

Topic: **3D Design and Making. Natural Forms.**

I need to know: The difference between modelling a form and reduction methods of carving a form. How to add to and take away from the form.

Key Words	Definitions
Modelling	<i>Using plastic, soft clay like materials (malleable by touch and by instrument) add to and manipulate the body of material to make a form.</i>
Reduction	<i>Reduce the size and mass of the main body of material by cutting material away. With hard materials like stone this is often irreversible.</i>
Carving	<i>Reduce by cutting from the main body of material through the use of a chisel like instrument.</i>
Form	<i>In relation to art, form has two meanings: it can refer to the overall 3D form taken by the work - its physical nature; or within a work of art it can refer to the arrangement of elements or shapes that make up a work.</i>
Inside	<i>The inner surface or space of a 3D form.</i>
Outside	<i>The external surface or space of a 3D form.</i>
Positive / Negative	<i>Positive space refers to the main focus of a picture, while negative space refers to the background. When used creatively, positive and negative space together can tell a story using visual composition alone. The term negative space is something of a contradiction.</i>
Volume	<i>Volume is the quantity of three-dimensional space enclosed by a closed surface. For example, the space that a liquid occupies or is contained within a vase.</i>
Surface	<i>Surfaces can take on many textures and qualities including colour and tone. It is essentially the 'skin' of the object. Sculptors control light on surfaces.</i>
Orthographic Projection	<i>Orthographic projection is a means of representing three-dimensional objects in two dimensions. The object is depicted using parallel lines to project its outline on to a plane.</i>
Weight	<i>A body's relative mass, or the quantity of matter contained by it, giving rise to a downward gravitational force; the heaviness of a person or thing. This is a significant consideration in art as the engineered object / sculpture has to withstand these forces to exist and to be safe.</i>
Structure	<i>A form assembled from multiple parts, or elements giving rise to considerations of organisation, placement, and compositional interconnectedness.</i>
Construction	<i>An art work that is actually assembled or built on the premises where it is to be shown. Many constructions are meant to be temporary and are disassembled after the exhibition is over.</i>
Casting	<i>Casting involves making a mould and then pouring a liquid material into the mould. A cast is a form made by this process. A mould can be cast more than once, allowing artists to create editions of an artwork.</i>
Armature	<i>An armature can be made from any material that is damp-resistant and rigid enough to hold such plastic materials as moist clay and plaster, which are applied to and shaped around it.</i>
Maquette	<i>A maquette is a model for a larger piece of sculpture, created in order to visualise how it might look and to work out approaches and materials for how it might be made.</i>



Soft 'plastic' clay, moved and added to, to create a 3D form.



Peter Randle Page drawing and preparing to carve stone away. This process is most often irreversible.



Student work.

Arrow Tasks: Compare and reflect upon work by Antony Gormley (Casting), Michelangelo (Carving) and Ron Mueck (Modelling). Research each artist and consider how each artist might visualise what they wish to make and how the process of shaping their sculptures present different challenges.

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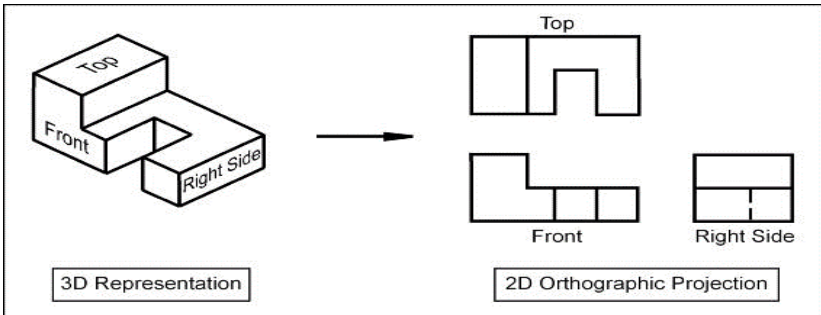
Barbara Hepworth carving, reducing wood sculpture.



Positive and negative space. Which do you see first. Does the inside or the outside define the shape / form?



Anish Kapoor's sculpture has volume. In this work he has cut a deep hole in a gallery floor. It is deep enough for you to fall into and not be able to get out. Painted with very dark pigment, it doesn't look like a hole; instead it looks like a flat circle of black cloth on the floor. It is so deceiving; people are feeling the volume!



Orthographic Projection is used by architects, designers and sculptors to plan and visualise 3D forms.



Michelangelo's 'David' carved from one block of stone.



Antony Gormley (Casting)



Ron Mueck (Clay modelling)

Links to further resources: <https://www.tate.org.uk/art/art-terms>

Thinking, questioning and communicating your visual intelligence using practical skills in ART. You will be able to organise your thoughts, understanding and expertise in **ART** this term under the following headings.

Skills: Manual dexterity, cutting, carving and modelling a variety of materials.

Contexts: History, reasoning, ideas, recognising genre/style, culture, connections, representations of forms and space in controlling light/shade.

Rules: Visual analysis, measuring, proportion, translation of 2D into 3D, experimentation, exploration of shape and form, light and shade, adaptability ...

Audience: Indoor vs outdoor, installation, community based, site specific, interaction, personal, commercial, ethics, morals, age, empathy, critique...

Resolution: Selection of appropriate 3D media, placement, first hand and secondary sources, scale, representational vs abstraction, decisions making, style vs technique...

Communication: Represent, truth, analyse, evaluate, talk, show, tactile...

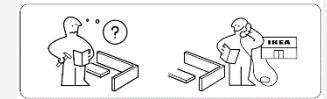
Legacy: Material, pigment, permanence, honesty, heritage, culture, accuracy, pollution, impact of touch...

Throughout the year we will be asking you to articulate (to say, explain and use), a number of **Personal, Learning and Thinking skills** to help you develop your knowledge and understanding. This term we will be asking you to reflect upon your **Creative Learning**: Generating ideas, explore, ask questions, extend thinking, question assumptions, experiment and adapt.

Further thinking (why does this matter?):



On a functional level, it is important to us that we can visualise and interpret drawings in order to build the things we need to survive.



On a more complex, subtle level, understand that **"Thinking is form"** and therefore **"Drawing is embodied thinking"**. Our ability to communicate is determined as much by our ability to make and interpret images as it is defined by our ability to use words and syntax. They are intricately linked. **"Architecture is by definition is a very collaborative process"** Joshua Prince-Ramus