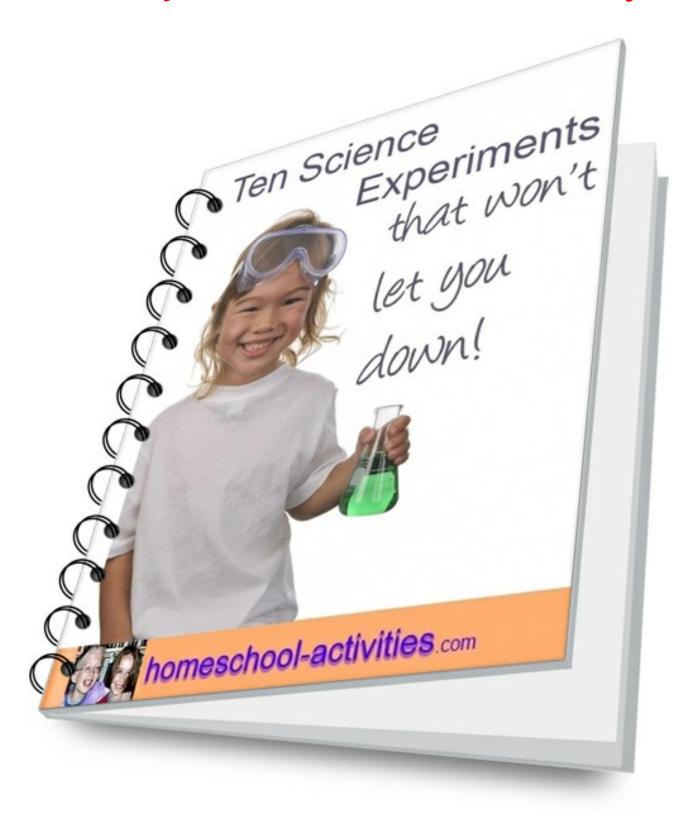
# FREE E-BOOK



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## Welcome to my Free E-book:

Ten Science Experiments that won't let you down!

If you like this e-book, please SHARE it.

Science is one of the great delights which can really open your kids eyes to the wonders of the world.

So please share this e-book with your friends.

Simply post the following link on your blog, website, yahoo group or favorite forum:

http://www.homeschool-activities.com/kidsscience-experiments.html

Or, save this file to your computer and send it as an attachment.

Best wishes, Sonya

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## Ten Science Experiments that won't let you down!

I've picked these experiments specially for you!

I chose the BEST we found after years of teaching my kids at home and hunting through science book after science book.

These experiments are special because they're:

- 1. Fun!
- 2. Easy to do using stuff you'll mostly find in your kitchen.
- 3. Unusual. How about:
- \* Glow sticks in the bath
- \* Making blood
- 4. The ones my children William and Catherine enjoyed the most!

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## Ten Science Experiments that won't let you down!

Every experiment in this book has its own page on my website at:

http://www.homeschool-activities.com

where you'll find more ideas, fascinating facts, and the science behind your experiment.

You'll also find more free e-books as well as fun ideas for crafts, art, writing, and math too!

Best wishes,
Sonya, William and Catherine



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## What You'll Find in this E-Book

- 1. HOW TO MAKE A LAVA LAMP
- 2. HOW TO MAKE A VOLCANO
- 3. HOW TO MAKE SUGAR CRYSTALS
- 4. EXPERIMENTS AND FUN ACTIVITIES WITH GLOW STICKS
- 5. TOUCH AND FEEL BOX
- 6. HOMESCHOOL ARCHEOLOGICAL DIG
- 7. HOW TO MAKE SLIME
- 8. SILLY PUTTY RECIPE AND EXPERIMENTS
- 9. SURFACE TENSION EXPERIMENT WITH MILK
- 10. HUMAN BODY FOR KIDS: MAKE BLOOD

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#### **HOW TO MAKE A LAVA LAMP**

#### **STUFF YOU NEED:**

- 1. CLEAR JAR WITH LID (OR A SODA BOTTLE)
- 2. FOOD COLORING
- 3. WATER
- 4. COOKING OIL
- 5. ALKA-SELTZER TABLETS\*
  - \* You can use SALT but it doesn't work as well

**SECRET STUFF: (optional)** 

- GLITTER / SEQUINS / SMALL BEADS
- FLASHLIGHT



#### **INSTRUCTIONS**

STEP ONE: FILL JAR OR SODA BOTTLE 3/4 FULL OF OIL.

STEP TWO: FILL TO THE TOP WITH WATER.

STEP THREE: ADD SOME DROPS OF FOOD COLOR.

STEP FOUR: CUT AN ALKA-SELTZER TABLET INTO 8 PIECES AND DROP ONE IN.



#### **OPTIONAL:**

- 1. ADD SOME GLITTER OR SEQUINS.
- 2. LIGHT YOUR LAVA LAMP WITH A FLASHLIGHT.



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### **HOW TO MAKE A VOLCANO**



#### **STUFF YOU NEED:**

- 1. VINEGAR
- 2. BAKING SODA (BICARBONATE OF SODA)

#### **OPTIONAL:**

- DISH SOAP (WASHING UP LIQUID)
- RED FOOD COLORING
- GLITTER

#### **INSTRUCTIONS**

STEP ONE: PUT THREE TEASPOONS OF BAKING SODA IN A BOTTLE (or your modeling

clay volcano cone.)

STEP TWO: USE A FUNNEL TO FILL ANOTHER PLASTIC BOTTLE ABOUT ONE-THIRD

FULL OF VINEGAR.

STEP THREE: ADD SOME DROPS OF FOOD COLOR AND A GOOD SQUEEZE OF DISH SOAP

TO THE VINEGAR.

STEP FOUR: TIP THE VINEGAR MIXTURE ONTO THE BAKING SODA.

STEP FIVE: WATCH YOUR VOLCANO ERUPT.

#### FUN:

1. ADD SOME GLITTER TO THE FOOD COLORING FOR A SPARKLY VOLCANO.

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#### **HOW TO MAKE SUGAR CRYSTALS**

#### **STUFF YOU NEED:**

- 1. ONE CUP WATER (240ml)
- 2. THREE CUPS ORDINARY HOUSEHOLD SUGAR (600g)\*
- 3. FOOD COLORING
- 4. MASON JAR AND SMALL SPOON
- 5. STRING made of cotton or wool (not nylon)





#### **INSTRUCTIONS**

STEP ONE: PLACE THE WATER AND SUGAR IN A PAN.

STEP TWO: STIR WELL AS YOU BRING TO THE BOIL.

STEP THREE: WHEN BOILING, ADD FOOD COLOR AND

STEP FOUR: LEAVE TO COOL.

STEP FIVE: TIE SOME STRING TO A POPSICLE OR SPOON.

STEP SIX: PLACE IN THE MIDDLE OF THE MASON JAR.

STEP SEVEN: FILL WITH THE SUGAR SOLUTION.

STEP FIVE: COVER WITH PAPER TOWEL TO KEEP THE DUST

OUT.



#### EXPERIMENTS AND FUN ACTIVITIES WITH GLOW STICKS

#### **STUFF YOU NEED:**

1. GLOW STICK PENDANTS

(6 inches (152mm) long and 10mm (0.39 inches) thick)

#### **GLOW STICK BRACELETS**

(8 inches (203mm) long and 5mm (0.2 inches) thick)

- 2. MASON JARS
- 3. PAINT BRUSH AND BLACK CARDSTOCK
- 4. GLITTER AND SEQUINS Optional: Balloons, snap-together plastic eggs



IT IS YOUR RESPONSIBILITY TO KEEP YOUR CHILDREN SAFE. Check Wikipedia (link on my page) to see the exact chemical contents of light sticks. The chemicals are contained in a GLASS TUBE which you have to snap for some of these activities. USE GLOVES TO PROTECT YOUR HANDS. ACTIVITIES MARKED WITH AN ASTERIX ARE BEST CARRIED OUT BY AN ADULT.

#### \*\*GLOW STICK PAINTING

SNAP A PENDANT GLOW STICK AND USE THE CONTENTS TO PAINT ON BLACK CARDSTOCK.

#### \*\*GLOW STICK LANTERNS

TAKE A PENDANT GLOW STICK AND SNAP THE

CONTENTS INTO A MASON JAR HALF-FILLED WITH WATER.

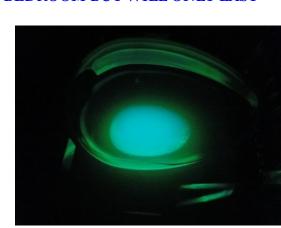
THE LANTERN CAN BE PLACED IN YOUR CHILD'S BEDROOM BUT WILL ONLY LAST

OVERNIGHT.

#### \*\*EASTER BUNNY SURPRISE

PLACE PENDANT GLOW STICKS
INSIDE THE EGGS TO MAKE THEM GLOW
FOR A FUN EASTER EGG HUNT.
YOU CAN ALSO MAKE GLOW IN THE DARK

BALLOONS!





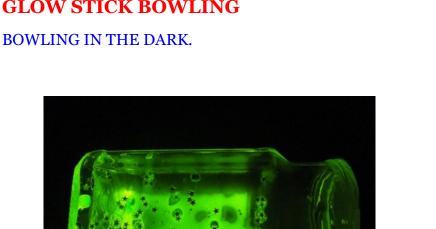


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#### **GLOW STICK TOSS**

USE BRACELET GLOW STICKS TO PERFECT YOUR AIM.

### **GLOW STICK BOWLING**







#### \*\*GLOW STICK MASON JAR

SNAP A PENDANT BRACELET INTO A MASON JAR. ADD GLITTER AND SEQUINS FOR EXTRA FUN.



#### **GLOW STICKS IN THE BATH**

PUT GLOW STICKS IN THE BATH FOR SPECIAL UNDERWATER EFFECTS.

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#### **TOUCH AND FEEL BOX**



#### **STUFF YOU NEED:**

- 1. SHOE BOX
- 2. SCISSORS TO CUT A HOLE IN THE BOX
- 3. OBJECTS TO HIDE IN THE BOX

#### **OPTIONAL:**

• CRAYONS TO DECORATE THE BOX (FUN ART ACTIVITIES!)

#### **INSTRUCTIONS**

STEP ONE: TAKE A SHOE BOX AND CUT A CHILD'S SIZED HAND-HOLE IN IT.

STEP TWO: PLACE A NATURAL OBJECT INSIDE (or get one child to find the objects and

ask the other child to guess.)

STEP THREE: PUT THE LID ON AND ASK YOUR CHILD TO FEEL THE OBJECT.

STEP FOUR: WHAT DOES IT FEEL LIKE? TICKLY, SMOOTH, ROUGH, HEAVY?

STEP FIVE: WHAT IS IT?

#### **FUN:**

1. Take this slowly; the fun is spending time feeling the object. When you're done with natural history, see if your child can identify their toys by feel!

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#### HOMESCHOOL ARCHEOLOGICAL DIG



#### **STUFF YOU NEED:**

- 1. CARDBOARD BOX
- 2. PLAY SAND
- 3. PAINT BRUSH
- 4. NATURAL HISTORY OBJECTS TO HIDE IN THE BOX

#### **OPTIONAL:**

MAGNIFYING GLASS







#### **INSTRUCTIONS**

STEP ONE: TAKE A CARDBOARD BOX AND LAY DIFFERENT NATURAL OBJECTS ON

THE BOTTOM.

STEP TWO: COVER WITH PLAY SAND.

STEP THREE: MARK THE SAND INTO FOUR SCIENTIFIC 'QUADRANTS.'

STEP FOUR: ALLOCATE ONE CORNER AS THE START OF YOUR DIG.

STEP FIVE: USE A PAINTBRUSH TO CAREFULLY UNCOVER THE OBJECTS.

#### TIP:

1. Take this slowly; move on only when all the objects have been uncovered and correctly identified by your child.

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#### **HOW TO MAKE SLIME**

#### **STUFF YOU NEED:**

- 1. 4 OUNCES (110g) WHITE GLUE, (Elmer's if possible).
- 2. HALF A TEASPOON (2.5ml) BORAX POWDER.
- 3. DISTILLED WATER.
- 4. FOOD COLORING.
- 5. THREE DISPOSABLE PLASTIC CONTAINERS (e.g. yogurt pots).



#### **INSTRUCTIONS**

STEP ONE: IN ONE CONTAINER, STIR TO DISSOLVE BORAX IN 250ml WATER.

STEP TWO: IN ANOTHER CONTAINER, MIX 250ml WATER AND GLUE.

STEP THREE: USING A THIRD CONTAINER, MIX THE CONTENTS OF THE OTHER

CONTAINERS TOGETHER.

STEP FOUR: ADD SOME FOOD COLORING.

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## SILLY PUTTY RECIPE AND EXPERIMENTS



#### **STUFF YOU NEED:**

- 1. ELMER'S (PVA) WHITE GLUE
- 2. LIQUID STARCH
- 3. DISPOSABLE PLASTIC CONTAINER

#### **OPTIONAL:**

- FOOD COLORING
- GLITTER

#### INSTRUCTIONS

STEP ONE: MIX TWO PARTS GLUE TO ONE PART LIQUID STARCH IN A DISPOSABLE

PLASTIC CONTAINER.

STEP TWO: ADD GLITTER AND FOOD COLORING.

#### **FUN EXPERIMENTS**

ONE: TRY DROPPING IT FROM A GREAT HEIGHT.

TWO: PLACE IN WARM WATER AND SEE WHAT HAPPENS.

THREE: CAN YOU GET YOUR PUTTY TO FORM A PUDDLE BY LEAVING IT TO SIT?

FOUR: HOW FAR WILL YOUR SILLY PUTTY STRETCH?

FIVE: CAN YOU BLOW YOUR SILLY PUTTY INTO A BALLOON BY WRAPPING

IT ROUND A STRAW AND BLOWING?

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### **SURFACE TENSION**



#### **STUFF YOU NEED:**

- MILK
- FOOD COLORING
- DISH SOAP (= WASHING UP LIQUID in the UK)
- A DISH ( LARGE BOWL OR PLATE)

#### **STEP ONE:**

PLACE MILK IN DISH

#### **STEP TWO:**

ADD A FEW DROPS OF DIFFERENT FOOD COLORS

#### **STEP THREE:**

ADD A DROP OF DISH SOAP

#### **STEP FOUR:**

**ENJOY!** 

## HUMAN BODY FOR KIDS: BLOOD

#### **STUFF YOU NEED:**

- 1. BUCKET
- 2. WATER
- 3. RED FOOD COLORING
- 4. LITER JUG

#### **INSTRUCTIONS**

The human body has an average of 5.6 liters of blood.

STEP ONE: ADD RED FOOD COLORING TO WATER.

STEP TWO: TAKE A LITER JUG.

STEP THREE: MEASURE OUT 5.6 LITERS INTO A BUCKET.



#### **HOW TO MAKE BLOOD**

#### **STUFF YOU NEED:**

- 1. RED AND WHITE JELLY BEANS for red and white blood cells
- 2. RICE for platelets
- 3. CORN SYRUP OR OLIVE OIL for plasma
- 4. MIXING BOWL

#### **INSTRUCTIONS**

STEP ONE: MAKE UP YOUR HUMAN BLOOD FOLLOWING THE GUIDELINES BELOW:

- White blood cells (Leukocytes) are cells of the immune system defending us against disease. They make up approximately 1% of the total blood volume in a healthy adult.
- Red blood cells (Erythrocytes) carry oxygen round the body. They are the most common cell and make up 40-45% of its volume.
- Platelets are tiny cell fragments that circulate in the blood and help form blood clots when you cut yourself. The best answer I got was about 0.1% of the total volume. Tip in a few rice grains!
- Plasma is the liquid component of blood and makes up 55% of the volume.

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I hope you had fun with these experiments.



You can also get my free monthly activities newsletter based on fascinating themes like fun Math, Art, Dragons and the Rainforest.

http://www.homeschool-activities.com/homeschoolnewsletter.html

I look forward to seeing you on Facebook:

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And on Pinterest:

http://pinterest.com/homeschoolsonya/

Best wishes

Sonya

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Thanks for reading!

Now pass it on.

I hope you have enjoyed my free e-book:

Ten Science Experiments that won't let you down!

If you did, then please share this e-book.

Do me a favor and share this guide with your friends.

Simply post the following link on your blog, website, yahoo group or favorite forum:

http://www.homeschool-activities.com/kidsscience-experiments.html

Or, save this e-book to your computer and attach it to an e-mail. Thanks!

Best wishes Sonya

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