KS3 Yr9 Design and Technology & Information and Communication Technology

About me

Name:

Teaching group:

End of year 8 level:

I will be studying a combination of….

GRAPHIC DESIGN
TEXTILES
RESISTANT MATERIALS
FOOD & NUTRITION
ELECTRONICS
ICT

What will I need to bring with me to each lesson?

Pencil
Black Pen
Ruler
Eraser
Calculator

Optional:
Colour pencils
Fine Liner

For Food & Nutrition:
Ingredients
Tupperware
Carrier bag

Project 1
SPECIALISMS:

FOCUS:

Project 2
SPECIALISMS:

FOCUS:

Project 3
SPECIALISMS:

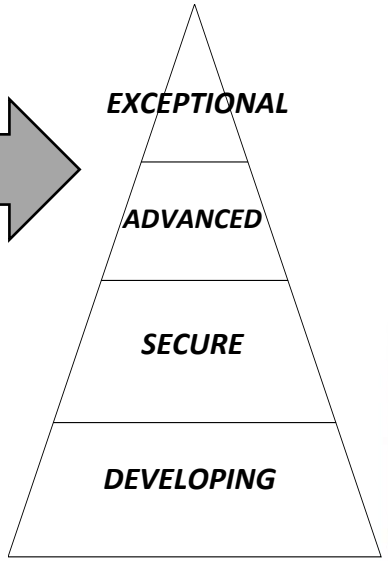
FOCUS:

Contents in this booklet:

- ☐ My **flight paths**
- ☐ My 3 **projects**
- ☐ My 3 'big' **homeworks**
- ☐ My 3 **literacy** tests
- ☐ My 3 **numeracy** tests

Assessment

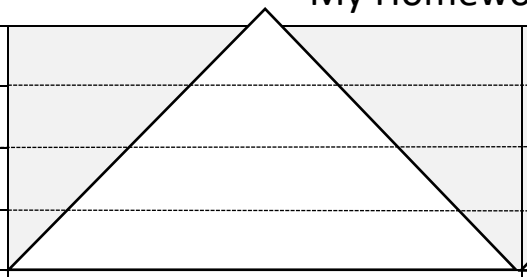
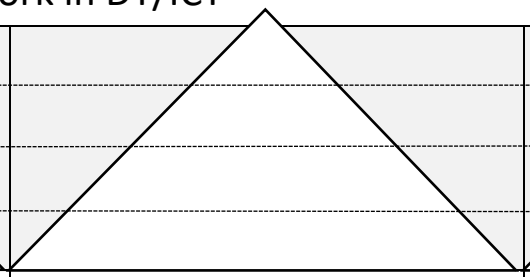
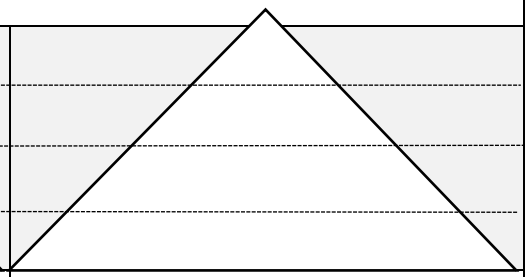
When working in Design and Technology and ICT you will be assessed using a triangle. It will be shaded to indicate where you are working at.
Book work will be marked in PINK (Progressive work) and Green (Target set)



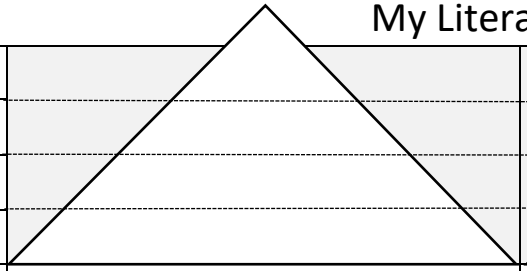
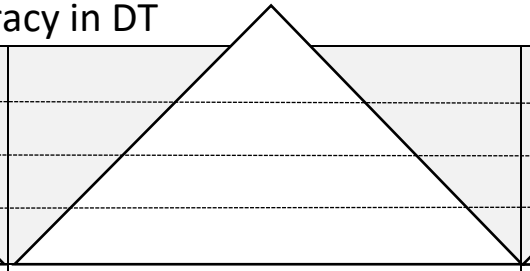
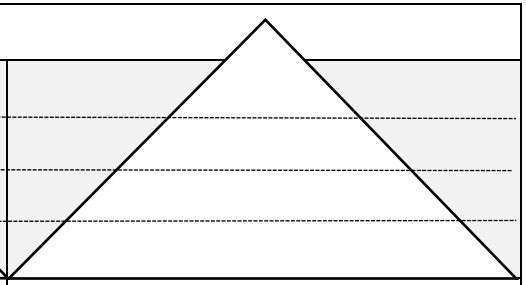
My Flight Paths

TARGET LEVEL *Shaded below.*	My Projects in DT/ICT		
Exceptional			
Advanced			
Secure			
Developing			
Specialism	1	2	3
Focus			
	YEAR 9		

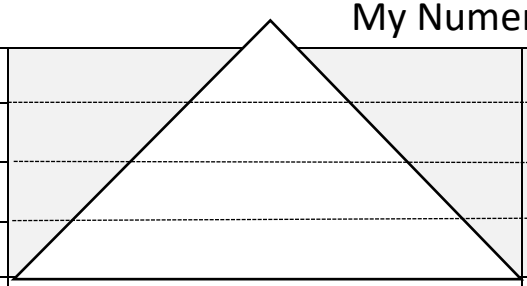
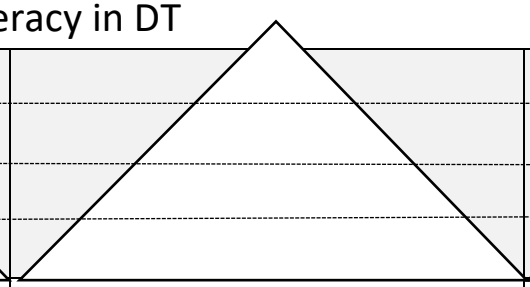
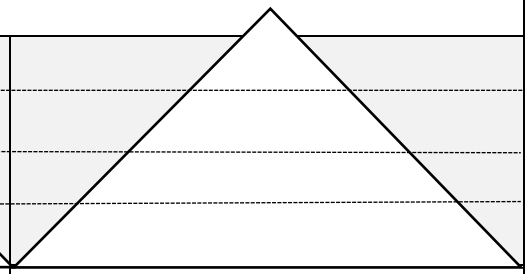
My Homework in DT/ICT

Exceptional			
Advanced			
Secure			
Developing			
	1.	2.	3.

My Literacy in DT

Exceptional			
Advanced			
Secure			
Developing			
	Test 1 *Date:*	*Test 2* *Date:*	*Test 3* *Date:*

My Numeracy in DT

Exceptional			
Advanced			
Secure			
Developing			
	Test 1 *Date:*	*Test 2* *Date:*	*Test 3* *Date:*

GRAPHIC DESIGN & TEXTILES

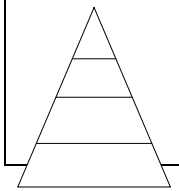
DESIGN BRIEF: To create a t-shirt design based on a design movement or work of a designer (from a given list), that will be presented and stored in a creative and innovative packaging.

ASSESSMENT FOCUS: **EVALUATING**	**DEVELOPING**	**SECURE**	**ADVANCED**	**EXCEPTIONAL**
	Limited evidence of design iterations as a result of evaluating.	Limited evidence that various iterations are as a result of considerations linked to testing, analysis and evaluation of the prototype.	Some evidence that various iterations are as a result of considerations linked to testing, analysis and evaluation of the prototype, including basic consideration of feedback from third parties.	Good evidence that various iterations are as a result of considerations linked to testing, analysis and evaluation of the prototype, including some consideration of feedback from third parties.
	Basic testing of some aspects of the final prototype with no regard to specification.	Basic testing of some aspects of the final prototype against the design brief and specification.	Adequate testing of some aspects of the final prototype against the design brief and specification.	Good testing of most aspects of the final prototype against the design brief and specification.
	Superficial evidence of any modifications either proposed or undertaken.	Little reference is made to any modifications either proposed or undertaken.	Some reference is made to modifications either proposed or undertaken.	Detailed reference is made to any modifications either proposed or undertaken.
	Lacking independence when analysing and evaluating. Minimal evidence of evaluation influencing the design and manufacturing specifications.	Superficial analysis and evaluation. Little influence on the design brief and the design and manufacturing specifications.	Adequate analysis and evaluation is present at some stages of the project but does not have sufficient influence on the design brief and the design and manufacturing specifications.	Good analysis and evaluation at most stages of the project that influences the design brief and the design and manufacturing specifications.

WWW

EBI

TEACHER COMMENT



STUDENTS THOUGHTS

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PHOTO

FOOD AND NUTRITION

DESIGN BRIEF:

ASSESSMENT FOCUS: **MAKING**	DEVELOPING	SECURE	ADVANCED	EXCEPTIONAL
	Tools, materials, ingredients and equipment have been used or operated safely at a basic level, requiring a minimum of teacher input.	Tools, materials, ingredients and equipment (including CAM where appropriate) have been used or operated safely at a basic level.	The correct tools, materials, ingredients and equipment (including CAM where appropriate) have been used or operated safely with an adequate level of skill.	The correct tools, materials, ingredients and equipment (including CAM where appropriate) have been used or operated safely with a good level, of skill.
	Quality control is evident through outcome though little evidence is available.	Basic quality control is evident through measurement only.	Some quality control is evident through measurement and testing.	Detailed quality control is evident to ensure the outcome is mostly accurate through partial application of tolerances.
	Outcome shows a minimal level of making/finishing skills.	Outcome shows a basic level of making/finishing skills which may not be appropriate for the desired outcome.	Outcome shows an adequate level of making/finishing skills that are mostly appropriate to the desired outcome.	Outcome shows a good level of making/finishing skills that are largely consistent and appropriate to the desired outcome.
	A outcome of low quality has been produced which has not considered the needs of the client/user.	A outcome of basic quality has been produced with little or no potential to be commercially viable and does not meet the needs of the client/user.	A outcome of sufficient quality has been produced that may have potential to be commercially viable, although further developments would be required, and only partially meets the needs of the client/user.	A good quality outcome that may have potential to be commercially viable has been produced which mostly meets the needs of the client/user.

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TEACHER COMMENT

STUDENTS THOUGHTS

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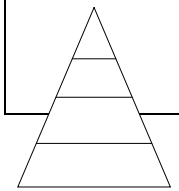
PHOTO



PRODUCT DESIGN & ELECTRONICS

DESIGN BRIEF:

ASSESSMENT FOCUS: **DESIGNING AND DEVELOPING**	**DEVELOPING**	**SECURE**	**ADVANCED**	**EXCEPTIONAL**
	Simple ideas have been generated with obvious design fixation and limited consideration of functionality.	Basic ideas have been generated with clear design fixation and limited consideration of functionality, aesthetics and innovation.	Imaginative ideas have been generated with a degree of design fixation and having some consideration of functionality, aesthetics and innovation.	Imaginative and creative ideas have been generated which mainly avoid design fixation and have adequate consideration of functionality, aesthetics and innovation.
	Modelling is very basic or non-existent, using a one (or none) method to test their design ideas meeting requirements only superficially	Modelling is basic, using a limited number of methods to test their design ideas meeting requirements only superficially	Modelling is sufficient, using a variety of methods to test their design ideas, meeting some requirements.	Good modelling which uses a variety of methods to test their design ideas, largely meeting requirements.
	Communication is poor.	Basic experimentation and communication is evident, using a limited number of techniques.	Experimentation is sufficient to generate a range of ideas. Communication is evident, using a range of techniques.	Good experimentation and communication is evident, using a wide range of techniques.
	Very basic teacher led manufacturing specification.	Basic manufacturing specification that lacks detail and has minimal justification to inform manufacture.	Adequate manufacturing specification contains sufficient detail with some justification to inform manufacture.	Largely detailed manufacturing specification is produced with good justification to inform manufacture.

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TEACHER COMMENT

STUDENTS THOUGHTS

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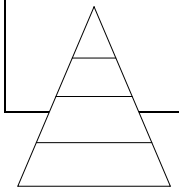
PHOTO



APPLE

Founded in 1976 by Steve Jobs, Steve Wozniak and Ronald Wayne, the company developed one of the first personal computers, called the Apple 1. The early Apple computers, led the way in terms of their user-friendly graphical operating systems, at a time when computers were dominated by IBM and their 'less than intuitive' operating system, called MS-DOS.

APPLE, INNOVATION AND ICONIC DESIGNS

Apple Incorporated, is probably the most successful and best known international company. Its success is based on the development of innovative software and especially consumer electronics, setting a high standard for competing technology companies to reach. Their corporate logo is one of the most recognisable, along with the Nike logo. Apple have developed a variety of innovative products and over the years, have built up a brand, based on both quality and innovation. Many of their products are now recognised as iconic designs, such as the iPhone, iPod, iPad and their intuitive software operating system, not to mention iTunes.

REASONS FOR SUCCESS

Track record of introducing trend setting electronic consumer products.
Each product is a brand in its own right iPod, iPad, iPhone)
Designed to be intuitive and easy to use.
Stylish and functional products.
Obsession for detail, sometimes overlooked by other manufacturers.
A loyal and growing customer base.

Homework 1: *Work of others*

HARRY BECK

Homework 1: *Work of others*

Harry Beck was an Engineering Technical Draftsman and he worked for the London Underground Signals Office. He developed an interest in the way rail transport maps were graphically presented. Maps of the London Underground, were geographic representations, although there were attempts by map designers to simplify the route maps. Beck's iconic London Underground Map was first published in 1932. It was very well received by travellers and commuters.

MAP CHARACTERISTICS

The distance between the stations is not important, as passengers are interested in the order of the stations and how they connected to each other. The busy central area of the map, has been expanded to show more detail. Stations on the periphery of the geographical map are drawn closer to the centre. Straight lines connect the stations, ensuring the map is easy to understand.

WHY IS IT AN ICONIC DESIGN?

The map was designed in Beck's own time and without a commission from the London Passenger Transport Board. His original sketch was drawn in a school exercise book, whilst he was 'laid off'. Beck's London Underground Map, is now regarded as an iconic design, as it has inspired other map layouts throughout the world. The style of map that he introduced has been adapted for a vast range of diagrammatic presentations. It set a high benchmark for other map designers to follow. The map provides all the necessary information required by a traveller and no unnecessary detail or decoration. It is strictly functional and yet can be regarded as piece of art, reflecting a modernist philosophy. It is aesthetically pleasing.

Homework 1: *Work of others*

Harry Beck
Marcel Breuer
Coco Chanel
Norman Foster
Sir Alec Issigonis
Alexander McQueen
William Morris
Mary Quant
Charles Rene Mackintosh
Gerrit Rietveld
Aldo Rossi
Ettore Sottsass
Philippe Starck
Raymond Templier
Louis Comfort Tiffany
Vivienne Westwood

Using the same layout as the previous pages select a designer from the list and create your own fact page.

Homework 2: *Sustainability*

The 6 R's are used to help designers improve the sustainability of the products that they produce.

Define the meaning of each of the 6 R's

REUSE

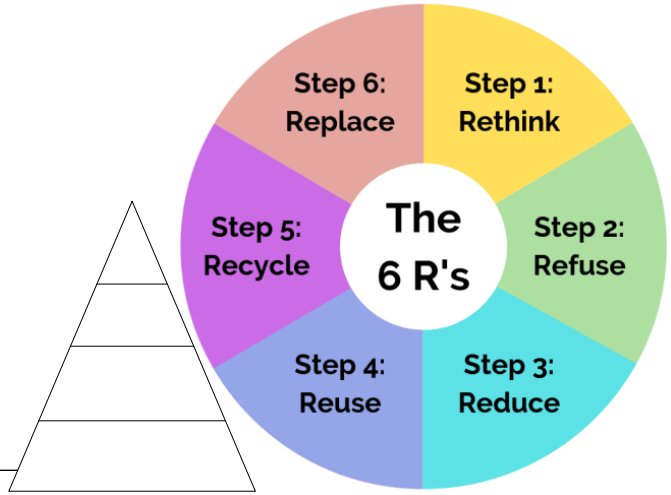
RECYCLE

REFUSE

RETHINK

REDUCE

REPAIR



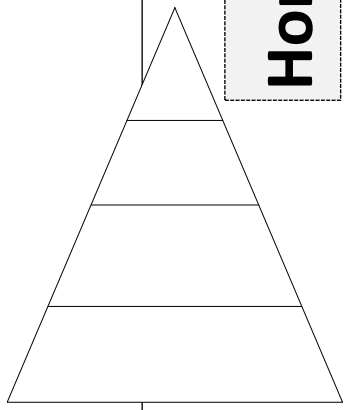
Fair Trade is a movement that works to help people in developing countries get a fair deal for the products that they produce. Producers are paid an agreed minimum rate for many products.

Find 4 items in the supermarket or in your kitchen cupboards that have the Fair Trade logo. Note the items and where they were produced.

Explain one benefit of fair trade to producers of products.

Explain why a consumer might choose NOT to buy a fair trade product.

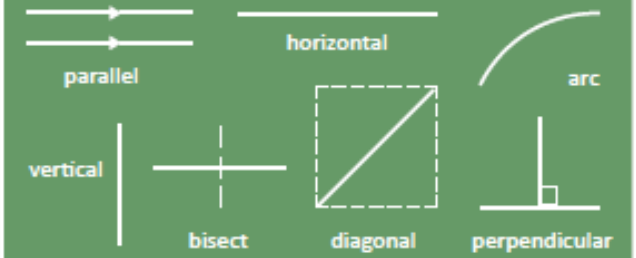
Homework 3: *Moral & Social*



NUMERACY SUPPORT IN D&T

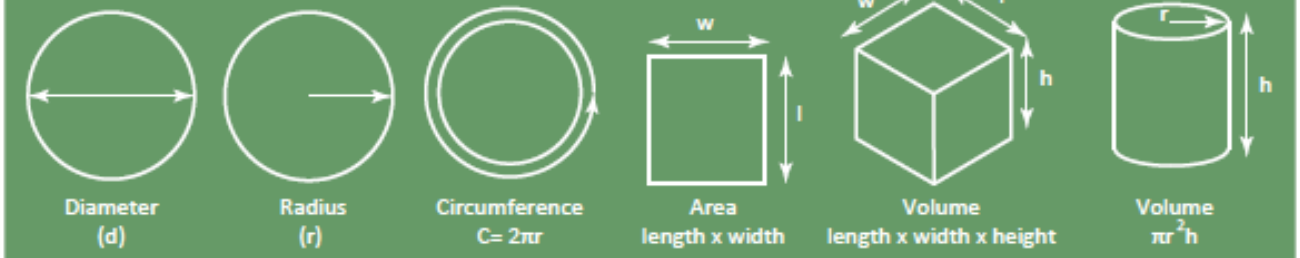
LINES

What do each of following lines mean



SHAPES

How to measure different shapes



Diameter (d)

Radius (r)

Circumference $C = 2\pi r$

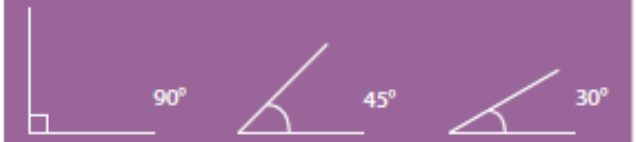
Area length x width

Volume length x width x height

Volume $\pi r^2 h$

ANGLES

Use the right tool to get the right angle



A **try square** is used to mark a 90° angle.

A **mitre square** is used to mark a 45° angle.

A **sliding bevel** is used to mark irregular angles.

MEASURES OF AVERAGES

This help you draw conclusions from data

The **mean** is the most common measure of average. To calculate the mean add the numbers together and divide the total by the amount of numbers:
Mean = sum of numbers ÷ amount of numbers

If you place a set of numbers in order, the **median** number is the middle one.

The **mode** is the value that occurs most often.

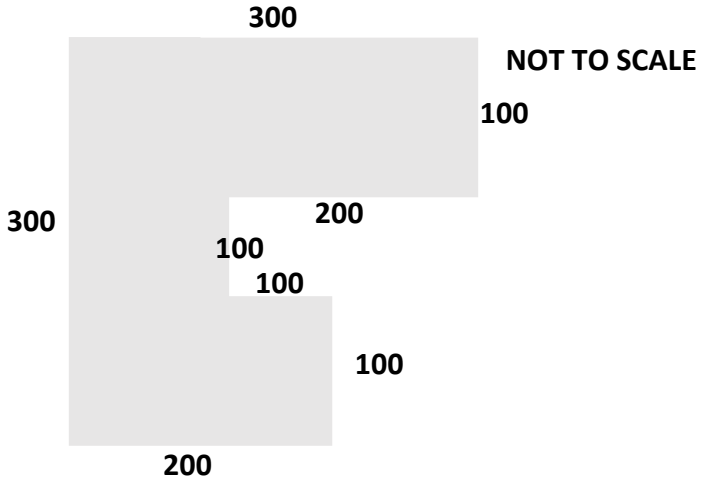
MEASURING

Measuring in millimetres is more accuarate than measuring in centimetres. In the workshop you will frequently use the steel rule.

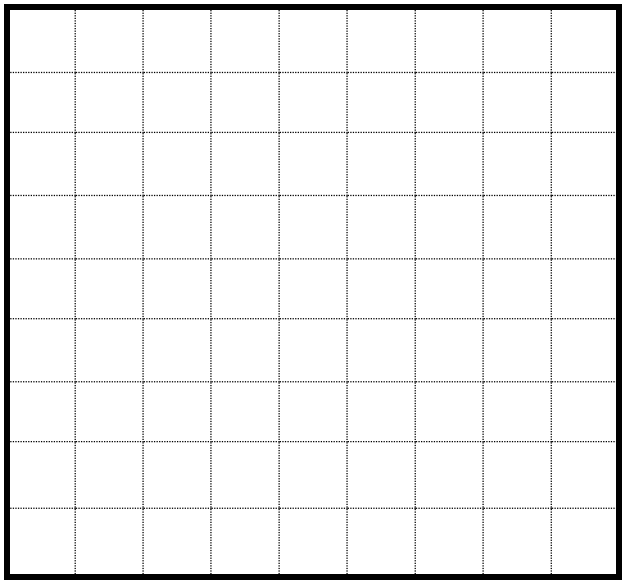
1mm = 0.1cm
10mm = 1cm
50mm = 5cm
57mm = 5.7cm
100mm = 10cm

To convert mm to cm ÷ 10
To covert cm to mm x 10

The shape shown needs to be cut out of a sheet of material using nesting to ensure that minimum material is wasted. The measurements are in millimetres. The sheet is 900mm long by 900mm wide.
Note: 2 of these shapes can be nested together to make a simple geometric shape.



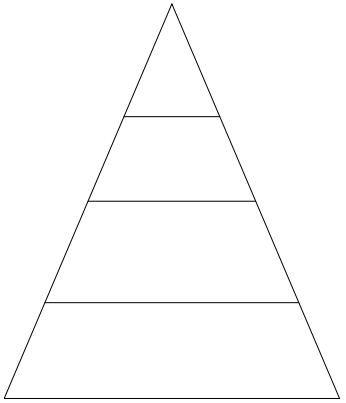
Repeat the shape on the grid to ensure that as many fit on the sheet as possible. Each box on the grid represents 100mmx100mm



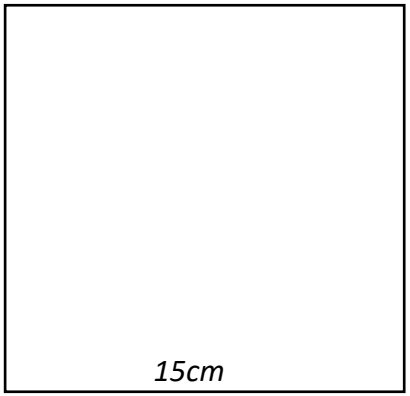
Calculate the surface area of 1 shape

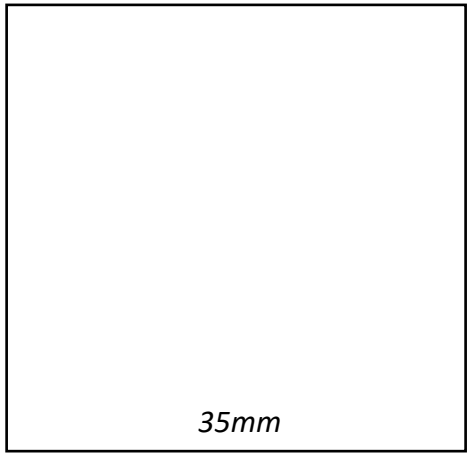
Calculate the percentage of material wasted when producing the shapes that you have drawn

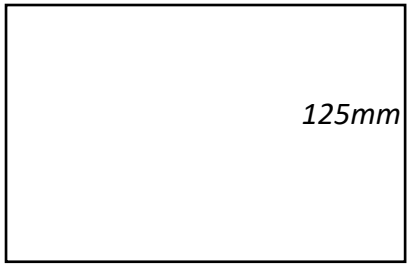
Numeracy 1: *Nesting*

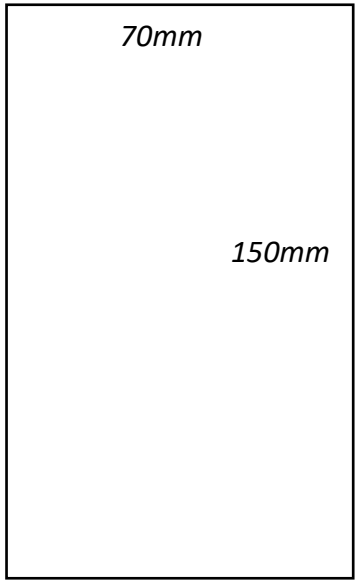


Calculate the areas *write the answer inside the shape*

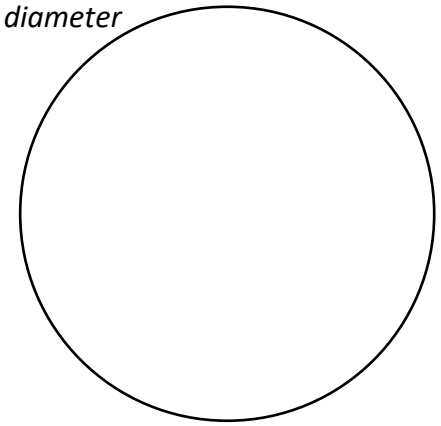


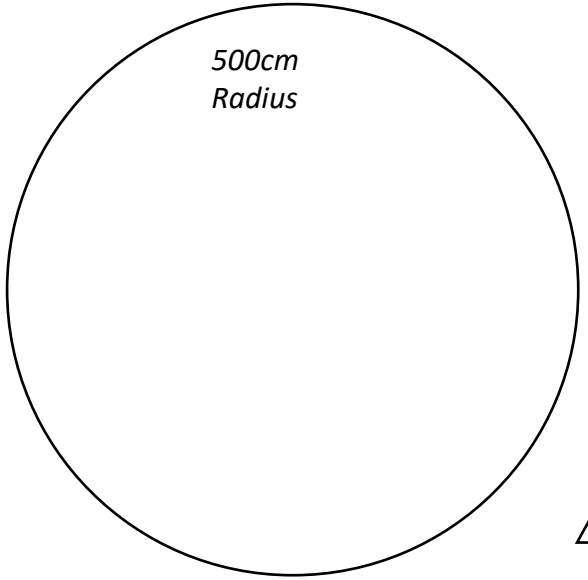


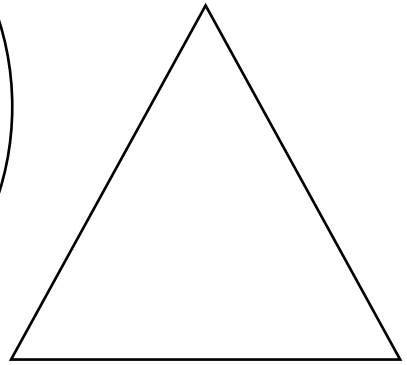


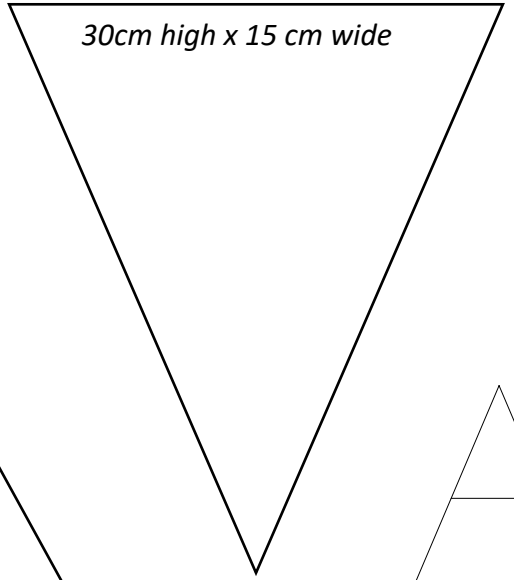


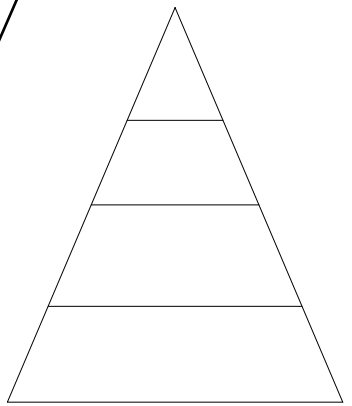
Numeracy 2: *Area*



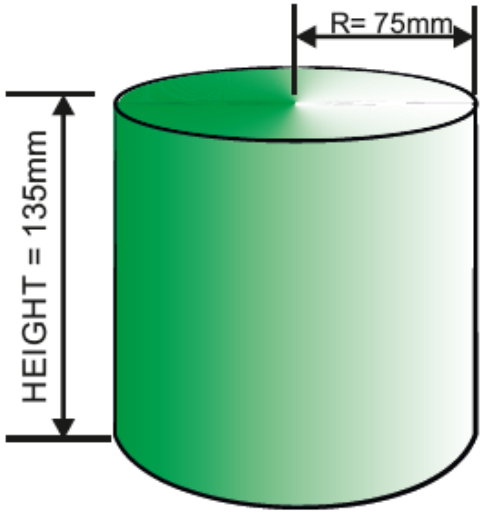


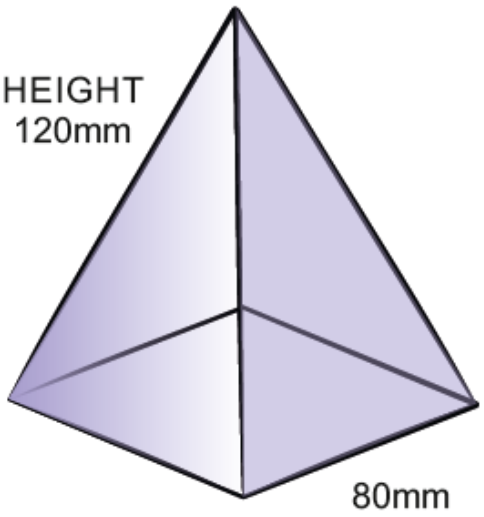


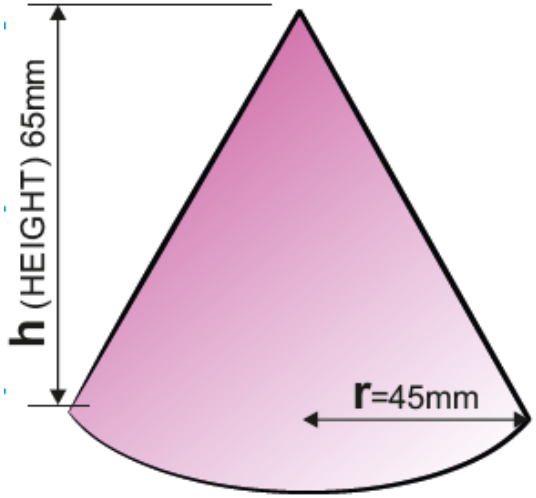


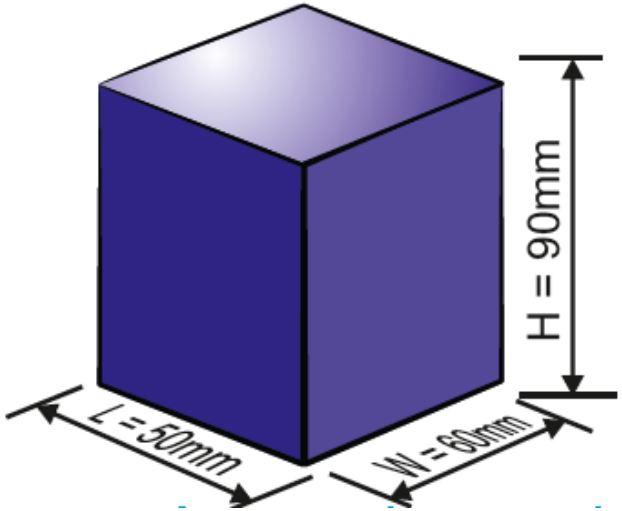


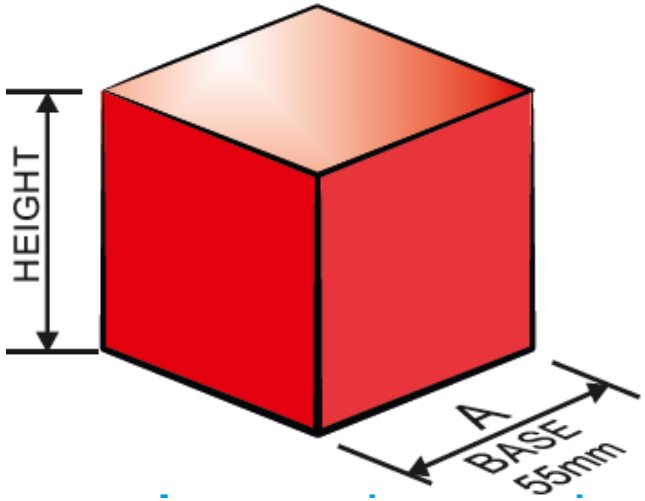
Calculate the volume *write the answer inside the shape*



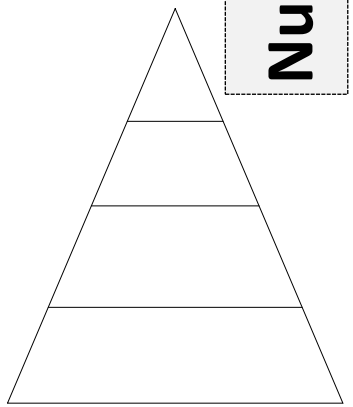






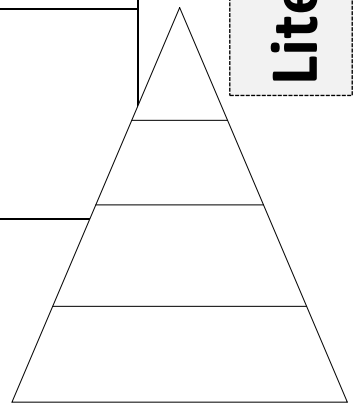


Numeracy 3: *Volume*



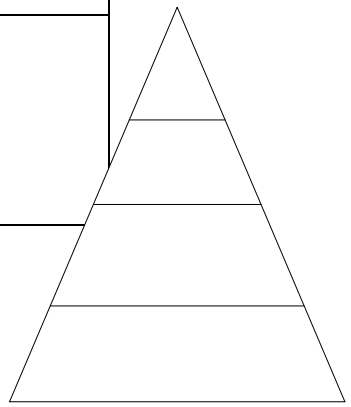
Keyword	Meaning	Use the word in a sentence
MATERIALS		
QUANTITIES		
VOLUME		
FUNCTIONS		
DIMENSIONS		

Literacy 1:



Keyword	Meaning	Use the word in a sentence
EXTRACT		
PERFORMANCE		
INTERPRET		
COMPARATIVE		
RESPONSES		

Literacy 2:



Keyword	Meaning	Use the word in a sentence
TRIANGULATION		
MECHANISMS		
VISUALISE		
REPRESENTATIONS		
LIFE CYCLE		

Literacy 3: