Let's Doodle.

What will you create?

Back to Playdough.

- Remember when you used to model with play dough?
- What object did you make the most?
- What was your favourite thing to do?

Starter: Let's Create.

You have **1 minute** to use the playdough to recreate your favourite model

Didn't have a favourite object to make? Don't worry – try to mould any object that comes to mind

Time's up!

Making Faces.

Choose one of the faces above.

Can you make a model of a face that portrays the same emotions?

NB: Use separate pieces of playdough for the facial features

Can you give your friend a set of instructions to modify the features and change the emotion?

Making 3D objects.

- When you model with playdough you are making 3D objects.

- However, playdough does have its limitations.

Can you think of a few?

Limitations of Playdough.

But it's FUN & EASY to use!

- Not as long lasting or robust as models made with other materials such as clay
- Can be quite difficult to create models with fine detail
- Mouldable – if you accidentally press it/drop it then the shape changes

Introducing the 3Doodler.

The world's first 3D Pen!

What can we make?

Anything you want!

Setting Up the 3Doodler.

Health & Safety first!

BURN HAZARD. The tip of the 3Doodler can become extremely hot. DO NOT touch the tip, the parts near the tip, or any melted plastic, or you may be severely burned! DO NOT allow the tip near or in contact with flammable materials. Inform others in the area that the unit is hot and should not be touched. Unplug and set the slide switch to OFF when not in use or before storing. Allow the tip to cool completely after use and before storing. The hot tip may damage painted surfaces, plastics and cloth if left in direct contact with these materials. Only use plastic filament designed for use with the 3Doodler. Do not pull plastic from the back of the 3Doodler (other than as directed).

Choosing the plastic.

There are two types of plastic. It's important to make sure you pick the right one.

Practice, Practice, Practice!

Pick a stencil & start practicing

Dodecahedron
PAGE 1 OF 1

3DS-BU-086

Initial Face
x1

2nd Face
x1

Leaf Necklace
PAGE 1 OF 1

Maple Leaf
PAGE 1 OF 1

Masterpieces take time...

Can you draw freehand?

Now try doodling freehand

Try one of the following suggestions:

1. **Write your name - Can you make a stand for your name?**

2. **Draw a 3D cube**

3. **Create a decorative 3D object**

Creating Solid Structures.

Using shapes to create solids.

Notice how the car was created by starting with a simple shape and building up by adding structure.

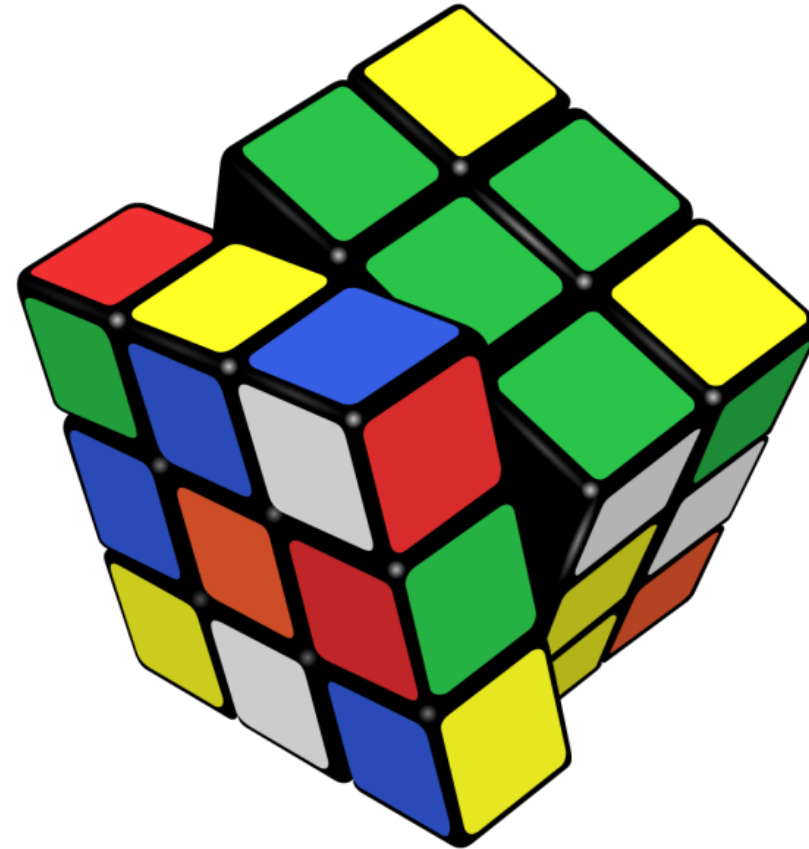The artist creating the car drew lots of smaller squares and triangles to build the car up.

All objects are made of shapes and can be broken down

What shapes make this object?

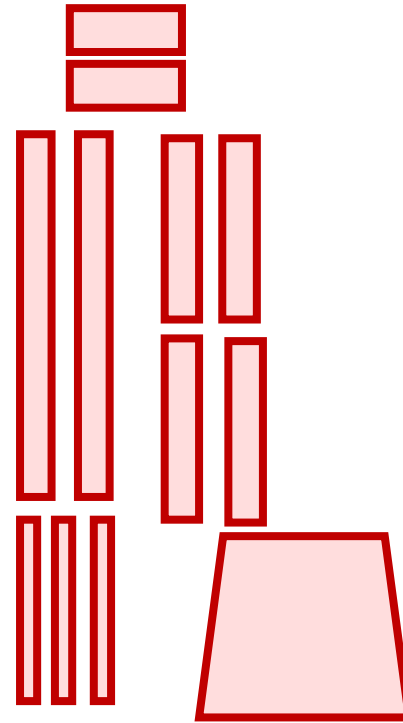## What shapes is a Rubik's Cube made up from?

Squares & Cubes!

What shapes make this object?

In your groups:

- Explore the object that you have been given

- Identify the different shapes that make up this object
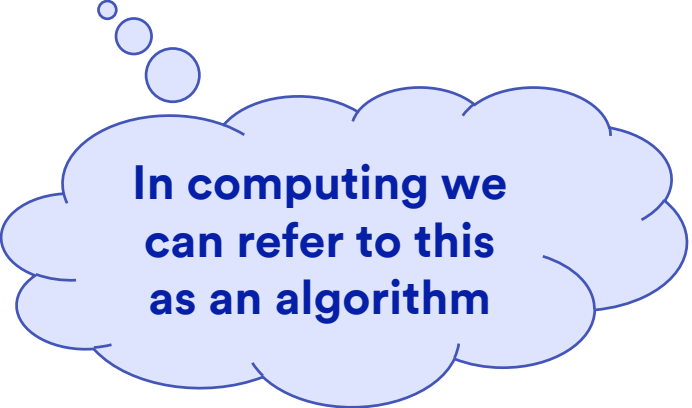
- Can you draw the different shapes?

For Example:

Stencils.

Now that you've drawn the shapes you can use these as stencils to recreate the object.

If accurately drawn your stencils will become a set of instructions telling someone else how to recreate your object/design.

In computing we can refer to this as an algorithm

More about stencils.

Explore some of the stencils that you've been given, or go to
http://the3doodler.com/project/

All stencils will have to give you certain information to enable you to create the object properly.

Can you work out what key information all good stencils will need to give you?

All good stencils...

Will tell you what shaped pieces you need to make

Tell you the size of each shape

Tell you the quantity of each shape

Show you how to put the individual pieces together

Tell you what the finished product should look like

Now your turn...

You are going to create your own object. In your groups you need to decide what this is going to be
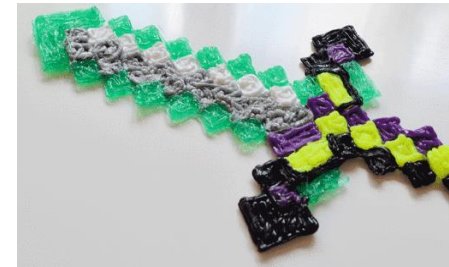
You could choose to:

Create jewellery

Create a toy e.g. catapult

Create a pencil or trinket box

Create a model

Now that you've made your choice...

Search the internet for images and/or videos of your object.

Identify the component shapes

Using specific measurements create your stencil

Is there a stencil for it already on the 3Doodler site? Perhaps you could adapt one that's already there.

Not sure, how this would work? Why not begin by constructing your object in playdough first.

Will your stencil work?

Swop your stencil with another group

Can you:

- See what the stencil makes
- Clearly see what shapes you need to create
- Clearly see how to put the different shapes together

Feedback your thoughts to the group

Make some final adjustments to the stencil

Create your object!

Now have fun and create!

If your object has multiple parts then you may want to assign different bits to different people within the group

Check you are following your stencil carefully

Assemble your object when you are finished.

How good was it?

Compare your object to your stencil

How good was your stencil?

Does your final piece look like what you had imagined?

Could you make this better? How?

What changes would you make to the stencil?

What "drawing" techniques did you use, what worked, what didn't?

Compare your work with another group
and have the same discussion

Showcase your work.

As a group, prepare the following:

Present your object to the class

Talk about:

- What you chose to create
- Why?
- Is your outcome as good as you'd hoped?
- What's the best thing about it?
- What could be improved?
- How did you work together as a group?