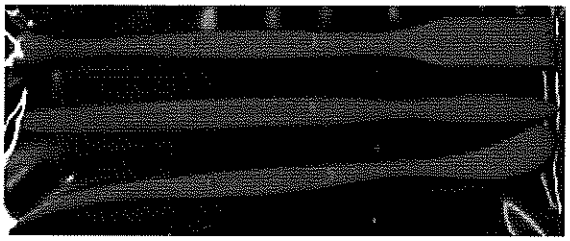
SKILLS Templates

A1

FIMO CLAY MODELS

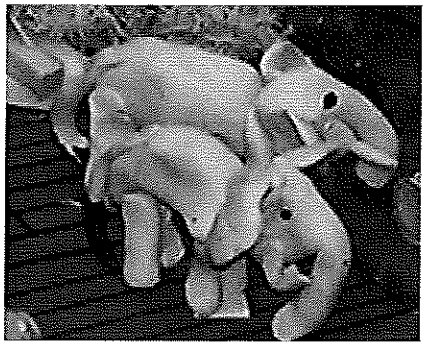
Part 1:

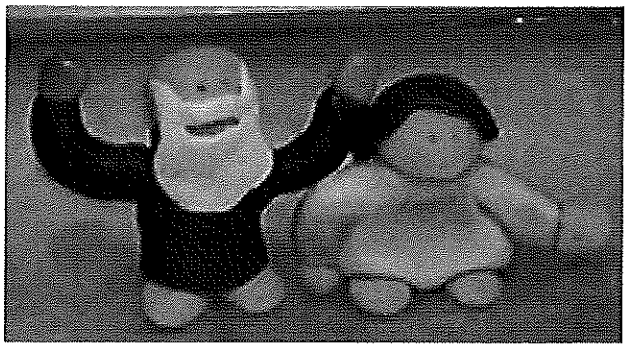
- Choose a Bible story to depict using clay models.
- Discuss the story and identify suitable objects which could be sculpted to make clay models.



Part 2:

- Keep the models quite small and simple. If possible find some pictures from the internet / or a book to help you design your model. Roll out some clay in your hands into the desired shape. Wash your hands before working with a different coloured clay. Use a modelling tool to add detail (if available).





- Give your model to a leader to bake in an oven for about 10-15 minutes.
- Remember not to touch them when they come out of the oven – they will be very hot.

Part 3:

- Help create a background which the models can be set onto.

A2

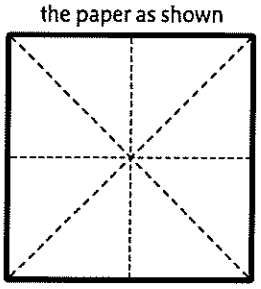
Origami

WATER BOMB

You need a square piece of paper to start, then follow the step by step instructions below:

1

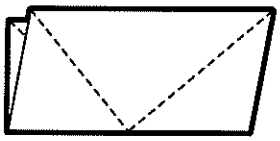
Fold, crease and unfold the paper as shown



Now fold up the bottom half

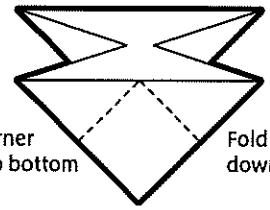
2

First push corner A into middle



A Then push corner B into middle B

3

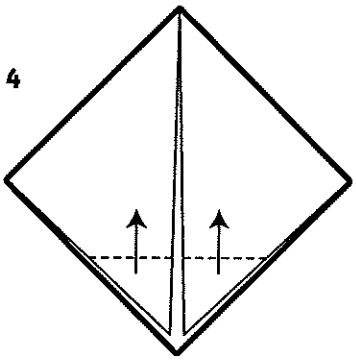


Fold corner down to bottom

Fold corner down to bottom

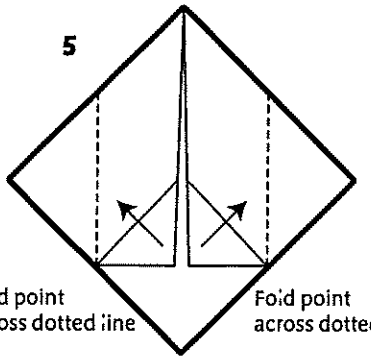
Turn over and repeat on other side

4



Fold the two points up across dotted line to the centre

5



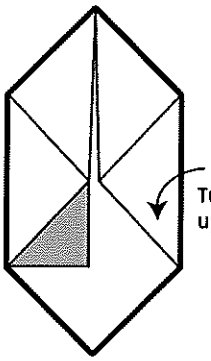
Fold point across dotted line

Fold point across dotted line

Fold the two points up across dotted line to the centre

Make sure hole is at top

6



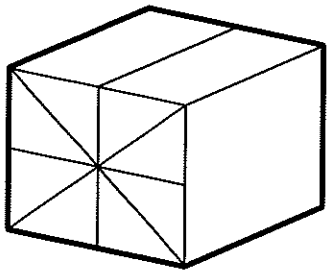
Tuck triangle up into flap

Tuck triangle up into flap

Turn over and repeat on the other side

7

Carefully blow into the end with the hole



You might need to help the bomb open out as you blow

8

Fill the bomb up with water slowly from a tap

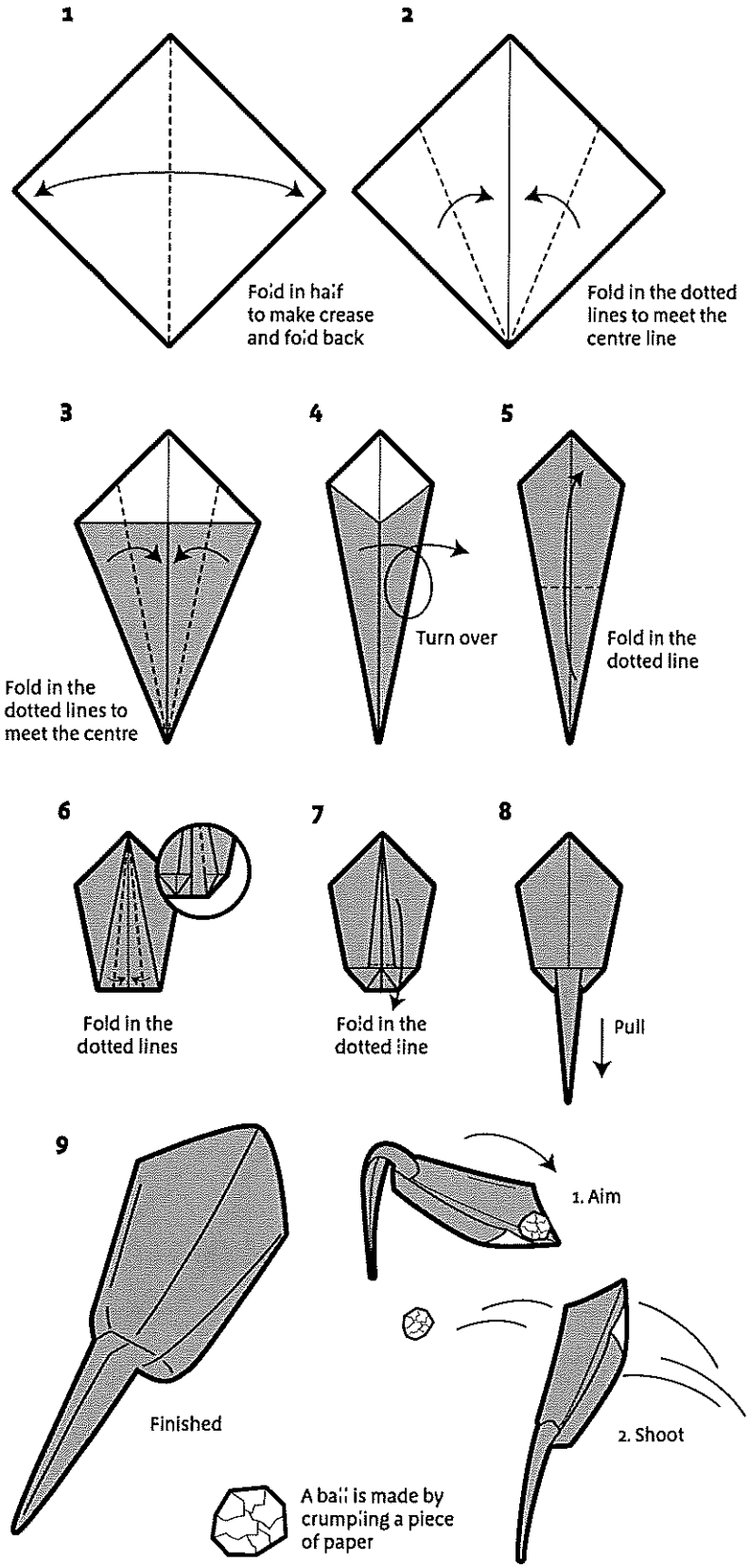
Don't throw it inside or at people. Go outside and throw it against a wall

A2

Origami

CATAPULT

You need a square piece of paper to start, then follow the step by step instructions below:

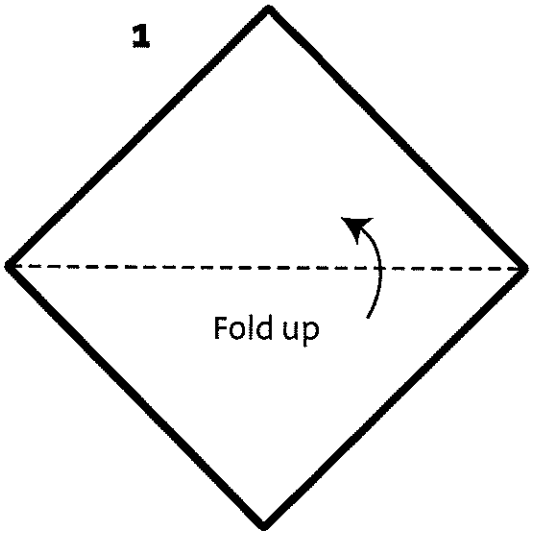


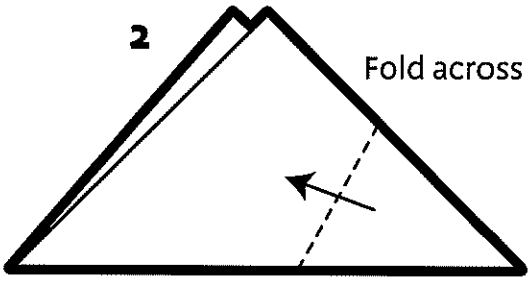
A2

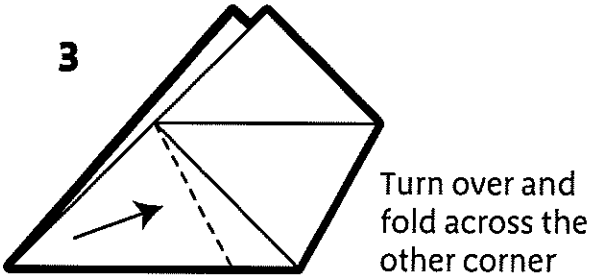
Origami

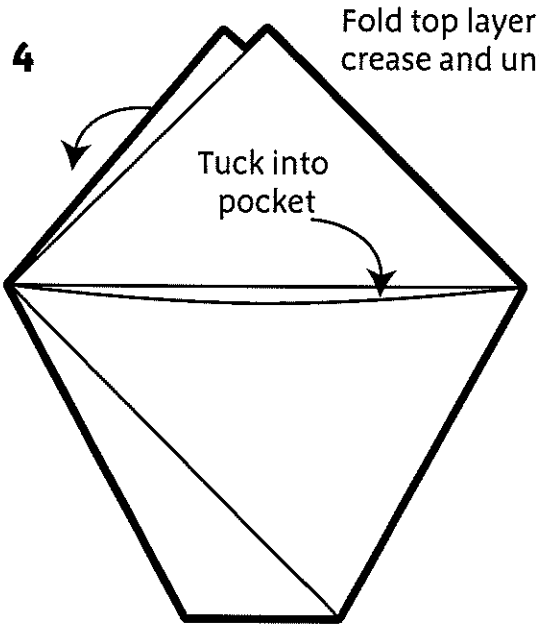
EMERGENCY CUP

You need a square piece of paper to start, then follow the step by step instructions below:

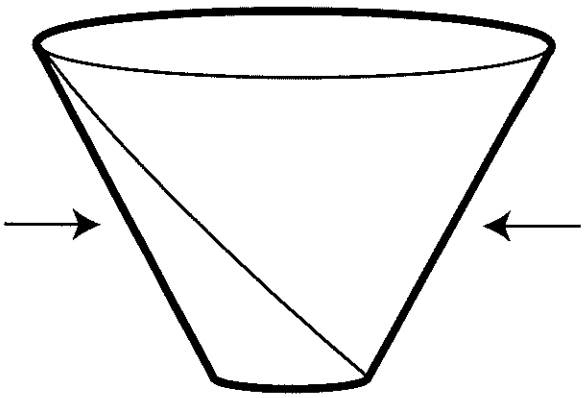








Do same on other side



Test your cup with some water (or better still some lemonade)

A3

Making a Boomerang

BOOMERANG BLANK

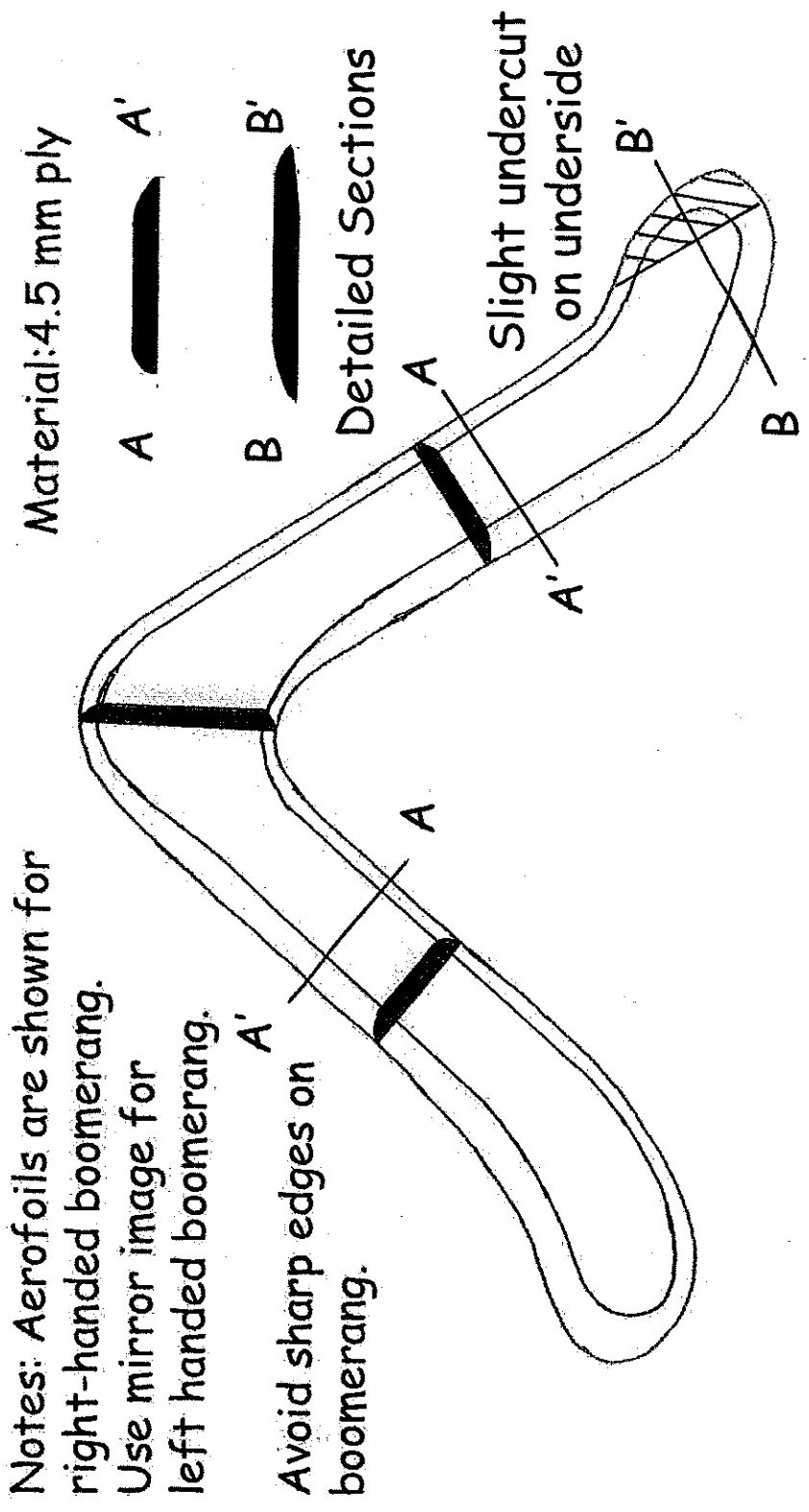
Notes: Blank is in 4.5 mm thick ply, good quality with equal thickness plys.

Direction of rotation is shown for right-handed boomerang

A3

Making a Boomerang

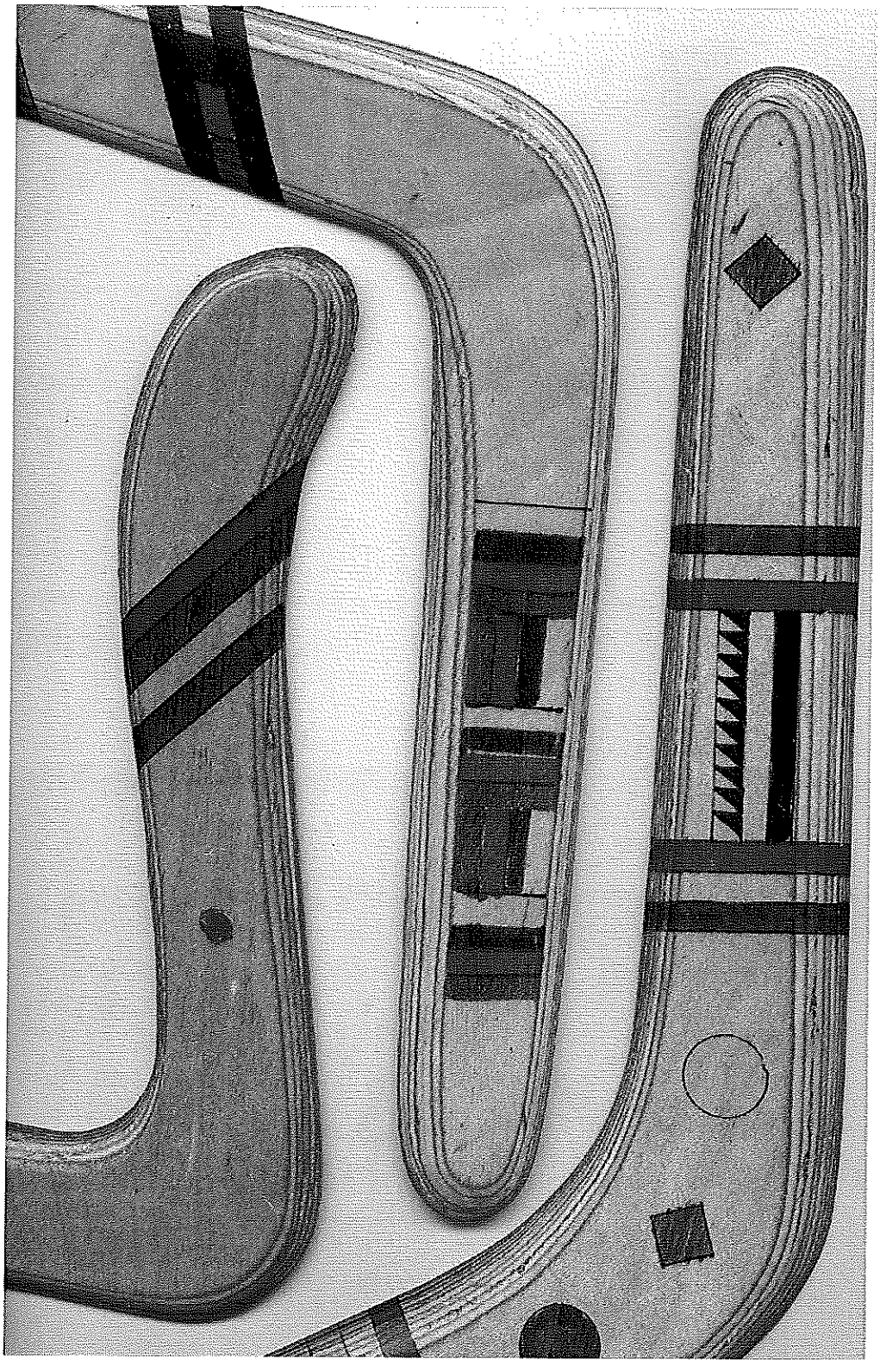
DETAILS OF AEROFOIL SECTIONS



A3

Making a Boomerang

EXAMPLES OF BOOMERANG DECORATION



A3

Throwing and Competing

GUIDE TO THROWING

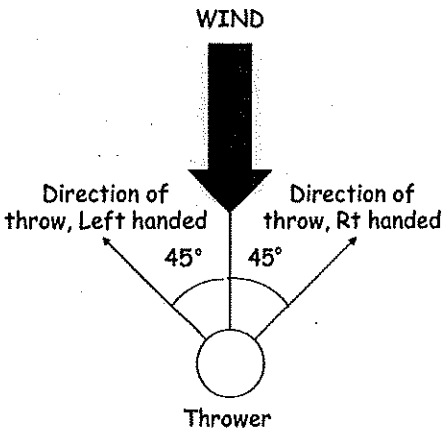


Fig 1 Direction of Throw

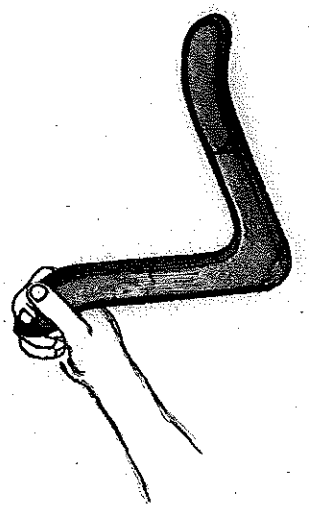


Fig 2 Cradle Grip

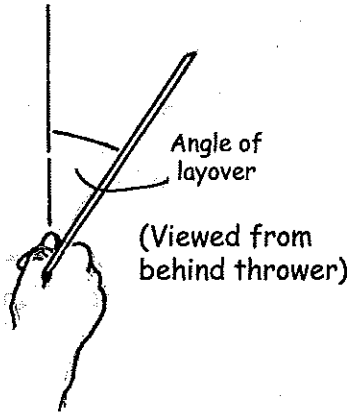


Fig 3 Layover of Boomerang

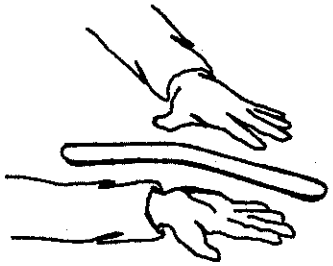


Fig 5 The Sandwich Catch

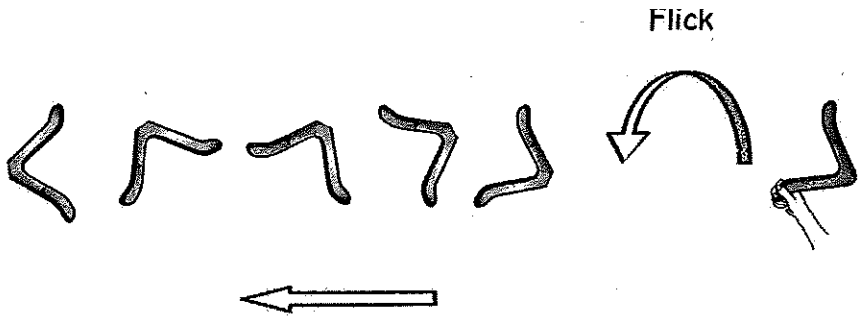


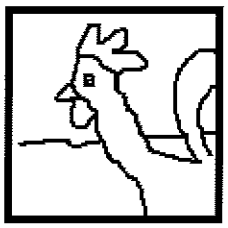
Fig 4 Throw boomerang out horizontally
(or a few degrees up)

A4

STAINED GLASS WINDOW

Choose a Bible story to depict in a stained glass window, made up of small acetate squares.

Part 1:

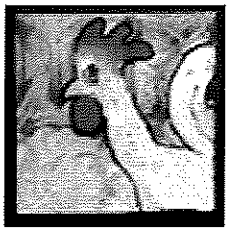


- Discuss the story and identify suitable things to include in your window about the story.
- In the square on the paper make a line drawing of your idea. Make it big enough to fill the square on the paper!

Part 2:

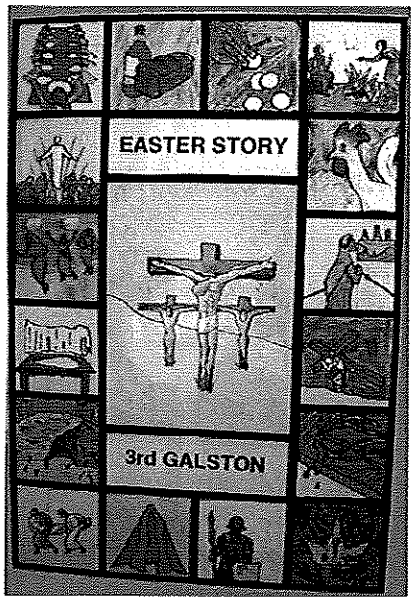
- Sellotape an acetate square on top of your sheet from last week, (or the one given to you), lining up the squares. Using the black outliner, carefully draw round ALL the lines of your line drawing onto the acetate sheet. Store carefully to allow it to dry until next week.

Part 3:

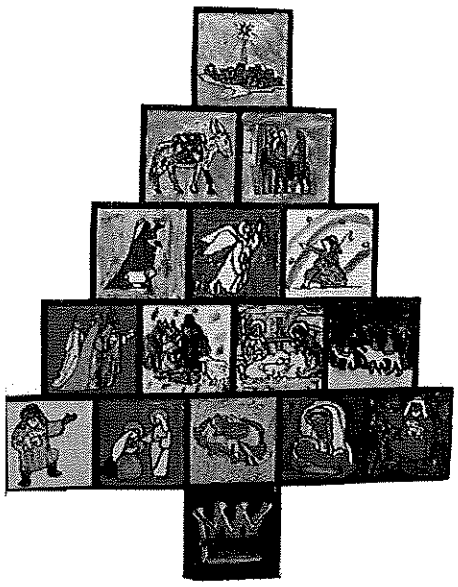


- Carefully paint your acetate square, (start at the top to avoid smudges) using a different brush for each colour of paint.

When all the windows are finished, use double sided tape on the black border to join then together to form a window or possible, a shape like the Christmas tree.



Easter Story



Christmas Story

D2

Writing a Drama

STRICTLY DRAGON FACTOR – OUTLINE SCRIPT

Cast:
Panel of three judges
Three contestants

Voice of stage: Ladies and Gentlemen Welcome to Strictly Dragon Factor and here are your judges.

(Judges walk onto the stage and sit down. Theme music and introduction. First contestant walks onto the stage)

Simon Cowell: Hello welcome, what's your name and where have you come from?

Simon and contestant engage in conversation, and then the contestant sings a song. The song is sung way over the top, with lots of hand actions. Simon criticises it.

(Characters pause as film plays – Simon sits in a chair at home. A delivery boy arrives at his house, and Simon acts like a crazy man criticising the boy for a little crease in the paper. He too is acting in a manner that is way over the top.)

Voice off stage: And dancing for us tonight we have the one and only...

Contestant 2: *(Performs a dramatic dance, but their dance is out of time with the music)*

Judge criticises the couple for being out of time with the music.

(Characters pause as film plays – judge sits at a desk and looks at his diary and sees that he is late, but isn't very bothered)

(Dragon's Den Theme Music)

Judge 3: Hello what's your idea then?

Contestant proposes a totally unrealistic product. The judge unsurprisingly criticises it for this reason.

(Characters pause as film plays – judge in his factory demanding that they increase productivity by 400%.)

End with the verse. "Do not judge, and you will not be judged. Do not condemn, and you will not be condemned. " Luke 6:37

D2

Writing a Drama

STRICTLY DRAGON FACTOR – FINAL SCRIPT

Cast:
Panel of three judges
Three contestants

Voice of stage: Ladies and Gentlemen Welcome to Strictly Dragon Factor and here are your judges.

(Judges walk onto the stage and sit down. Theme music and introduction. First contestant walks onto the stage)

Simon Cowell: Hello welcome, what's your name and where have you come from?

Contestant 1: Hiya everyone, I absolutely love the show. I just can't believe it's you Simon Cowell. This is amazing.

Simon Cowell: Thank... *(Simon tries to say something but can't butt in)*

Contestant 1: Yeah and that Louis Walsh, he's sooo funny. Where is he? *(Contestant looks for Louis)*

Simon Cowell: *(interrupts)* Yes, yes sweetheart. Ok, just get on and sing your song. You do have a song?

Contestant 1: This is a very special song for me, the first time I ever...

Simon Cowell: *(interrupts again)* Sorry, somewhere along the line did I pretend like I cared. I really am just not interested in your life story. Get on with it!

Contestant 1: Ok *(sings the Titanic theme tune in a totally dramatic and over top way, with lots of hand actions and dramatic movements)*

Every night in my dreams
I see you. I feel you.
That is how I know you go on. *(ooh yeah!)*

Far across the distance
And spaces between us
You have come to show you go on.

Near, far, wherever you are
I believe that the heart does go on
Once more you open the door
And you're here in my heart
And my heart will go on and on

D2

Writing a Drama ctd.

Simon Cowell: *(interrupts again)* Ok that's enough. Wow that was amazing!

Contestant 1: Really!

Simon Cowell: NO! It wasn't an iceberg that sank the titanic, it was you! I'm absolutely speechless, *(Simon pauses and then goes on and on and on)* I don't mean to be rude, but in all my years in the business I have never seen anything quite like that and that is not good. The only consistent thing was that every note was out of tune, every note was painful, but worst of all **everything was just way over the top**. I wasn't sure where to look, and with all those hand movements I just ended up feeling dizzy. There really was just nothing positive I could say about it. It was awful *(pause)*, truly awful *(pause)*, terrible. **It was far too over the top!** I'm afraid it's going to have to be a no from me, but follow your dream and one day you never know! *(Simon whispers to himself)* It's never going to happen.

(Characters pause as film plays – Simon sits in a chair at home singing quietly to himself something from S Club 7)

Simon Cowell:
S Club (there ain't no party like an S Club party)
Gonna show you how (everybody get down tonight)
S Club (there ain't no party like an S Club party)
Gonna take you high (shake your body from side to side)

(Simon hears the newspaper delivery boy and runs to the door)

Simon Cowell: I bet you've put a crease in the newspaper again. (Simon grabs the newspaper) Of all the newspaper boys in all the world, I can't believe that I got you. You're just incompetent. I don't mean to be rude, but it's just typical

Newspaper boy: Sorr . . (newspaper boys tries to apologise)

Simon Cowell: The crease is just over the article that I want to read. I can't believe it, I just can't believe it! In fact I'm going to change newsagents, no I'm going to get you sacked. I bet you think I'm over reacting and going way over the top, why you just wait till I talk to your manager!

(Newspaper boy runs away crying, and Simon follows waving his newspaper)

D2

Writing a Drama ctd.

(Strictly Come Dancing theme music)

Voice off stage: And dancing for us tonight we have the one and only...

Contestant 2: *(Performs a dramatic dance, but their dance is out of time with the music)*

Judge 2: *(chuckles to himself, and talks in Italian accent)* Well darling after that I'm not really sure if there is a lot that I can say. The alignment of your head and shoulders were like a giraffe, but worst of all darling was the fact that your timing was all over the place. You didn't hit a single beat darling. From your very first step to your very last you were out of time. You need to focus darling. **Timing is crucial in dance!** In fact there are four things that are crucial, your timing *(counting on his fingers)*, the music, how you move your body, and *(struggling to remember)*

Contestant 2: Well I tried my best...

Judge 2: Do not interrupt darling, I'm not finished. TIMING! Go to blockbusters and get my dance video!

(Characters pause as film plays – judge sits at a desk and looks at his diary and sees that he has a dentist appointment today)

Judge 2: So what am I doing today then? *(Camera cuts to page where it states that he has a dentist appointment at 0930, then cuts to time which shows 1100 and dramatic music plays. The judge goes into a mad panic)*. I can't believe how late it is, oh well I'll call up and apologise. What does it matter if one person isn't on time?

D2

Writing a Drama ctd.

(Dragon's Den Theme Music)

Judge 3: Hello what's your idea then?

Contestant 3: Right, I've devised a product that will revolutionise the way that we all travel in space. I propose the "breathable space suit" called "breathe easy". *(pause)* This allows air to circulate around the average astronaut and drastically reduces perspiration and unwanted smelliness. My research has shown that within 5 years 95% of the population will own this suit, and I would like to offer you 20% of the company for £5.5 billion.

Judge 3: What? Are you stupid or just intellectually impaired? That will never work. 95% of the population might own it but they'll all be dead. I have never heard such a ridiculous idea! I wouldn't offer you 5p for your business. No in fact I'll give you £100 just to leave this room right now! You're wasting my time and I just don't have time for people like you. You're on a different planet and are just **totally unrealistic**. *(pause and in despair)* completely unrealistic.

Contestant 3: Oh right well thanks. I've got another idea what about "underwater sunglasses", "inflatable dart board", "Pigeons Burgers", "Glass footballs".

(Characters pause as film plays – judge in his factory. Workers sitting on an assembly line, assembling Lego. He then demands from his staff that it would be realistic for them to increase productivity by 400%.)

End with the verse. "Do not judge, and you will not be judged. Do not condemn, and you will not be condemned." Luke 6:37

F2

First Steps

RESEARCHING YOUR FAMILY TREE

Below is a table that you can photocopy (however many times you need) to give to your parents and grandparents to complete.

If any columns are not applicable, simply leave them blank.

The information can then be used to create a basic family tree.

Full Name		
Maiden Name		
Date of Birth		
Place of Birth		
Place of Marriage		
Full Name of Parent	Mother	Father
Parents' Date of Birth	Mother	Father
Parents' Place of Birth	Mother	Father

ASTRO BINGO!

Randomly enter each word from the list below into each square on the bingo grid above. Make sure that there is one word only in each square.

24 hours	Light Year	Pluto
365 Days	Asteroid	Mars
Saturn	Mercury	4.5 billion years
Solar System	Black Hole	Uranus
Constellation	Sun	Milky Way
Earth	Moon	Gravity
Venus	Jupiter	Neptune
1969	NASA	Alpha Centauri
1961		

As your leader reads out each clue, cross out in the grid the word you think the clue is referring to

When you have completed a row up/down or across, shout out BINGO!

I1

ASTRO BINGO! – TERMS LIST

(Read off the terms in a random order)

The amount of time it takes for the earth to make one rotation on its axis **(24 hours)**

The amount of time it takes for the earth to make a revolution around the sun **(365 days)**

Force of attraction between massive objects, such as the pull between earth & moon **(gravity)**

Largest planet in our solar system, and is known for its red giant spot **(Jupiter)**

Distance light travels in one year **(Light Year)**

The year of the first man in space, Yuri Gagarin **(1961)**

This small planet is known as the rusty planet due to its reddish colour **(Mars)**

The closest planet to the sun **(Mercury)**

The name for our spiral galaxy that contains our solar system **(Milky Way)**

A dry, airless barren world that orbits our planet once every 28 days **(Moon)**

A giant bluish planet named after the Roman god of the sea **(Neptune)**

A very dense area with gravity so strong that nothing can escape it, not even light **(Black Hole)**

The year that Neil Armstrong became the first man to walk on the moon **(1969)**

The third rock from the sun **(Earth)**

The age of our Solar System is estimated to be this figure... **(4.5 billion years)**

Consists of our sun, its planets, and all the other objects that revolve around the sun **(solar system)**

The closest neighbouring star to our sun **(Alpha Centauri)**

Second planet from the sun that rotates in the opposite direction to that of earth **(Venus)**

Furthest planet from the sun named for the Roman god of the underworld **(Pluto)**

A medium-sized yellow star that is very important to Earthlings **(the sun)**

A planet with seven major rings and more moons than any other planet **(Saturn)**

Seventh planet from the sun that is described as a planet on its side **(Uranus)**

The term used to describe a group or cluster of stars **(constellation)**

A small object that orbits the sun, often exhibiting a small tail behind it **(comet)**

I1

Survival on the Moon

SCENARIO

Scenario:

You are a member of a space crew originally scheduled to rendezvous with a mother ship on the lighted surface of the moon. However, due to mechanical difficulties, your ship was forced to land at a spot some 200 miles from the rendezvous point. During re-entry and landing, much of the equipment aboard was damaged and, since survival depends on reaching the mother ship, the most critical items available must be chosen for the 200-mile trip. Below are listed the 15 items left intact and undamaged after landing. Your task is to rank order them in terms of their importance for your crew in allowing them to reach the rendezvous point. Place the number 1 by the most important item, the number 2 by the second most important, and so on through number 15 for the least important.

Activity:

Your Ranking **NASA Ranking**

_____ Box of matches _____

_____ Food concentrate _____

_____ 50 feet of nylon rope _____

_____ Parachute silk _____

_____ Portable heating unit _____

_____ Two .45 calibre pistols _____

_____ One case of dehydrated milk _____

_____ Two 100lb. tanks of oxygen _____

_____ Stellar map _____

_____ Self-inflating life raft _____

_____ Magnetic compass _____

_____ 5 gallons of water _____

_____ Signal flares _____

_____ First aid kit, including injection needle _____

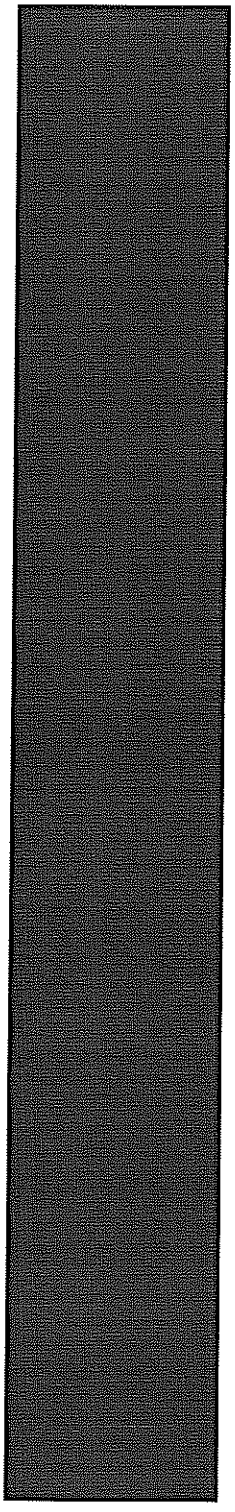
_____ Solar-powered FM receiver-transmitter _____

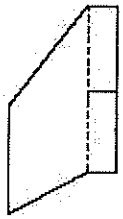
I1

Construct a Model Rocket

STRAW ROCKET PATTERNS

Cut out the paper strip. Cut out fins or make your own.

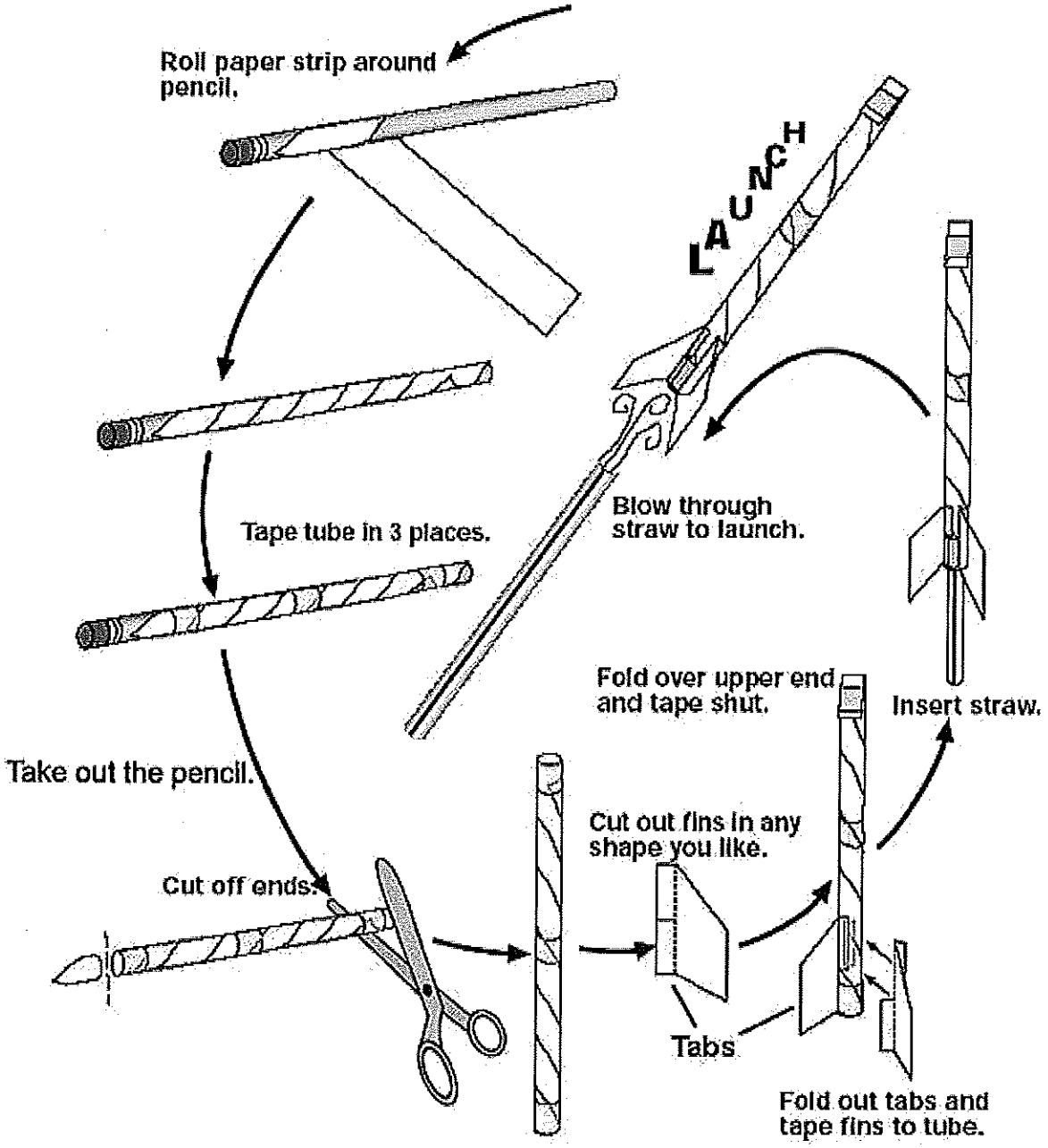




I1

Construct a Model Rocket

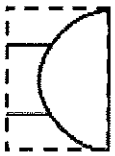
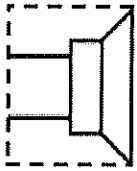
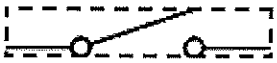
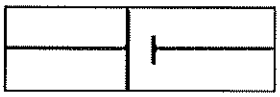
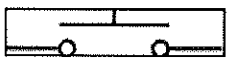
HOW TO MAKE A STRAW ROCKET



I2

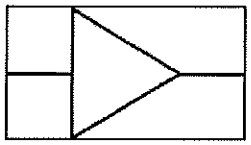
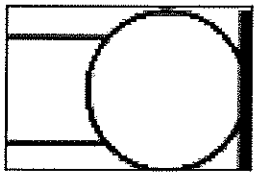
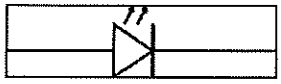
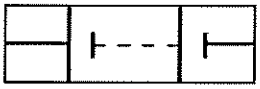
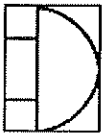
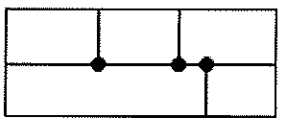
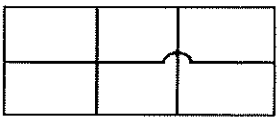
Steady Hand Game

Electrical Components

	Buzzer
	Loudspeaker
	Lamp
	Switch
	Cell
	Heater
	Motor
	Switch

I2

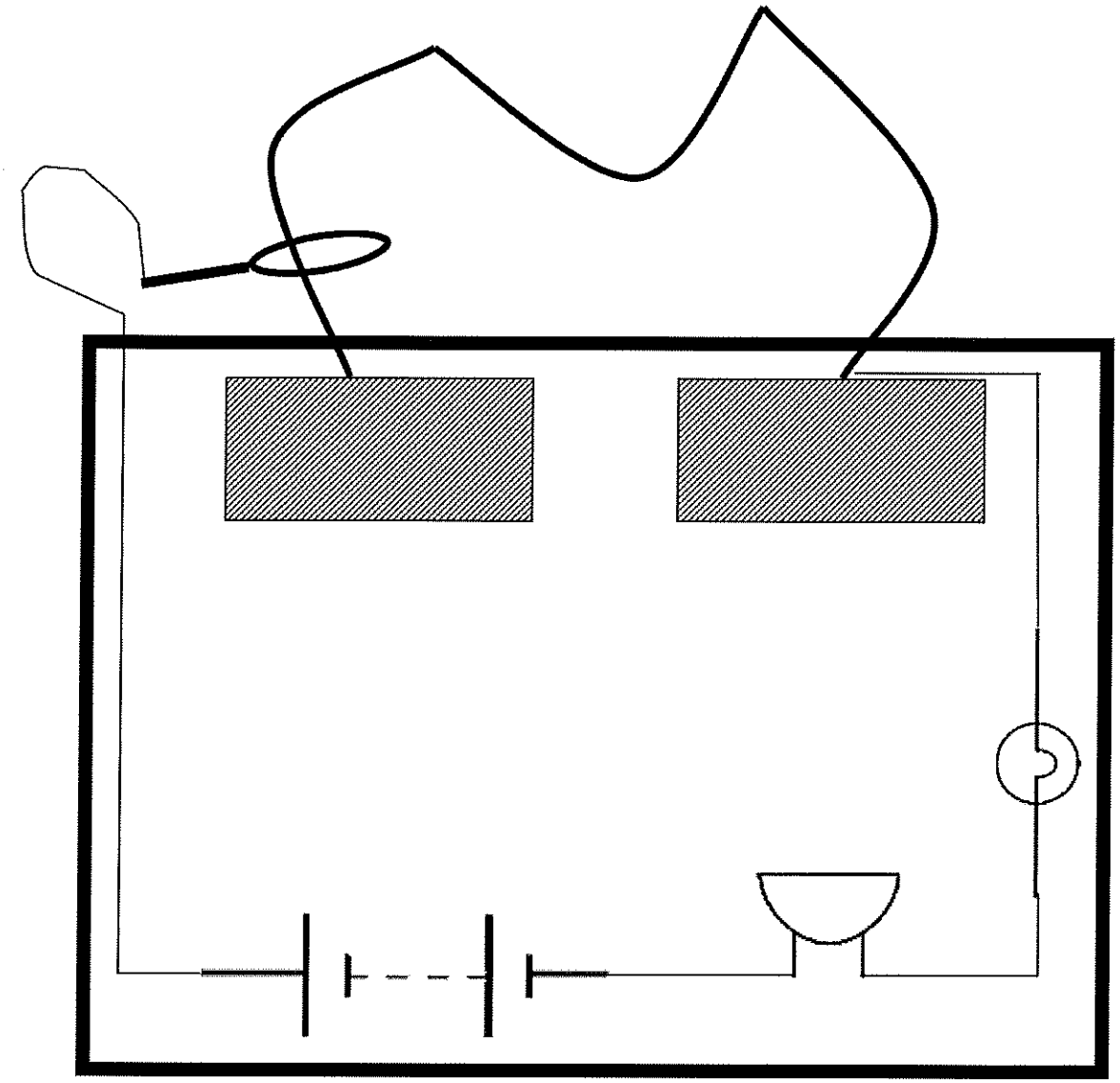
Steady Hand Game

	Amplifier
	Microphone
	LED
	Battery
	Bell
	2– Way Switch
	Wires Joined
	Wires Not Joined

I2

Steady Hand Game

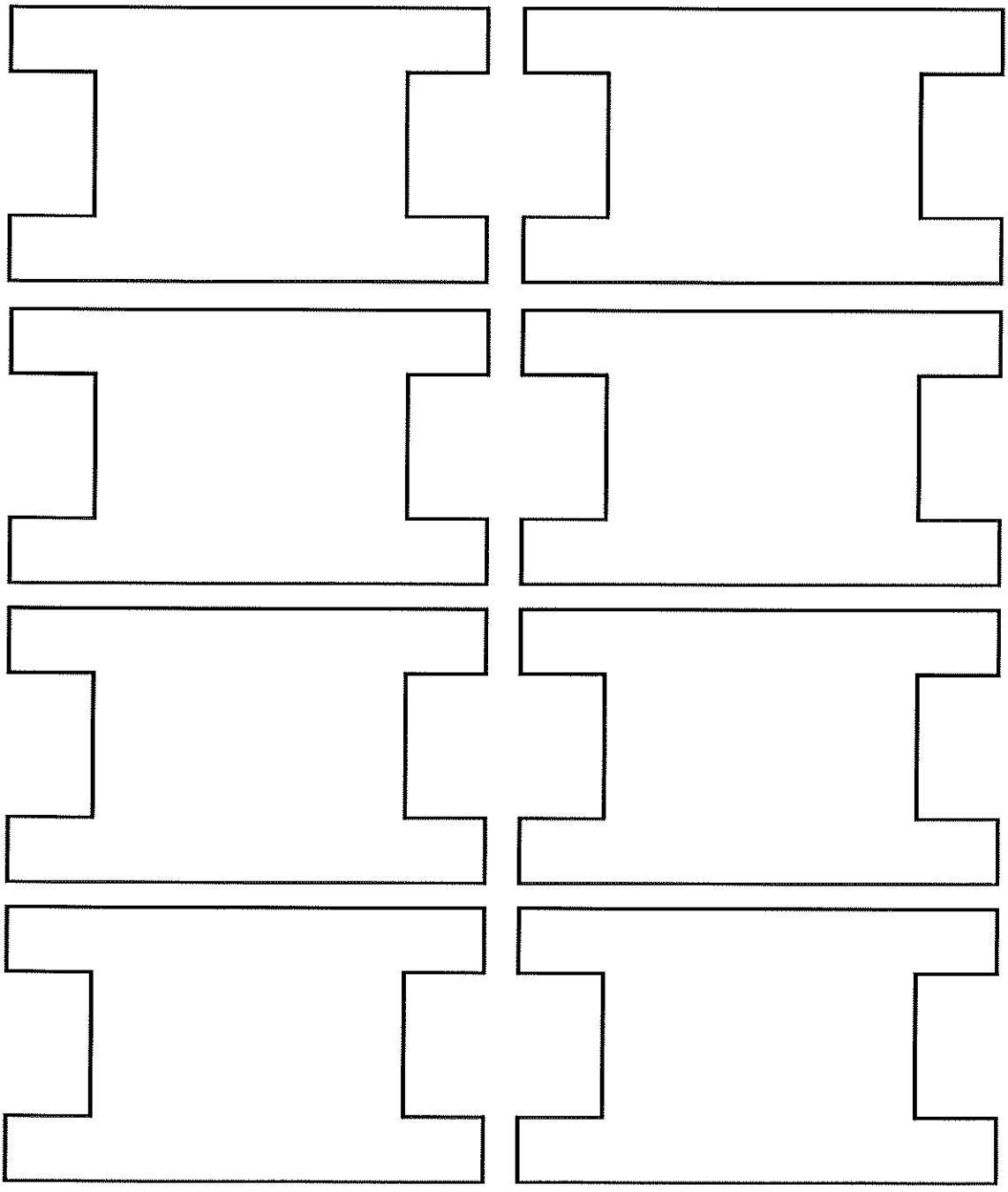
Steady Hand Diagram



I2

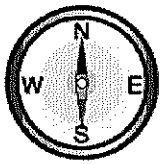
Battery Tester

Battery Tester Template



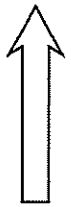
Sun Dial

Start Here!

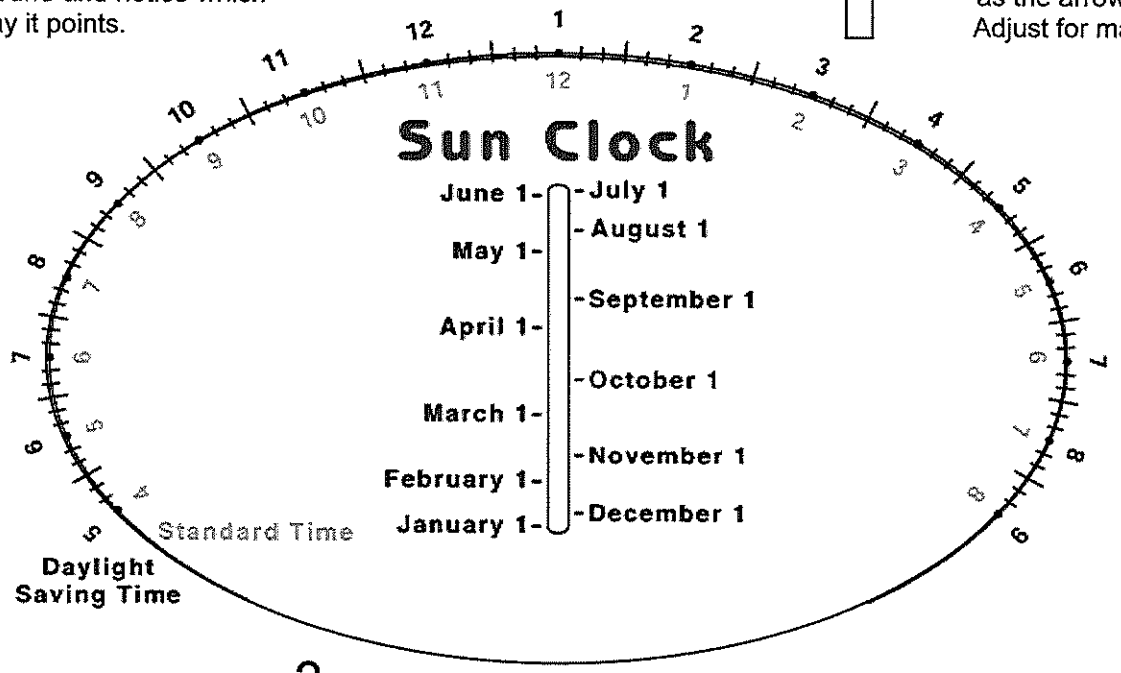


1 Put a compass on the ground and notice which way it points.

Geographic North



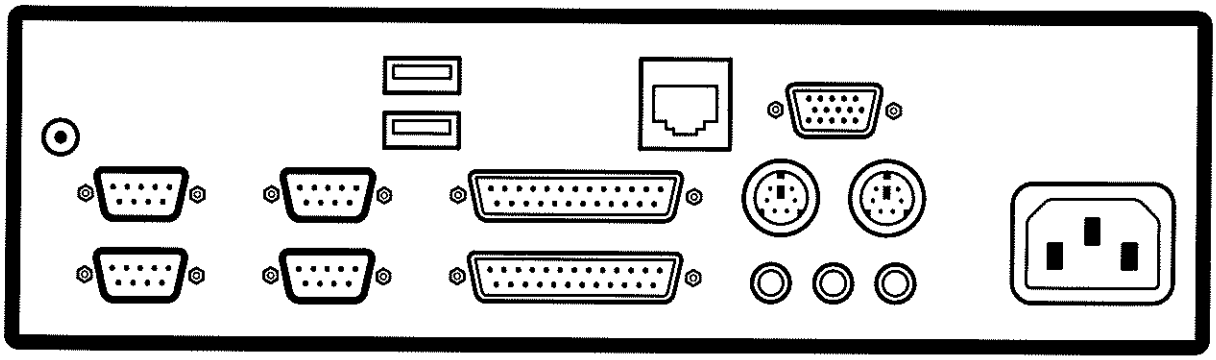
2 Put this page on the ground and move it around until the arrow points in the same direction as the arrow on your compass. Adjust for magnetic declension.



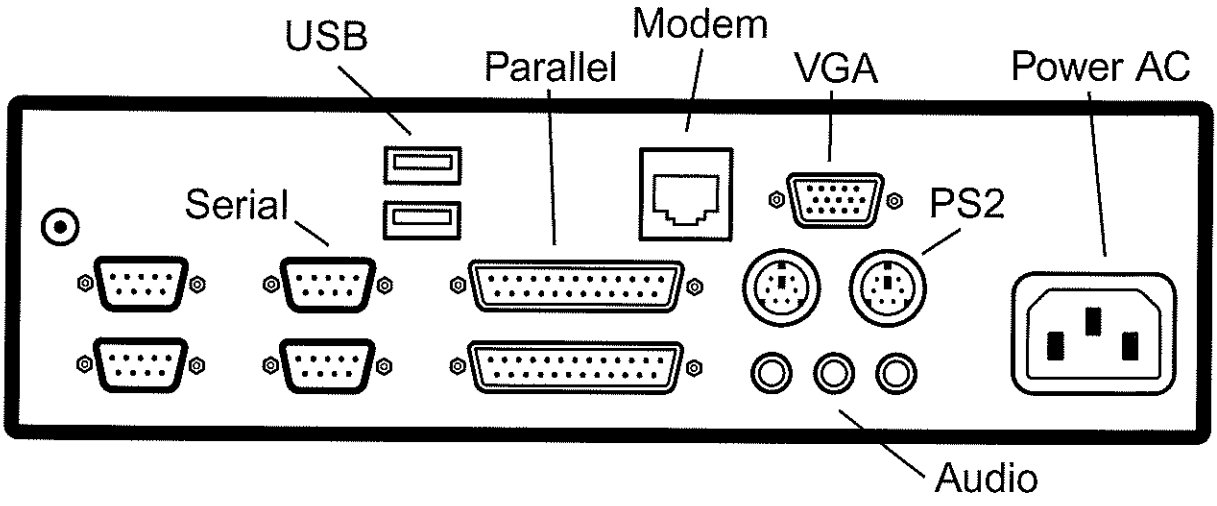
3 Stand a pencil on today's date and look at the shadow to find out what time it is.

J1

PC Set Up



Answer



J1

Word Processing

Formatting

Change each line or word to the format that it describes.

Arial 12point Font

Times New Roman 20point Font

Verdana 8point Font

The following are all set up as Arial 10 point but you could compare how they look using the different fonts.

Bold

Italics

Underlined

Bold + Italics

Small Capitals

Centred on the page

Aligned Right

This paragraph will need to be fully justified so that both the left and right side of the text lines up with the edge of the margins in a square block. This will only work if the text is nearly a full line.

Bullets and Lists; Change the first list into a list with bullet points, the second into a list that has consecutive numbers.

List 1

List details for bullets
List details for bullets
List details for bullets
List details for bullets
List details for bullets

List 2

List details for numbering
List details for numbering
List details for numbering
List details for numbering
List details for numbering

J1

Spreadsheets

Functions

All mathematical function in spreadsheets must start with a = sign. This tells that it is to be a calculation

1. SUM Function =SUM()

The sum function is probably the most commonly used function. This avoids the need for selecting each cell and adding them indivdually with standard plus signs. It is used to calculate the value of a range of cells, either in a row or column or both. Use the table below to sum the 4 rows, then the 4 colums and then all the numbers in the table.

	A	**B**	**C**	**D**	**Total**
e.g.	*1*	*2*	*3*	*4*	*10*
r1	1	9	11	89	
r2	24	1	14	8	
r3	6	9	7	14	
r4	5	5	6	99	
Total					

2. Average Function =AVERAGE()

The average function allows you to take an average of a group of numbers. Use the table below to work out the average of each row, column and the table itself.

	A	**B**	**C**	**D**	**Total**
e.g.	*1*	*2*	*3*	*4*	*2.5*
r1	1	9	11	89	
r2	24	1	14	8	
r3	6	9	7	14	
r4	5	5	6	99	
Total					

3. Percentages

J1

Functions ctd.

4. IF =IF (Criteria, if Yes, if no)

The IF statement is used to check a statement is either true or false. The body of the function is set up in 3 parts:

1. Criteria
2. Result if it meets the criteria
3. The result if it does not meet the criteria

e.g. IF Cell B42 is greater than 10 then the answer is Yes, if it is not then the answer is No.

Type in a number into Cell B42 below and see what the answer is in C41, it is currently set to No

	No

Try some of your own using Greater or Less than and Equal to calculations with your own results as the positive or negative answers.

1
2
3
4

5. LOOKUPS

=VLOOKUP (Lookup Value, Table, Column, Match or Not)
=HLOOKUP (Lookup Value, Table, Row, Match or Not)

Look up function is a very powerful function that allows information in a named table range to be looked at and the information contained returned. This means you can store a set of values and then look it up in the table. Look ups are in row and column format (horizontal and vertical). The task and example use VLOOKUP to look up a column in a table.

We have a table of values which we have named 'points':

Points Grade	
50	Gold
40	Silver
30	Bronze
20	Unlucky
10	Rubbish

J1

Functions ctd.

Our lookup would be added into the the column 'Grade' below and then it would look up the points in Column B (2 in the table) from the 'points' table to determine the cities grade.

Name	Points	Grade		
London	10	VLOOKUP (B67,points,2,FALSE)		
Portsmouth	50	Gold		
Manchester	20	Unlucky		
Plymouth	40	Silver		
Birmingham	30	Bronze		
Chester	30	Bronze		
Liverpool	20	Unlucky		

Try your own below:

1. Create a table to lookup.

2. Now create your results to show.

K1

Preparations Before Starting Work

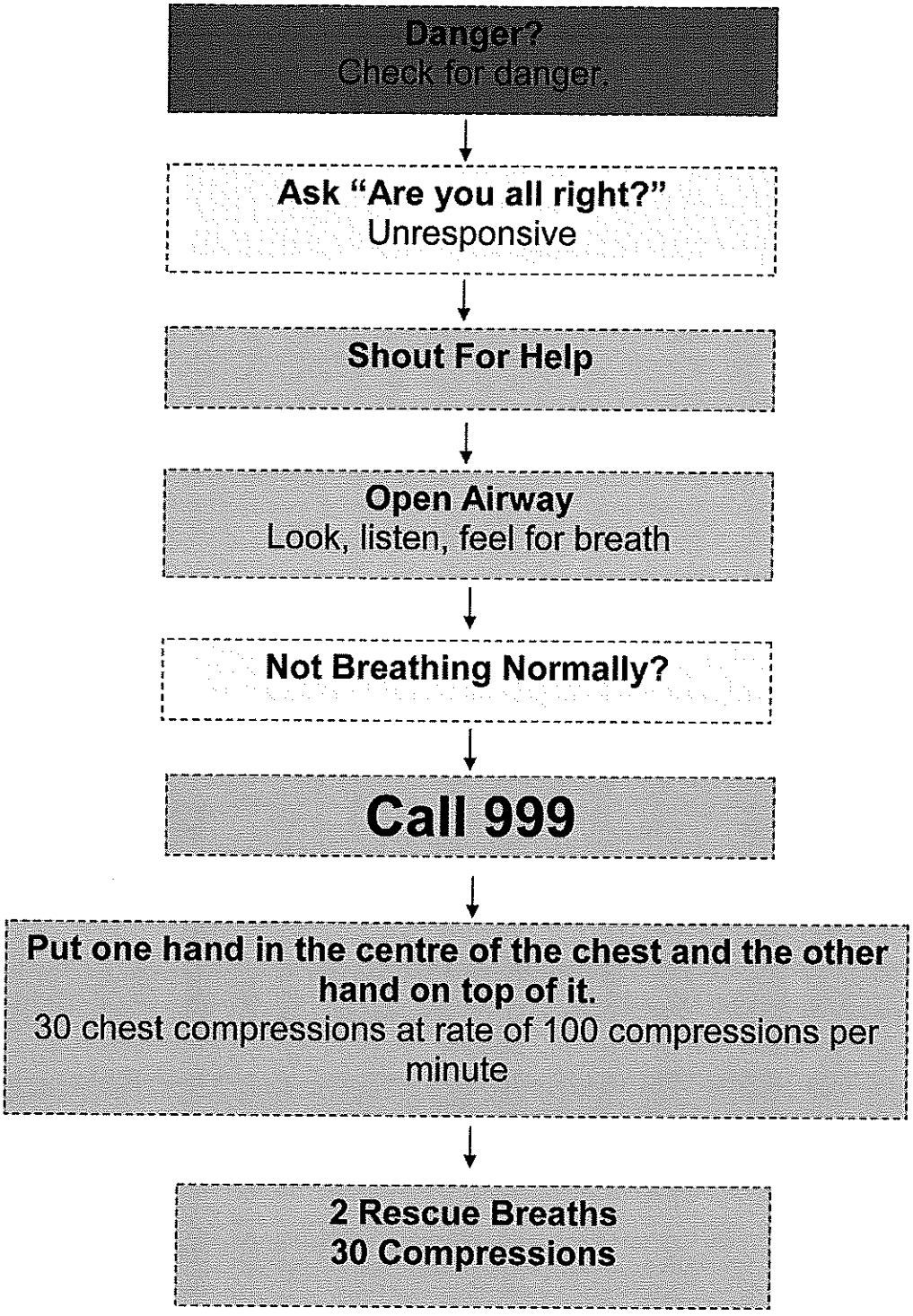
PAINT CALCULATOR

Room Area: Wall height (from skirting/ m) Total length of all walls to be painted (m) Window Area: Window 1 height (m) Window 1 width (m Window 2 height (m) Window 2 width (m) Window 3 height (m) Window 3 width (m) Door Area: Door 1 height (m) Door 1 width (m) Door 2 height (m) Door 2 width (m) Door 3 height (m) Door 3 width (m)	
Total Area	
Type of paint	
Colour/ Make	
How many coats of paint (m2):	
Coverage per litre (m2):	
Quantity of paint required (litres):	
Size of paint pot (litres):	
Number of paint pots:	
Cost of paint per litre (£):	
Cost of paint per pot (£):	
Total cost (£):	

L1

Resuscitation

Adult Basic Life Support



Source: Resuscitation Council (UK) Guidelines

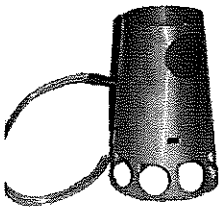
M2

Small Stoves

Outdoor Cooking: Stoves

There are many different sorts of outdoor stove. In The Boys' Brigade, other than at static camps, the varieties of stoves we will use outdoors are mainly of the portable, one-burner camping stove type. Within this group however, there are a number of methods of providing heat. These fall into the broad categories of Solid, Liquid ("reservoir" and pressurized) and Gas. A brief description of some of the stoves in each category is given below.

Solid Fuel Stoves

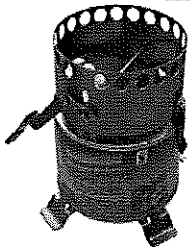


Solid fuel has long been a convenient cooking material. From the earliest days, food will have been cooked on an open fire – usually fuelled by readily available combustible materials such as wood, bark, animal dung etc. Charcoal, Peat and Coal were used to fuel cookers and ovens.

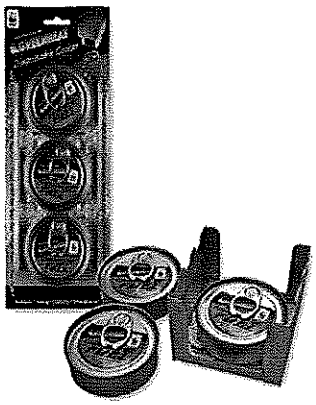
Modern solid fuel cookers tend to be small, pocket sized devices which hold pieces of specially produced solid fuel (hexamine). Small, portable wood-burning stoves are also available and area possible alternative for use where dry wood is readily available.

Advantages: Small, Light, Easy to light and operate, Fuel is easy to handle

Disadvantages: Limited temperature control, requires separate pans, hard to extinguish. Fuel not widely available.



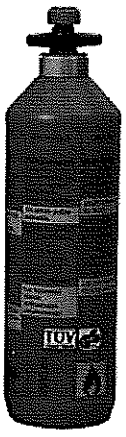
Greenheat™ produce a combustible gel that can be used in a similar manner to the solid fuel cooker. This is easier to extinguish as it can be suffocated in a similar manner to the Trangia™ liquid fuel system described below. They also produce a small cooker that fits their fuel cells.



Liquid: Reservoir / Spirit Stoves

Trangia™, and similar stoves use a pool or reservoir of inflammable liquid which is burned to produce heat. The Trangia™ system comes complete with pans, and a shield which protects the flame from the wind and holds the pans above the flame. Recently, Trangia™ have produced gas burners to fit their system. Greenheat™ have also produced their gel in a container which fits the Trangia™ system.

Advantages: Relatively light, Easy to light and operate, Fuel (methylated spirits) is widely available and relatively safe and easy to handle.
Pans & cooker fit together for storage & transport. Can be used with greenheat™ fuel cells.



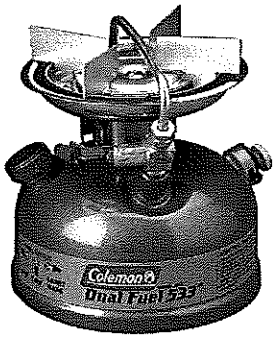
Disadvantages: Limited temperature control, hard to extinguish, liquid fuel is easily spilt and needs to be carried separately in an appropriate container.

M2

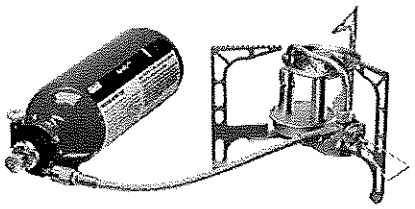
Small Stoves ctd.

Liquid: Pressure Stoves

Pressure stoves work by forcing liquid fuel under pressure (often through a pre-heat tube, where it is vaporized) through a nozzle, where it is turned into a fine aerosol and mixed with air, then into a burner, similar to that on a gas cooker, where it burns fiercely. The original Primus™ and Optimus™ stoves used paraffin as a fuel. This waxy liquid was hard to ignite at room temperature (or below) and required the stove to be "primed" (by burning a more inflammable solid or liquid in a tray to pre-heat the burner, and so cause the paraffin to be vaporized as it was forced out). Pressure is applied by pumping air into the sealed container holding the fuel.



More recently, pressure stoves have been produced that use unleaded petrol as a fuel. This is more readily available, and easier to light than paraffin. The stove does not need to be primed with another fuel, but takes a few moments to reach the ideal operating temperature. Petrol is forced through a pre-heating tube which passes close to the flame, so the stove primes itself. Coleman™ also produce a fuel that can be used in preference to petrol.



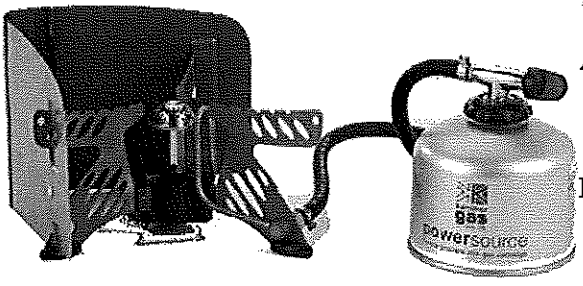
This type of stove is available in several formats; with integrated fuel tank, or separate pressurized fuel bottle; the latter can also be used (with the appropriate adapter) with compressed gas.

Advantages: Fuel (unleaded petrol) is widely available. This type of stove is very efficient, and controllable. Some multi-fuel stoves will work with many different liquids &gases.

Disadvantages: Liquid fuel is easily spilt and needs to be carried separately in an appropriate container. Paraffin is not easy to light. Petrol and similar fuels are volatile, with potentially explosive fumes. Pans must be carried separately.

Gas Stoves

These are probably the most common camping stoves in use today. They use propane or butane gas (or a mixture of the two) in a pressurized canister. Sometimes, this is pierced when mounted in the stove, or attached with a re-sealable threaded connector. Like the pressurized liquid stoves, the gas canister may be attached below the burner, or connected by a flexible hose. Operation is very simple, and a consistent, clean flame is produced.



Advantages: Fuel is widely available. Very versatile, easy to use, and controllable.

Disadvantages: Gas is explosive and needs to be handled appropriately. Does not work well at high altitude. Pans must be carried separately.

N1

Learning to Spell

BRITISH TWO-HANDED

FINGER SPELLING

ALPHABET