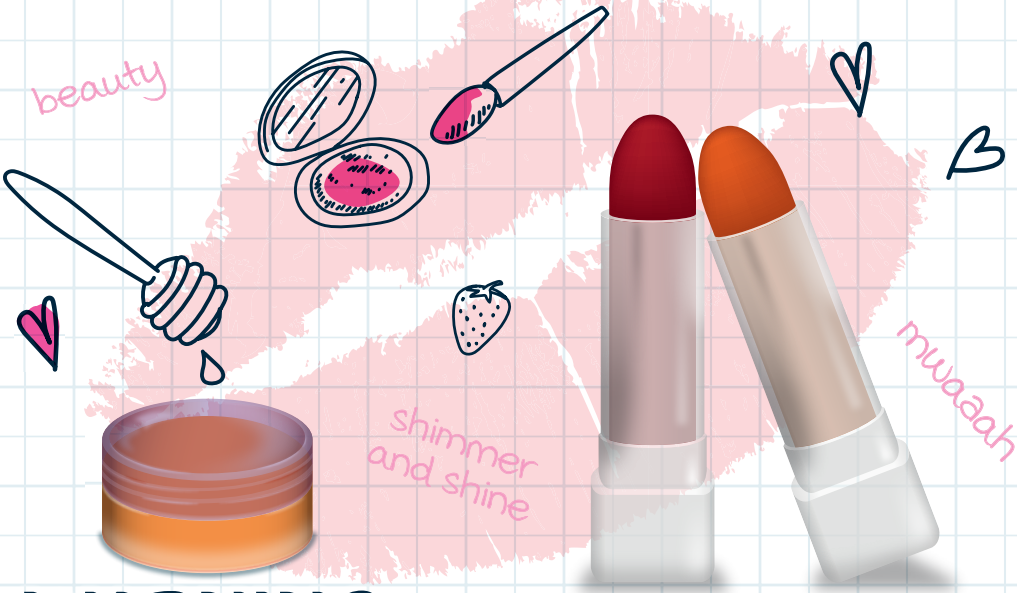
nickelodeon

USER MANUAL

SCIENTISTS / KIDS = FUN!

EXPERIMAKE

CREATED BY SCIENTISTS. FUN FOR KIDS!



WARNING

Not suitable for children under 8 years. For use under adult supervision. Contains some chemicals which present a hazard to health. Read the instructions before use, follow them and keep them for reference. Do not allow chemicals to come into contact with any part of the body, particularly the mouth and eyes. Keep small children and animals away from experiments. Keep the set out of reach of children under 8 years. **Warning**. Gloves are made of natural rubber latex.

FUN FACTS INSIDE

LUSH LIPSTICK AND LIP GLOSS

Addo Play Ltd. Bucks, HP10 8EG, UK. Tel: +44 (0) 1494 917250

Addo

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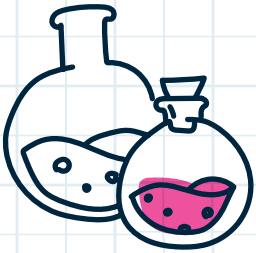
Advice for Supervising Adults



- 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 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. Particular attention should be paid to the safe handling of acids, alkalis and flammable liquids.
- 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.
- Substances in non-reclosable packaging should be used up (completely) during the course of one experiment i.e. after opening the package.
- This set contains colourings which can stain. Keep away from objects and delicate fabrics.

Safety Rules

- 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.
- Clean all equipment and surfaces before and after use.
- Make sure that all containers are fully closed and properly stored after use.
- Ensure that all empty containers 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.
- Do not allow raw chemicals to come into contact with the eyes or mouth.
- Always conduct a PATCH TEST with your finished cosmetic product before applying to make sure you will not have an allergic reaction.
- Do not replace foodstuffs in original container. Dispose of immediately.
- The finished products should not be used if they change their appearance, colour or scent.
- Take care handling hot water and hot solutions.

Contents

Protective gloves
Castor oil (50ml)
Beeswax (10g)
Carnauba wax (10g)
Orange cosmetic colouring (3g)
Red cosmetic colouring (3g)
Strawberry fragrance (3 ml)
2 lipstick tubes
2 lip gloss cases
Lipstick mould
Small measuring cup
Pipette
Plastic spatula

Chemicals Supplied and Warnings

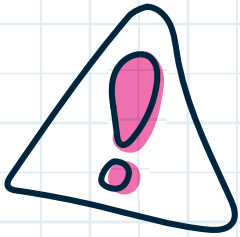
The below warnings relate to the pure chemicals and not to the finished cosmetic product you will be creating.

Keep all containers tightly closed. Store in a cool, dry place.

Substance/ID	Hazard and Precautionary Statements
Beeswax CAS # 8012-89-3	Do not ingest. Avoid contact with eyes and mouth. Use only in accordance with instructions.
Carnauba Wax CAS # 8015-86-9	Do not ingest. Avoid contact with eyes. Use only in accordance with instructions.
Castor oil CAS # 8001-79-4	Do not ingest. Avoid contact with eyes. Use only in accordance with instructions.
Orange Cosmetic Colouring CAS # 15790-07-5 CI 15985-1	Do not ingest. Avoid contact with eyes. Use only in accordance with instructions.
Red Cosmetic Colouring CAS # 68583-95-9 CI 16035-1	Do not ingest. Avoid contact with eyes. Use only in accordance with instructions.
Strawberry Fragrance	Harmful to aquatic life with long lasting effects. Avoid release to the environment.

Disposal of Used Chemicals and Packaging

When you need to dispose of chemical substances, it is necessary to refer to the national and/or local regulations. Never throw chemicals into sewers and garbage. For more details please refer to a competent authority. For disposal of packaging make use of the specific collection points.
Please recycle all packaging where possible.



General First Aid Information

- **In case of eye contact:** 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.

In case of emergency dial:

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

Write the telephone number of the national poison information centre or local hospital below.

They may provide you with information about measures to take in case of intoxication.

Periodic Table

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1 H Hydrogen 1.008																	2 He Helium 4.003
3 Li Lithium 6.941	4 Be Beryllium 9.012											5 B Boron 10.811	6 C Carbon 12.011	7 N Nitrogen 14.007	8 O Oxygen 15.999	9 F Fluorine 18.998	10 Ne Neon 20.180
11 Na Sodium 22.990	12 Mg Magnesium 24.305											13 Al Aluminum 26.982	14 Si Silicon 28.086	15 P Phosphorus 30.974	16 S Sulfur 32.066	17 Cl Chlorine 35.453	18 Ar Argon 39.948
19 K Potassium 39.098	20 Ca Calcium 40.078	21 Sc Scandium 44.956	22 Ti Titanium 47.867	23 V Vanadium 50.942	24 Cr Chromium 51.996	25 Mn Manganese 54.938	26 Fe Iron 55.845	27 Co Cobalt 58.933	28 Ni Nickel 58.693	29 Cu Copper 63.546	30 Zn Zinc 65.38	31 Ga Gallium 69.723	32 Ge Germanium 72.631	33 As Arsenic 74.922	34 Se Selenium 78.971	35 Br Bromine 79.904	36 Kr Krypton 84.798
37 Rb Rubidium 84.468	38 Sr Strontium 87.62	39 Y Yttrium 88.906	40 Zr Zirconium 91.224	41 Nb Niobium 92.906	42 Mo Molybdenum 95.95	43 Tc Technetium 98.907	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.906	46 Pd Palladium 106.42	47 Ag Silver 107.868	48 Cd Cadmium 112.414	49 In Indium 114.818	50 Sn Tin 118.711	51 Sb Antimony 121.760	52 Te Tellurium 127.6	53 I Iodine 126.904	54 Xe Xenon 131.294
55 Cs Cesium 132.905	56 Ba Barium 137.328	57-71 Lanthanides	72 Hf Hafnium 178.49	73 Ta Tantalum 180.948	74 W Tungsten 183.84	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.217	78 Pt Platinum 195.085	79 Au Gold 196.967	80 Hg Mercury 200.592	81 Tl Thallium 204.383	82 Pb Lead 207.2	83 Bi Bismuth 208.980	84 Po Polonium [208.982]	85 At Astatine 209.987	86 Rn Radon 222.018
87 Fr Francium 223.020	88 Ra Radium 226.025	89-103 Actinides	104 Rf Rutherfordium [261]	105 Db Dubnium [262]	106 Sg Seaborgium [266]	107 Bh Bohrium [264]	108 Hs Hassium [269]	109 Mt Meitnerium [268]	110 Ds Darmstadtium [269]	111 Rg Roentgenium [272]	112 Cn Copernicium [277]	113 Uut Ununtrium unknown	114 Fl Flerovium [289]	115 Uup Ununpentium unknown	116 Lv Livermorium [298]	117 Uus Ununseptium unknown	118 Uuo Ununoctium unknown

57 La Lanthanum 138.905	58 Ce Cerium 140.116	59 Pr Praseodymium 140.908	60 Nd Neodymium 144.243	61 Pm Promethium 144.913	62 Sm Samarium 150.36	63 Eu Europium 151.964	64 Gd Gadolinium 157.25	65 Tb Terbium 158.925	66 Dy Dysprosium 162.500	67 Ho Holmium 164.930	68 Er Erbium 167.259	69 Tm Thulium 168.934	70 Yb Ytterbium 173.055	71 Lu Lutetium 174.967
89 Ac Actinium 227.028	90 Th Thorium 232.038	91 Pa Protactinium 231.036	92 U Uranium 238.029	93 Np Neptunium 237.048	94 Pu Plutonium 244.064	95 Am Americium 243.061	96 Cm Curium 247.070	97 Bk Berkelium 247.070	98 Cf Californium 251.080	99 Es Einsteinium [254]	100 Fm Fermium 257.095	101 Md Mendelevium 258.1	102 No Nobelium 259.101	103 Lr Lawrencium [262]

Alkali Metal | Alkaline Earth | Transition Metal | Basic Metal | Semimetal | Nonmetal | Halogen | Noble Gas | Lanthanide | Actinide

Welcome to the Wonderful World of Science!

EXPERIMAKE science sets have been designed by scientists to encourage **learning** through **play**.

Science, Technology, Engineering & Maths (STEM) education is important and each set will enable the development of at least two of these skills.

The **skills** and **knowledge** gained are essential for children's learning.

EXPERIMAKE sets not only support education but are fun and enjoyable for parents too.

When having fun, or making discoveries, a neurotransmitter called **dopamine** is released. Dopamine helps control the brain's **reward centre**.

When we have a positive experience and dopamine is released, we are more likely to remember it.

So, if learning is a positive experience it will stimulate the brain to help develop various skills.

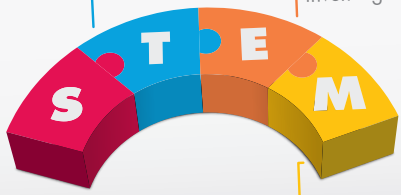
EXPERIMAKE sets are **educational toys** that combine **science** and **creativity** by fostering curiosity and experimentation.

We hope you enjoy exploring the wonderful world of science through our EXPERIMAKE range.

Inventive, creative and imaginative, STEM toys are educational, teaching new skills and knowledge and are (most importantly) lots of fun!

Technology
Encouraging problem solving and methodology skills.

Engineering
Encouraging design, building, and inventing skills.



Science
Encouraging a curiosity for the world around us.

Maths
Exploring different ways of getting children to think about numbers.

Why not share your results with us?

@AddoPlay AddoPlay hello@addoplay.com

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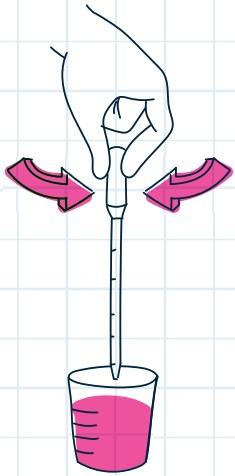
Before You Start...

How to Use Your Pipette

A pipette is used to collect liquid in small amounts and move from one container into another. It lets you control the amount of liquid you are adding by releasing a drop at a time. Before you begin with the experiments, you should practise using a pipette. The soft and squidgy end is called the **bulb** and the other end is called the **tip**.

1. Fill a small container with water, squeeze the bulb and place the tip into the water.
2. Slowly release the bulb until you see water filling up the tube.
3. Now that you have collected the liquid you can release it again in small drops. To do this, remove the pipette tip from the liquid and press the bulb lightly. You will see the drops come out one by one.

1.



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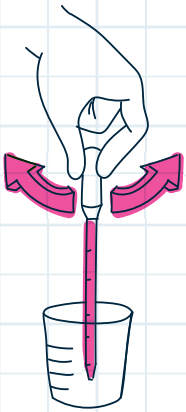

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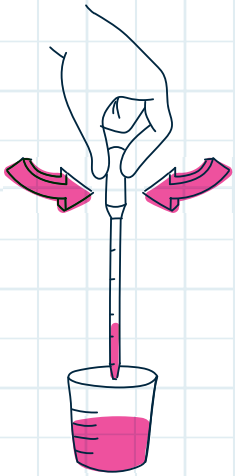
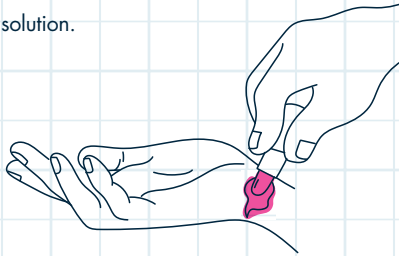


Tip: To avoid contamination, always use the same pipette for the same solution.

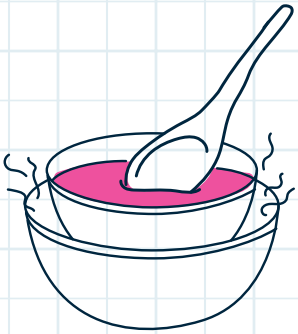
Patch Test



Before using your lipstick or lip gloss, you should do a patch test to make sure you will not have an allergic reaction.

1. After making your lipstick / lip gloss and before using them, put a small amount on the inside of your wrist.
2. Wait 5 minutes.
3. Remove the lipstick / lip gloss by washing the area with plenty of water and soap.
4. If there isn't any skin irritation you may use your lipstick / lip gloss.

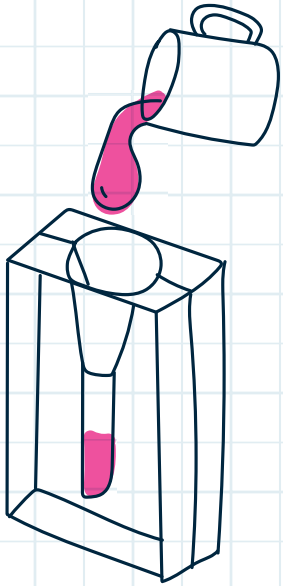
Please note: For the following experiments you will need a microwave. If you do not have access to a microwave please consider using a bain-marie or water-bath consisting of two bowls (one larger containing hot water and one smaller bowl for melting the contents which will sit in the hot water - not included).



1. My First Lipstick

You will need

Protective gloves, beeswax, carnauba wax, castor oil, strawberry fragrance, cosmetic colouring of your choice, plastic spatula, pipette, lipstick mould (make sure both sides are pushed firmly together), lipstick tube, small measuring cup, microwavable mug or similar container (not included), metal spoon (not included), microwave oven (not included).



Ingredients for finished product: Ricinus Communis Seed oil, Cera Alba, Copernicia Cerifera Cera, Parfum, CI 16035, CI 15985.

Steps

1. Put on your protective gloves.
2. Using the spatula, put 3 spoons of carnauba wax and 3 spoons of beeswax inside the mug.
3. Pour 10ml of castor oil into the mug.
4. Using the spatula, add a little of your chosen colouring into the mug and mix well with the metal spoon.
5. After mixing the ingredients, ask an adult for help and place the mug in the microwave for 1 minute. This will melt the lipstick waxes and help the ingredients mix better.

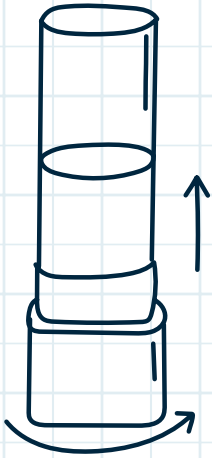
Note: If after 1 minute the waxes aren't melted, stir the mixture again with the spoon and ask an adult to put it back in the microwave for 15 seconds more. Repeat this step until all waxes have melted.

Explanation

Here you saw a change of state. Waxes went from solid into liquid with the rise in temperature. This is called melting.

Note: The next two steps must be carried out quickly to prevent the wax from solidifying in the mug. If this happens, don't worry, just ask an adult to heat it in the microwave again.

6. Using the pipette add 10 drops of strawberry fragrance.
7. Ask an adult for help and quickly pour the mixture into the lipstick mould.
8. Now be patient whilst your lipstick cools and solidifies. This can take 2 hours. To speed things up, you can carefully put the mould into the fridge to help it cool faster.
9. Take the lipstick tube and turn the swivel cylinder to the top of the tube.
10. Carefully, open the mould, remove the lipstick, break off the funnel end and place your lipstick in the tube.
11. After this, twist the cylinder to the bottom and replace the lid.

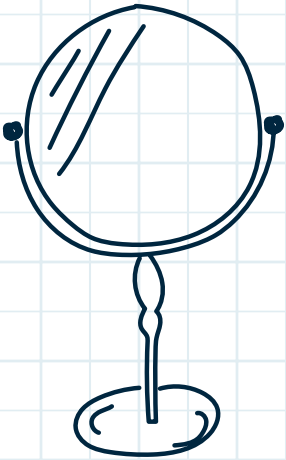


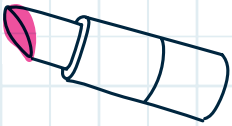
You can repeat this experiment using the other cosmetic colouring to create a different coloured lipstick.

Please note: You can vary the amount of colouring used or blend the colours to create your perfect coloured lipstick.

Explanation

Your lipstick will now change its state from liquid to solid with the drop in temperature. This is called solidifying.





Ideal Formulation

My first lipstick (5.3g)

Castor oil (3.5g), beeswax (0.8g), carnauba wax (0.8g), fragrance (0.2g), cosmetic colouring (0.005g)

2. My First Lip Gloss

You will need

Protective gloves, beeswax, castor oil, colouring of your choice, strawberry fragrance, plastic spatula, pipette, lip gloss pot, small measuring cup, microwavable mug or similar container (not included), metal spoon (not included), microwave oven (not included).

Ingredients for finished product: Ricinus Communis Seed Oil, Cera Alba, Parfum, CI 16035 and CI 15985.

Explanation

Here you saw a change of state. Waxes went from solid into liquid with the rise in temperature. This is called melting.

Steps

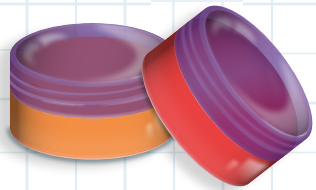
1. Put on your protective gloves.
2. Using the spatula put 1 spoon of beeswax inside the mug.
3. Add 10ml of castor oil to the mug.
4. Using the spatula, add a little of your chosen colouring into the mug and mix well with the metal spoon.
5. After mixing the ingredients, ask an adult for help and place the mug in the microwave for 1 minute. This will melt the lip gloss waxes and help mix the ingredients better.

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 have melted.
Note: The next two steps must be carried out quickly to prevent the wax from solidifying in the mug. If this happens, don't worry, just ask an adult to heat it in the microwave again.

6. Using the pipette add 10 drops of strawberry fragrance and mix with the metal spoon.
7. Pour the melted mixture into the lip gloss pot.
8. Now be patient whilst your lip gloss cools and solidifies. This can take 2 hours. To speed things up, you can carefully put the pot into the fridge to help it cool faster.
9. After 2 hours, put the lid on the pot and your lip gloss is ready to use!

Explanation

Your lip gloss will now set, but will not become a solid. The lip gloss does not contain carnauba wax, instead it has beeswax. Carnauba wax is used in lipsticks to make them harder. It has the highest melting point among all waxes. Beeswax has a lower melting point, which prevents the lip gloss from solidifying.



Ideal Formulations

My first lip gloss (5.29g)

Castor oil (4.8g), beeswax (0.24g), fragrance (0.24g), cosmetic colouring (0.005g)

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3. Homemade Lipstick

You will need

Protective gloves, lipstick tube (wound down to the bottom), strawberry fragrance, lipstick remains (not included*), microwavable mug or similar container (not included), microwave oven (not included), metal spoon (not included)
*You can mix the remains of two or more lipsticks with different colours and create a unique colour shade.

Steps

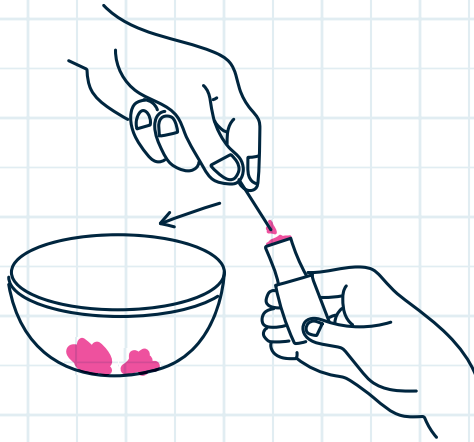
1. Put on your protective gloves.
2. Using a small spoon, scrape the remains of the lipsticks into the mug. (Ask an adult first!)
3. Ask an adult for help and place the mug in the microwave for 30 seconds.

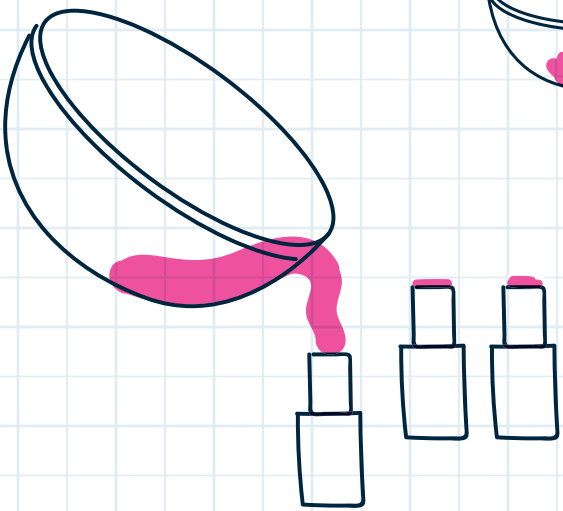
Note: If after 30 seconds the lipsticks aren't melted, stir the mixture again with the spoon and ask an adult to put it back in the microwave for 15 seconds more. Repeat this step until all lipsticks have melted.

4. Stir the mixture well and carefully pour into the empty lipstick tube.
5. Now be patient whilst your lipstick cools and solidifies. This can take 2 hours. To speed things up, you can carefully put the mould into the fridge to help it cool faster.

Explanation

Your lipstick will now change its state from liquid to solid with the drop in temperature. This is called solidifying.





4. Homemade Lip Balm

You will need

Protective gloves, lip balm pot (or another similar container), strawberry fragrance, runny honey (not included), petroleum jelly (cosmetic or pharmaceutical grade – not included) microwavable mug or similar container (not included), microwave oven (not included) metal spoon (not included), face cosmetic e.g. blusher, lipstick, or eye shadow (not included – or you can use the colourings included in the set or even food colouring).

Steps

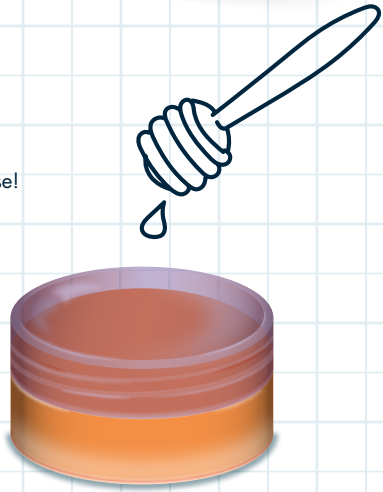
1. Put on your protective gloves.
2. Put 3 teaspoons of petroleum jelly, half a teaspoon of honey, and a little blusher/ eye shadow/lipstick or colouring into the mug.
3. Ask an adult for help and place the mug in the microwave for 30 seconds.

Note: If after 30 seconds the ingredients aren't melted, stir the mixture with the spoon and ask an adult to put it back in the microwave for 15 seconds more. Repeat this step until all ingredients have melted.
Note: The next two steps must be carried out quickly to prevent the wax from solidifying in the mug. If this happens, don't worry, just ask an adult to heat it in the microwave again.

4. Using the pipette add 10 drops of strawberry fragrance and mix with the metal spoon.
5. Pour the melted mixture into the lip balm pot.
6. Now be patient whilst your lip balm cools and solidifies. This can take 2 hours. To speed things up, you can carefully put the pot into the fridge to help it cool faster.
7. After 2 hours, put the lid on the pot and your lip balm is ready to use!

Explanation

When making lipsticks or lip gloss with ingredients like honey, we are giving the nutritional characteristics of the honey to the lip gloss, making it more nutritive.



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5. Lipstick Prints

Did you know that lips have 5 characteristic patterns

You will need

Dark coloured lipstick (not included), several white sheets of paper (not included), pencil or pen (not included), clear cup (not included).

Steps

1. With your friends, apply a dark lipstick and rub your lips together to make sure the lipstick is even.
2. Place a sheet of paper between your lips and press them against it, taking care not to let the paper slip, otherwise the print won't be clear.
3. Write their name on the back of the sheet.
4. Now, ask one of your friends to reapply the dark lipstick and leave their lip print on the clear cup.

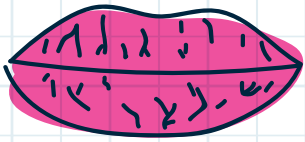
Note: No peeking! You mustn't know who it is!

5. Compare the print left on the cup with the ones your friends left on the sheets of paper to solve the mystery.

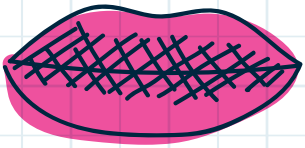
Explanation

There are several ways of identifying a criminal. One of these methods is called cheiloscopy, which is the study of lip prints. 'Cheilos' is the Greek word for lips.

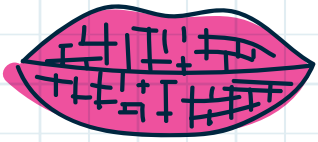
Lip prints can identify a person as they are unique and don't change.



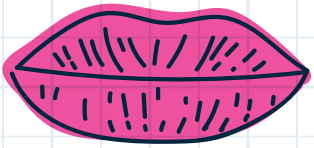
Branched Pattern



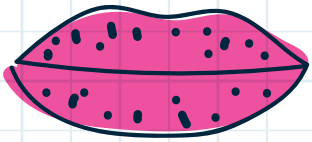
Intersected Pattern



Regular Pattern



Vertical Pattern



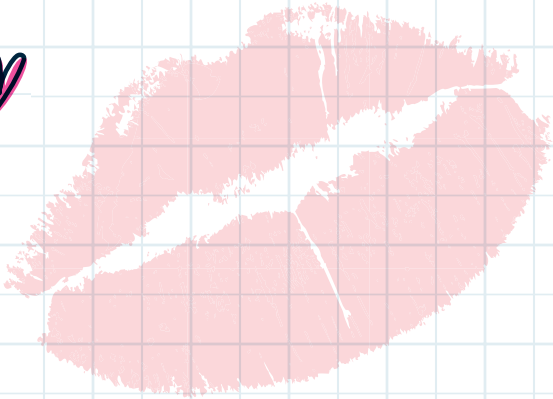
Partial Vertical Pattern

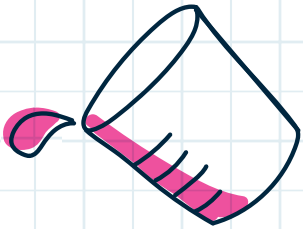
Lipsticks and lip glosses are both cosmetics to use on the lips, however they have different properties and some different ingredients.

Lipstick is a solid.
A lipstick is a cosmetic used to give colour to your lips.

Lip gloss is a liquid, however, almost solid!
A lip gloss is a cosmetic used to provide shine to your lips.

Max Factor invented lip gloss on purpose to use in the cinema industry. He wanted to create a product that made actresses' lips, from black and white films, more shiny.





People started using lipsticks to make them look different to others. The first lipsticks were made from natural ingredients, such as fruit juices and plants. Fruits and plants were crushed and applied directly to colour the lips.

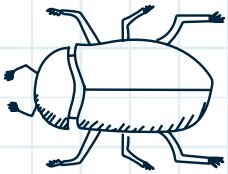
EXPERIMAKE TOKEN

Congratulations! You are on your way to achieving your experimake certificate.

To claim your certificate collect **3** of these tokens and send them to us.

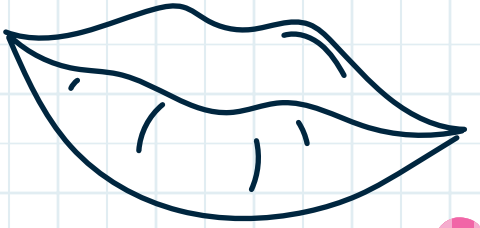
It was in Egypt that lipsticks started to become similar in shape to the ones we know today.

Cleopatra, the last queen of Egypt, made red lips famous. The red colour was obtained by smashing special beetles which released a red colouring called cochineal. Cleopatra added some shine to the red lipsticks, using a pearled substance found in fish scales.



Lipsticks are made up of:

waxes – allowing lipsticks to be moulded in their characteristic shape.
oils – providing the characteristic glow.
pigments and colourings – providing the colour.
alcohol and fragrances – providing a pleasant smell and to disguise the smell of other ingredients which have a bad odour.
preservatives and antioxidants – added to increase the expiry date.



FUN FACTS

Please ask your parent or guardian to complete:

Name _____ **Age** _____

Home Address _____

_____

Email Address _____

Please send 3 tokens to Addo to receive your experimake certificate

Send to: Addo Play Ltd. Bucks, HP10 8EG, UK

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