**OMEGA TERM E-Note CLASS; J S S 2**

**SUBJECT; CULTURAL AND CREATIVE ARTS**

**SCHEME OF WORK**

**WEEK 1.**  **PATTERNS.**

**‘’ 2. KEY – SIGNATURE.**

**‘’ 3. DANCE AS A CAREER.**

**‘’ 4. BEAD WORKS.**

**‘’ 5. TIME SIGNATURE**

**‘’ 6. CROCHETING.**

**‘’ 7. PAPER MACHE.**

**‘’ 8. INTERVALS.**

**‘’ 9. TIE – DYE.**

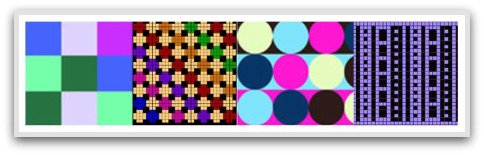
**‘’ 10. SINGING AND RECORDER PLAYING.**

**‘’11& 12. REVITION AND EXAMINATION.**

**CLASS; J S S 2 WEEK 1** **TOPIC; PATTERNS.**

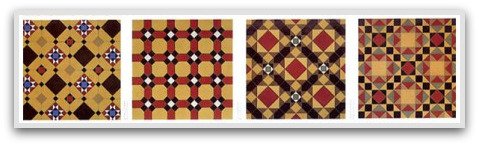
Basic shapes are also used in many modern loose and fixed carpet designs. The very basic shapes are so versatile people the world over use them in designs to create great modern works of art for fashion, decorating our homes and off course we use them in our very own eraser and potato print projects in EASY CRAFTS FOR KIDS! Below are some African prints.

The graphics above show how these basic shapes can be applied to create amazing geometric sequences and patterns. They can be used to print on paper, clothing, artwork, walls, tiles, floors and just about any other flat surface you can think of. Below are some more examples of geometric figures used to create beautiful geometric sequences: Note the geometric distribution of the shapes to create interesting designs.



African tradition is rich with these incredible geometric prints. Houses, fabrics, blankets, pots and clothing are often decorated with these striking shapes and patterns.



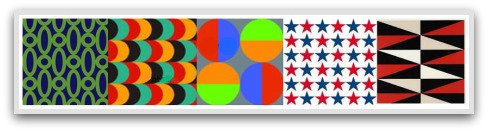


The iconic Nelson Mandela former freedom fighter and President of South Africa made silk batik shirts designed with these beautiful motifs on a worldwide tendency and fashion statement. He broke the tradition of the very formal suite worn as a Statesman with beautifully designed silk shirts with African prints and motifs on. His shirts are now known throughout the world as "Madiba Shirts" or "Mandela Shirts".

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These designs often focus on a single square or circle. The design is then built up with more squares and circles to create these exquisite patterns and sequences which are then used as a main design or simply as a border on plain silk, fabric, walls, pots, cups, dishes and plates.



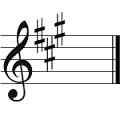


Very basic shapes can be positioned to create world class geometric art. The black, white & red example above - far right - is a work of art by Richard Killeen of New Zealand. Below are more great geometric prints and sequences.

**CLASS; J S S 2 WEEK 2**  **TOPIC; KEY – SIGNATURE.**

Key signature is the several combinations of sharps or flats after the clef at the beginning of each stave, indicating the key of a composition.

In musical notation, a key signature is a set of sharp or flat symbols placed together on the staff. Key signature are generally written immediately after the clef at the beginning of a line of musical notation, although they can appear in other parts of a score, notably after a double bar line.

 In [musical notation](https://en.wikipedia.org/wiki/Musical_notation), a key signature is a set of [sharp](https://en.wikipedia.org/wiki/Sharp_(music)) or [flat](https://en.wikipedia.org/wiki/Flat_(music)) symbols placed together on the [staff](https://en.wikipedia.org/wiki/Staff_(music)). Key signatures are generally written immediately after the [clef](https://en.wikipedia.org/wiki/Clef) at the beginning of a line of musical notation, although they can appear in other parts of a [score](https://en.wikipedia.org/wiki/Sheet_music), notably after a [double bar line](https://en.wikipedia.org/wiki/Bar_(music)).

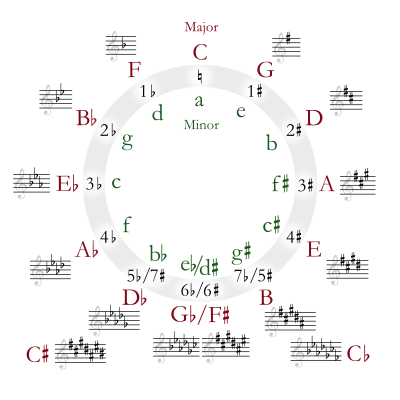
A key signature designates [notes](https://en.wikipedia.org/wiki/Note_(music)) that are to be played higher or lower than the corresponding [natural](https://en.wikipedia.org/wiki/Natural_sign) notes and applies through to the end of the piece or up to the next key signature. A sharp symbol on a line or space in the key signature raises the notes on that line or space one [semitone](https://en.wikipedia.org/wiki/Semitone) above the natural, and a flat lowers such notes one semitone. Further, a symbol in the key signature affects all the notes of one letter: for instance, a sharp on the top line of the [treble staff](https://en.wikipedia.org/wiki/Clef#Treble_clef) applies to Fs not only on that line, but also to Fs in the bottom space of the staff, and to any other Fs. This convention was not universal until the late Baroque/early Classical period, however; music published in the 1720s and 1730s, for example, uses key signatures showing sharps or flats on both octaves for notes which fall within the staff.

An [accidental](https://en.wikipedia.org/wiki/Accidental_(music)) is an exception to the key signature, applying only in the measure in which it appears.

Although a key signature may be written using any combination of sharp and flat symbols, about a dozen [diatonic key signatures](https://en.wikipedia.org/wiki/Circle_of_fifths) are by far the most common, and their use is assumed in much of this article. A piece scored using a single diatonic key signature and no accidentals contains notes of at most seven of the twelve [pitch classes](https://en.wikipedia.org/wiki/Pitch_class), which seven being determined by the particular key signature.

Each [major](https://en.wikipedia.org/wiki/Major_scale) and [minor](https://en.wikipedia.org/wiki/Minor_scale) [key](https://en.wikipedia.org/wiki/Key_(music)) has an associated key signature that sharpens or flattens the notes which are used in its scale. However, it is not uncommon for a piece to be written with a key signature that does not match its key, for example, in some Baroque pieces, or in transcriptions of traditional modal folk tunes.

Later on, this use of a key signature that is theoretically incorrect for a piece as a whole or a self-contained section of a piece became less common (in contrast to brief passages within a piece, which, as they modulate from key to key often temporarily disagree with the key signature); but it can be found at least as late as one of Beethoven's very late piano sonatas. For example, in his Sonata no. 31 in A♭ major, Op. 110, the first appearance of the Arioso section in the final movement is notated throughout in 6 flats; but it both begins and ends in A♭ minor and has a significant modulation to C♭ major, and both these keys theoretically require 7 flats in their key signature. (The second appearance later in the movement of this same section, a semitone lower, in G minor, uses the correct key signature of two flats.)



**CLEF SIGNATURE.**

Clef signature is related to stave and pitch notes accurately, a sign called a clef is used to fix the position of a certain letter names on it. Tow clefs are commonly used, one of the high notes, which is G or treble clef while the other if F or Bass clef. These clefs are signs written on the staff at the beginning of a piece of music to show the types of stave or staff.

**SCALE**.

Scale is an alphabetical arrangement of sounds ascending and descending order. It consist of eight notes.

Examples; from C to C = 8 notes.

## **Major scale structure**

Except for C major, key signatures appear in two varieties, "sharp key signatures" ("sharp keys") and "flat key signatures" ("flat keys"), so called because they contain only one or other.

### Scales with sharp key signatures

Sharp key signatures consist of a number of sharps between one and seven, applied in this order: F C G D A E B. A mnemonic device often used to remember this is "Father Charles Goes down and Ends Battle. The key note or [tonic](https://en.wikipedia.org/wiki/Tonic_(music)) of a piece in a major key is immediately above the last sharp in the signature.[[7]](https://en.wikipedia.org/wiki/Key_signature#cite_note-Kennedy-7) For example, one sharp (F♯) in the key signature of a piece in a major key indicates the key of G major, the next note above F♯. (Six sharps, the last one being E♯ (an enharmonic spelling of F♮) indicate the key of F♯ major, since F has already been sharped in the key signature.)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Major key** | **Number of sharps** | **Sharp notes** | **minor key** | **Enharmonic Equivalent** |
| [C major](https://en.wikipedia.org/wiki/C_major) | 0 |  | [A minor](https://en.wikipedia.org/wiki/A_minor) | None |
| [G major](https://en.wikipedia.org/wiki/G_major) | 1 | F♯ | [E minor](https://en.wikipedia.org/wiki/E_minor) | None |
| [D major](https://en.wikipedia.org/wiki/D_major) | 2 | F♯, C♯ | [B minor](https://en.wikipedia.org/wiki/B_minor) | None |
| [A major](https://en.wikipedia.org/wiki/A_major) | 3 | F♯, C♯, G♯ | [F♯ minor](https://en.wikipedia.org/wiki/F-sharp_minor) | None |
| [E major](https://en.wikipedia.org/wiki/E_major) | 4 | F♯, C♯, G♯, D♯ | [C♯ minor](https://en.wikipedia.org/wiki/C-sharp_minor) | None |
| [B major](https://en.wikipedia.org/wiki/B_major) | 5 | F♯, C♯, G♯, D♯, A♯ | [G♯ minor](https://en.wikipedia.org/wiki/G-sharp_minor) | [C♭ major](https://en.wikipedia.org/wiki/C-flat_major)/[A♭ minor](https://en.wikipedia.org/wiki/A-flat_minor) |
| [F♯ major](https://en.wikipedia.org/wiki/F-sharp_major) | 6 | F♯, C♯, G♯, D♯, A♯, E♯ | [D♯ minor](https://en.wikipedia.org/wiki/D-sharp_minor) | [G♭ major](https://en.wikipedia.org/wiki/G-flat_major)/[E♭ minor](https://en.wikipedia.org/wiki/E-flat_minor) |
| [C♯ major](https://en.wikipedia.org/wiki/C-sharp_major) | 7 | F♯, C♯, G♯, D♯, A♯, E♯, B♯ | [A♯ minor](https://en.wikipedia.org/wiki/A-sharp_minor) | [D♭ major](https://en.wikipedia.org/wiki/D-flat_major)/[B♭ minor](https://en.wikipedia.org/wiki/B-flat_minor) |

This table shows that each scale starting on the [fifth](https://en.wikipedia.org/wiki/Perfect_fifth) [scale degree](https://en.wikipedia.org/wiki/Scale_degree) of the previous scale has one new sharp, added in the order given above.

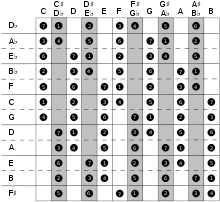
### **Scales with flat key signatures**

"Flat key signatures" consist of one to seven flats, applied as: B E A D G C F (same as the order of sharps, but reversed.) The mnemonic device is then reversed for use in the flat keys: "Battle Ends and down Goes Charles' Father". The major scale with one flat is F major. In all other "flat major scales", the tonic or key note of a piece in a major key is four notes below the last flat, which is the same as the second-to-last flat in the signature. In the major key with four flats (B♭ E♭ A♭ D♭), for example, the penultimate flat is A♭, indicating a key of A♭ major.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Major key** | **Number of flats** | **Flat notes** | **minor key** | **Enharmonic Equivalent** |
| [C major](https://en.wikipedia.org/wiki/C_major) | 0 |  | [A minor](https://en.wikipedia.org/wiki/A_minor) | None |
| [F major](https://en.wikipedia.org/wiki/F_major) | 1 | B♭ | [D minor](https://en.wikipedia.org/wiki/D_minor) | None |
| [B♭ major](https://en.wikipedia.org/wiki/B-flat_major) | 2 | B♭, E♭ | [G minor](https://en.wikipedia.org/wiki/G_minor) | None |
| [E♭ major](https://en.wikipedia.org/wiki/E-flat_major) | 3 | B♭, E♭, A♭ | [C minor](https://en.wikipedia.org/wiki/C_minor) | None |
| [A♭ major](https://en.wikipedia.org/wiki/A-flat_major) | 4 | B♭, E♭, A♭, D♭ | [F minor](https://en.wikipedia.org/wiki/F_minor) | None |
| [D♭ major](https://en.wikipedia.org/wiki/D-flat_major) | 5 | B♭, E♭, A♭, D♭, G♭ | [B♭ minor](https://en.wikipedia.org/wiki/B-flat_minor) | [C♯ major](https://en.wikipedia.org/wiki/C-sharp_major)/[A♯ minor](https://en.wikipedia.org/wiki/A-sharp_minor) |
| [G♭ major](https://en.wikipedia.org/wiki/G-flat_major) | 6 | B♭, E♭, A♭, D♭, G♭, C♭ | [E♭ minor](https://en.wikipedia.org/wiki/E-flat_minor) | [F♯ major](https://en.wikipedia.org/wiki/F-sharp_major)/[D♯ minor](https://en.wikipedia.org/wiki/D-sharp_minor) |
| [C♭ major](https://en.wikipedia.org/wiki/C-flat_major) | 7 | B♭, E♭, A♭, D♭, G♭, C♭, F♭ | [A♭ minor](https://en.wikipedia.org/wiki/A-flat_minor) | [B major](https://en.wikipedia.org/wiki/B_major)/[G♯ minor](https://en.wikipedia.org/wiki/G-sharp_minor) |

In this case each new scale starts a fifth *below* (or a [fourth](https://en.wikipedia.org/wiki/Perfect_fourth) above) the previous one.

# **Major scale**

[](https://en.wikipedia.org/wiki/File:MajorScales.svg)

**Major scales**

The **major scale** or [**Ionian**](https://en.wikipedia.org/wiki/Ionian_mode)**scale** is one of the most commonly used [musical scales](https://en.wikipedia.org/wiki/Scale_(music)), especially in [Western music](https://en.wikipedia.org/wiki/Western_culture#Music). It is one of the [diatonic scales](https://en.wikipedia.org/wiki/Diatonic_scale). Like many musical scales it is made up of seven [notes](https://en.wikipedia.org/wiki/Musical_note): the eighth duplicates the first at double its frequency so that it is called a higher [octave](https://en.wikipedia.org/wiki/Octave) of the same note (from Latin "octavos", the eighth).

The simplest major scale to [write](https://en.wikipedia.org/wiki/Musical_notation#Modern_musical_notation) is [C major](https://en.wikipedia.org/wiki/C_major), the only major scale not to require [sharps](https://en.wikipedia.org/wiki/Sharp_(music)) or [flats](https://en.wikipedia.org/wiki/Flat_(music)):

C-D-E-F-G-A-B-C ([About this sound](https://en.wikipedia.org/wiki/File:C_major_scale.ogg) [C major scale](https://upload.wikimedia.org/wikipedia/commons/5/59/C_major_scale.ogg) (help info)

The major scale had a central importance in European music, particularly in the [common practice period](https://en.wikipedia.org/wiki/Common_practice_period) and in [popular music](https://en.wikipedia.org/wiki/Popular_music), owing to the large number of [chords](https://en.wikipedia.org/wiki/Chord_(music)) that can be formed from it.[[*citation needed*](https://en.wikipedia.org/wiki/Wikipedia:Citation_needed)] In [Hindustani classical music](https://en.wikipedia.org/wiki/Hindustani_classical_music) it is known as [*Bilaval*](https://en.wikipedia.org/wiki/Bilaval).

There are 15 major scales in music, these major scales have their own relative minor scales.

1. The sixth degree of the major scales is the first degree of the minor.
2. The sub-mediate of the major of the major is the tonic off the minor.
3. The minor scales uses the same key signature with its major scale.

## **Structure**

[https://upload.wikimedia.org/wikipedia/commons/thumb/c/ce/C_major_scale.png/220px-C_major_scale.png](https://en.wikipedia.org/wiki/File:C_major_scale.png)

The pattern of whole and half steps characteristic of a major scale

A major scale is a [diatonic scale](https://en.wikipedia.org/wiki/Diatonic_scale). The sequence of [intervals](https://en.wikipedia.org/wiki/Interval_(music)) between the notes of a major scale is:

* whole, whole, half, whole, whole, whole, half

where "whole" stands for a [whole tone](https://en.wikipedia.org/wiki/Major_second) (a red u-shaped curve in the figure), and "half" stands for a [semitone](https://en.wikipedia.org/wiki/Semitone) (a red broken line in the figure).

A major scale may be seen as two identical [tetra chords](https://en.wikipedia.org/wiki/Tetrachord) separated by a whole tone. Each tetra chord consists of two whole tones followed by a [semitone](https://en.wikipedia.org/wiki/Semitone):

* Whole, whole, half.

### Scale degrees

[The C major scale.](https://en.wikipedia.org/wiki/File:C_Major_scale_(up_and_down).svg)

MAJOR SCALE RELATIVE MINOR SCALES

C major A minor.

G major – 1 shape E minor – 1 shape.

D major – 2 shapes B minor - 2 shapes.

A major – 3 shapes F# minor – 3 shapes.

E major – 4 shapes C# minor – 4 shapes.

B major – 5 shapes G# minor – 5 shapes.

F# major – 6 shapes D# minor – 6 shapes.

C# major – 7 shapes A# minor – 7 shapes.

**FLAT KEYS**

**MAJOR SCALE RELATIVE MINOR SCALES**

F major- 1 flat D minor – 1 flat.

Bb major – 2 flat G minor – 2 flat

Eb major - 3flat C minor - 3 flat.

Ab major – 4 flat F minor – 4 flat.

Db major – 5 flat B minor – 5 flat.

Gb major – 6 flat. E minor – 6 flat.

Cb major – 7 flat. Ab minor – 7 flat.

**CLASS; J S S 2 WEEK 3** **TOPIC; DANCE AS A CAREER.**

Dance is any body movement home or space for express human emotion in reaction to musical performance anywhere. It is an organized movement of the body to musical rhythm. It could be for fun to narrate a story, to inform or entertain.

Contemporary dance draws on both classical ballet and modern dance, whereas postmodern dance was a direct and opposite response to modern dance. Merce Cunningham is considered to be the first choreographer to "develop an independent attitude towards modern dance" and defy the ideas that were established by it.[4][5] In 1944 Cunningham accompanied his dance with music by John Cage, who observed that Cunningham's dance "no longer relies on linear elements (...) nor does it rely on a movement towards and away from climax. As in abstract painting, it is assumed that an element (a movement, a sound, a change of light) is in and of itself expressive; what it communicates is in large part determined by the observer themselves." Cunningham formed the Merce Cunningham Dance Company in 1953 and went on to create more than one hundred and fifty works for the company, many of which have been performed internationally by ballet and modern dance companies.

# **DANCER**

#### **Job Description**

Dancers use movement, gesture and body language to portray a character, story, situation or abstract concept to an audience, usually to the accompaniment of music. This normally involves interpreting the work of a choreographer, although it may sometimes require improvisation.

Dancers work in a variety of genres including classical ballet, modern stage dance, contemporary dance, street dance and African or Asian dance. They may perform to a live audience or take part in a recorded performance for television, film or music video.

Many dancers follow portfolio careers, combining performance with teaching, choreography or administrative work in a dance company.

Work activities will differ from dancer to dancer, depending on the contract.

Self-promotion is also a significant feature of the work. This can include sending out your CV and/or photographs/footage, delivering presentations, running workshops or attending auditions and meetings.

#### **Job Duties/Responsibilities**

* discussing and interpreting choreography;
* learning and using other skills such as singing and acting - many roles, for example in musical theatre, require a combination of performance skills;
* working in dance development and promotion, encouraging and enabling people, especially children, to become involved in dance and to understand and appreciate it;
* running workshops in the community, for example with groups of disabled people;
* undertaking administrative, promotional or stage management work, particularly in a small company or if setting up your own company;
* Liaising with arts and dance organizations, theatres and other venues regarding funding and contracts.
* looking after costumes and equipment;
* preparing for and attending auditions and casting sessions;
* preparing for performances, by rehearsing and exercising;
* performing to live audiences and for television, film and music video productions;
* studying and creating choreography;
* taking care of the health and safety of others, which requires knowledge and observation of physiology and anatomy, as well as safe use of premises and equipment;
* teaching dance, either privately or in the public sector;

## **Choreographer**

There is usually a choreographer who makes the creative decisions. He/she chooses whether the piece is an abstract or a [narrative](https://en.wikipedia.org/wiki/Narrative) one. Dancers are selected based on their skill and training. The choreography is determined based on its relation to the music or sounds that is danced to. The role of music in contemporary dance is different from in other genres because it can serve as a backdrop to the piece. The choreographer has control over the costumes and their aesthetic value for the overall composition of the performance and also in regards to how they influence dancers’ movements.

## **Dance technique**



Le Sacre du Tempo

Dance techniques and movement philosophies employed in contemporary dance may include [Contemporary ballet](https://en.wikipedia.org/wiki/Contemporary_ballet), [Dance improvisation](https://en.wikipedia.org/wiki/Dance_improvisation), [Modern dance](https://en.wikipedia.org/wiki/Modern_dance) styles from [United States](https://en.wikipedia.org/wiki/United_States) such as [Graham technique](https://en.wikipedia.org/wiki/Graham_technique), [Humphrey-Weidman](https://en.wikipedia.org/wiki/Humphrey-Weidman) technique and [Horton](https://en.wikipedia.org/wiki/Lester_Horton) technique, [Modern dance](https://en.wikipedia.org/wiki/Modern_dance) of [Europe](https://en.wikipedia.org/wiki/Europe) [Bartenieff Fundamentals](https://en.wikipedia.org/wiki/Bartenieff_Fundamentals) and the dance technique of [Isadora Duncan](https://en.wikipedia.org/wiki/Isadora_Duncan).

Contemporary dancers train using contemporary dance techniques as well as non-dance related practices such as [Pilates](https://en.wikipedia.org/wiki/Pilates), [Yoga](https://en.wikipedia.org/wiki/Yoga), the acting practice of [Corporeal mime](https://en.wikipedia.org/wiki/Corporeal_mime) - [Étienne Decroux](https://en.wikipedia.org/wiki/%C3%89tienne_Decroux) technique and somatic practices such as [Alexander technique](https://en.wikipedia.org/wiki/Alexander_technique),[Feldenkrais Method](https://en.wikipedia.org/wiki/Feldenkrais_Method), Sullivan Technique and [Franklin-Methode](https://en.wikipedia.org/wiki/Eric_Franklin), American contemporary techniques such as [José Limón](https://en.wikipedia.org/wiki/Jos%C3%A9_Lim%C3%B3n) technique and [Hawkins](https://en.wikipedia.org/wiki/Erick_Hawkins) technique and [Postmodern dance](https://en.wikipedia.org/wiki/Postmodern_dance) techniques such as [Contact improvisation](https://en.wikipedia.org/wiki/Contact_improvisation) and [Cunningham](https://en.wikipedia.org/wiki/Merce_Cunningham) technique, and [Release technique](https://en.wikipedia.org/wiki/Release_technique).

**CLASS; J S S 2 WEEK 4** **TOPIC; BEAD WORKS.**

# **Bead**

A **bead** is a small, decorative object that is formed in a variety of shapes and sizes of a material such as stone, bone, shell, glass, plastic, wood or pearl and that a small hole is drilled for [threading](https://en.wikipedia.org/wiki/Yarn) or stringing. Beads range in size from under 1 millimeter (0.039 in) to over 1 centimeter (0.39 in) in diameter. A pair of beads made from [*Nassau’s*](https://en.wikipedia.org/wiki/Nassarius) sea snail shells, approximately 100,000 years old, are thought to be the earliest known examples of jewelry ; jewelry. [Beadwork](https://en.wikipedia.org/wiki/Beadwork) is the art or craft of making things with beads. Beads can be woven together with specialized [thread](https://en.wikipedia.org/wiki/Yarn), strung onto thread or soft, flexible [wire](https://en.wikipedia.org/wiki/Wire), or adhered to a surface (e.g. [fabric](https://en.wikipedia.org/wiki/Cloth), [clay](https://en.wikipedia.org/wiki/Clay)).



## **Types of beads**

[](https://en.wikipedia.org/wiki/File:Cloisonnebeads.jpg)

Cloisonné beads

Beads may be divided into several types of overlapping categories based on different criteria such as the materials from which they are made, the process used in their manufacturing, the place or period of origin, the patterns on their surface, or their general shape. In some cases, such as [millefiori](https://en.wikipedia.org/wiki/Millefiori) and [cloisonné](https://en.wikipedia.org/wiki/Cloisonn%C3%A9) beads, multiple categories may overlap in an interdependent fashion. They are good for craft making

## **Components**

Beads can be made of many different materials. The earliest beads were made of a variety of natural materials which, after they were gathered, could be readily drilled and shaped. As humans became capable of obtaining and working with more difficult materials, those materials were added to the range of available substances. More recently, synthetic materials were added.

In modern manufacturing, the most common bead materials are wood, [plastic](https://en.wikipedia.org/wiki/Plastic), [glass](https://en.wikipedia.org/wiki/Glass), [metal](https://en.wikipedia.org/wiki/Metal), and [stone](https://en.wikipedia.org/wiki/Rock_(geology)).

### **Natural materials**

Beads are still made from many naturally occurring materials, both organic (i.e., of [animal](https://en.wikipedia.org/wiki/Animal)- or [plant](https://en.wikipedia.org/wiki/Plant)-based origin) and inorganic (purely [mineral](https://en.wikipedia.org/wiki/Mineral) origin). However, some of these materials now routinely undergo some extra processing beyond mere shaping and drilling such as color enhancement via [dyes](https://en.wikipedia.org/wiki/Dyes) or irradiation.

The natural organics include [bone](https://en.wikipedia.org/wiki/Bone), [coral](https://en.wikipedia.org/wiki/Coral_(precious)), [horn](https://en.wikipedia.org/wiki/Horn_(anatomy)), [ivory](https://en.wikipedia.org/wiki/Ivory), [seeds](https://en.wikipedia.org/wiki/Seed) (such as [tagua](https://en.wikipedia.org/wiki/Tagua) nuts), [animal shell](https://en.wikipedia.org/wiki/Animal_shell), and [wood](https://en.wikipedia.org/wiki/Wood). For most of human history [pearls](https://en.wikipedia.org/wiki/Pearl) were the ultimate precious beads of natural origin because of their rarity; the modern [pearl-culturing process](https://en.wikipedia.org/wiki/Cultured_pearl) has made them far more common. [Amber](https://en.wikipedia.org/wiki/Amber) and [jet](https://en.wikipedia.org/wiki/Jet_(lignite)) are also of natural organic origin although both are the result of partial [fossilization](https://en.wikipedia.org/wiki/Fossil).

# **Beadwork**

[](https://en.wikipedia.org/wiki/File:Beadwork_on_Container_(2131611625).jpg)

[Ethiopian](https://en.wikipedia.org/wiki/Ethiopia) beadwork on basket, from the ethnographic collection of the National Museum, [Addis Ababa](https://en.wikipedia.org/wiki/Addis_Ababa)

**Beadwork** is the art or craft of attaching [beads](https://en.wikipedia.org/wiki/Bead) to one another by stringing them with a [sewing needle](https://en.wikipedia.org/wiki/Sewing_needle) or beading needle and thread or thin wire, or sewing them to cloth.[[1]](https://en.wikipedia.org/wiki/Beadwork#cite_note-dict_beads-1) Beads come in a variety of materials, shapes and sizes. Beads are used to create [jewelry](https://en.wikipedia.org/wiki/Jewellery) or other articles of personal adornment; they are also used in wall hangings and [sculpture](https://en.wikipedia.org/wiki/Sculpture) and many other artworks.

Beadwork techniques are broadly divided into [loom](https://en.wikipedia.org/wiki/Bead_weaving) and [off-loom](https://en.wikipedia.org/wiki/Bead_weaving) weaving, [stringing](https://en.wikipedia.org/wiki/Bead_stringing), [bead embroidery](https://en.wikipedia.org/wiki/Bead_embroidery), [bead crochet](https://en.wikipedia.org/wiki/Bead_crochet), and [bead knitting](https://en.wikipedia.org/wiki/Bead_knitting).

Beads, made of durable materials, survive in the archaeological record appearing with the very advent of modern man, Homo sapiens.

Beads are used for [religious](https://en.wikipedia.org/wiki/Religion) purposes, as good luck [talismans](https://en.wikipedia.org/wiki/Amulet), for barter, and as curative agents.



MRAW Bellyband Tri Wing Ring from Contemporary Geometric Beadwork by Kate McKinnon

## **Modern Beading**

Modern beadwork is often used as a creative [hobby](https://en.wikipedia.org/wiki/Hobby) to create [jewelry](https://en.wikipedia.org/wiki/Jewelry), [handbags](https://en.wikipedia.org/wiki/Handbag), coasters, and dozens of other crafts. Beads are available in many different designs, sizes, colors, shapes, and materials, allowing much variation among bead artisans and projects. Simple projects can be created in less than an hour by novice beaders, while complex beadwork may take weeks of meticulous work with specialized tools and equipment. A lot of free patterns and tutorials can be found in Internet.

## **Ancient Beading**

[Faience](https://en.wikipedia.org/wiki/Egyptian_faience) is a mixture of powdered clays and lime, soda and silica sand. Mix this with a little water to make a paste and molded around a small stick or bit of straw. Now it is ready to be fired into a bead. As the bead heats up the soda sand and lime melt into glass that incorporates and covers the clay. The result is a hard bead covered in bluish glass.

This process was probably discovered first in Mesopotamia and then imported to Egypt. But, it was the Egyptians who made it their own art form. Since before the 1st dynasty of Name (3100 B.C.) to the last dynasty of the Polonies (33 B.C.) and to the present day, faience beads have been made in the same way.

These beads predate glass beads and were probably a forerunner of glass making. If you are a little short of clay and have a little extra lime and the fire is hotter than usual, the mixture will become glass. In fact some early tubular faience beads are clayish at one end and pure glass at the other end. Apparently the beads weren't fired evenly.

The uneven beads were noticed early on, this led to experimentation, slowly at first. It took a long time for new ideas to be accepted in a conservative, agricultural society. One of the first variations to take hold was to color the faience beads by adding metallic salts. By the beginning of the eighteenth dynasty (1850 B.C.), faience making and glass making had become two separate crafts.

Why were faience beads so common? They were cheaper and less labor-intensive to make than stone beads. Aside from personal use and daily wear they were used to create beaded netting to cover mummies. Most of the archaeological specimens come from

Burials.

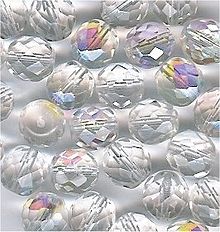
As early as the Old Kingdom (circa 2670–2195 B.C.), Egyptian artisans fashioned images of gods, kings, and mortals wearing broad collars made of molded tubular and teardrop beads. These beaded collars may have been derived from floral prototypes. In antiquity the collar was called a *wesekh*, literally "the broad one."

In the Americas, the Cherokee used bead work to tell stories. They told them by the patterns in the beads. They used dried berries, gray Indian corn, teeth, bones, claws, or sometimes sea shells when they traded with coastal tribes.

## **MANUFACTURING**

Modern [mass-produced](https://en.wikipedia.org/wiki/Mass_production) beads are generally shaped by [carving](https://en.wikipedia.org/wiki/Carving) or [casting](https://en.wikipedia.org/wiki/Casting), depending on the material and desired effect. In some cases, more specialized [metalworking](https://en.wikipedia.org/wiki/Metalworking) or [glass working](https://en.wikipedia.org/wiki/Glass) techniques may be employed, or a combination of multiple techniques and materials may be used such as in [cloisonné](https://en.wikipedia.org/wiki/Cloisonn%C3%A9).

### Glass working

[](https://en.wikipedia.org/wiki/File:Firebead.jpg)

Fire polished beads (10 millimetres (0.39 in)) with AB coating

Most glass beads are [pressed glass](https://en.wikipedia.org/wiki/Pressed_glass), mass-produced by preparing a molten batch of [glass of the desired color](https://en.wikipedia.org/wiki/Glass_coloring_and_color_marking) and pouring it into molds to form the desired shape. This is also true of most [plastic](https://en.wikipedia.org/wiki/Plastic) beads.

A smaller and more expensive subset of glass and lead crystal beads are cut into precise faceted shapes on an individual basis. This was once done by hand but has largely been taken over by precision machinery.

"Fire-polished" faceted beads are a less expensive alternative to hand-cut faceted glass or crystal. They derive their name from the second half of a two-part process: first, the glass batch is poured into round bead molds, then they are faceted with a grinding wheel. The faceted beads are then poured onto a tray and briefly reheated just long enough to melt the surface, "polishing" out any minor surface irregularities from the grinding wheel.

#### Specialized glass techniques and types

[](https://en.wikipedia.org/wiki/File:Dichroicclose.jpg) [](https://en.wikipedia.org/wiki/File:Furnaceglass.jpg)

Dichroic beads (10 millimetres (0.39 in) Furnace glass beads

There are several specialized glassworking techniques that create a distinctive appearance throughout the body of the resulting beads, which are then primarily referred to by the glass type.

If the glass batch is used to create a large massive block instead of pre-shaping it as it cools, the result may then be carved into smaller items in the same manner as stone. Conversely, glass artisans may make beads by [lampworking](https://en.wikipedia.org/wiki/Lampworking) the glass on an individual basis; once formed, the beads undergo little or no further shaping after the layers have been properly [annealed](https://en.wikipedia.org/wiki/Annealing_%28glass%29).

Most of these glass subtypes are some form of [fused glass](https://en.wikipedia.org/wiki/Fused_glass), although [goldstone](https://en.wikipedia.org/wiki/Goldstone_%28gemstone%29) is created by controlling the reductive atmosphere and cooling conditions of the glass batch rather than by fusing separate components together.

[Dichroic glass](https://en.wikipedia.org/wiki/Dichroic_glass) beads incorporate a semitransparent microlayer of metal between two or more layers. [Fibre optic](https://en.wikipedia.org/wiki/Fibre_optic) glass beads have an eye catching [chatoyant](https://en.wikipedia.org/wiki/Chatoyant) effect across the grain.

There are also several ways to fuse many small glass canes together into a multicolored pattern, resulting in [millefiori](https://en.wikipedia.org/wiki/Millefiori) beads or [chevron beads](https://en.wikipedia.org/wiki/Chevron_bead) (sometimes called "trade beads"). "Furnace glass" beads encase a multicolored core in a transparent exterior layer which is then annealed in a furnace.

**CLASS; J S S 2 WEEK 5** **TOPIC; TIME SIGNATURE**

Time signature consists of 2 figures written in form of fraction 2/2 at the left side of a piece of music to indicate the tuning of the music. E.g. 2/2, 2/4, 3/8, etc.

2 Numerator and 2 Denominator.

The **time signature** (also known as [**meter**](https://en.wikipedia.org/wiki/Meter_(music))**signature**, **meter signature**, or **measure signature**) is a notational convention used in [Western](https://en.wikipedia.org/wiki/Western_culture) [musical notation](https://en.wikipedia.org/wiki/Musical_notation) to specify how many [beats](https://en.wikipedia.org/wiki/Beat_(music)) (pulses) are to be contained in each [bar](https://en.wikipedia.org/wiki/Bar_(music)) and which [note value](https://en.wikipedia.org/wiki/Note_value) is to be given one beat. In a musical score, the time signature appears at the beginning of the piece, as a time symbol or stacked numerals, such as [Commontime inline.png](https://en.wikipedia.org/wiki/File:Commontime_inline.png) or **3**  
**4** (read *common time* and *three-four time*, respectively), immediately following the [key signature](https://en.wikipedia.org/wiki/Key_signature) or immediately following the [clef](https://en.wikipedia.org/wiki/Clef) symbol if the key signature is empty. A mid-score time signature, usually immediately following a [bar line](https://en.wikipedia.org/wiki/Barline), indicates a change of meter.

There are various types of time signatures, depending on whether the music follows simple rhythms or involves unusual shifting tempos, including:

[Simple](https://en.wikipedia.org/wiki/Time_signature#Simple_time_signatures) (such as **3** 4 or **4**  
**4**), [compound](https://en.wikipedia.org/wiki/Time_signature#Compound_time_signatures) (e.g., **9 8** or **12**

**8**), [complex](https://en.wikipedia.org/wiki/Time_signature#Complex_time_signatures) (e.g., **5** **4** or **7**  
**8**), [mixed](https://en.wikipedia.org/wiki/Time_signature#Mixed_meters) (e.g., **5** **8** & **3** **8** or **6** **8** & **3**  
**4**), [additive](https://en.wikipedia.org/wiki/Time_signature#Additive_meters) (e.g., **3+2+3**  
**8**), [fractional](https://en.wikipedia.org/wiki/Time_signature#Other_variants) (e.g., **2½**  
**4**), and [irrational meters](https://en.wikipedia.org/wiki/Time_signature#Irrational_meters)  (e.g., **3** 10 or **5** **24**).

The upper figure represents the number beats in a bar while the figure below represents the value of the notes. In another way, it can be written in this form 2=2 of the notes below in the bar. I.e. 0 1

2 minim beats in bar

There are two types of time signature

1. Simple Time Signature
2. Compound Time Signature.

Simple time signature is grouped into three (3)

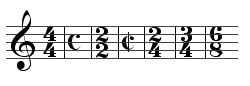
I Simple double time

Ii Simple triple time

Iii Simple quadruple time.

Compound Time Signature.

## **Simple time signatures**

[](https://en.wikipedia.org/wiki/File:Common_time_signatures.gif)

Basic time signatures: **4**  
**4**, also known as common time ([Commontime inline.png](https://en.wikipedia.org/wiki/File:Commontime_inline.png)); **2**  
**2**, also known as cut time or cut-common time ([cut time](https://en.wikipedia.org/wiki/File:Allabreve.svg)); plus **2**  
**4**; **3**  
**4**; and **6**  
**8**

Simple time signatures consist of two numerals, one stacked above the other:

* The *lower* numeral indicates the note value that represents one beat (the *beat unit*).
* The *upper* numeral indicates how many such beats there are grouped together in a [bar](https://en.wikipedia.org/wiki/Bar_(music)).

For instance, **2**  
**4** means two [quarter-note](https://en.wikipedia.org/wiki/Quarter-note) (crotchet) beats per bar—**3**  
**8** means three [eighth-note](https://en.wikipedia.org/wiki/Eighth-note) (quaver) beats per bar.

The most common simple time signatures are **2**  
**4**, **3**  
**4**, and **4**  
**4**.

### Notational variations in simple time.

The symbol [Commontime inline.png](https://en.wikipedia.org/wiki/File:Commontime_inline.png) is sometimes used for **4**  
**4** time, also called common time or imperfect time. The symbol is derived from a [broken circle](https://en.wikipedia.org/wiki/Time_signature#Early_music_usage) used in music notation from the 14th through 16th centuries, where a full circle represented what today would be written in **3**  
**2** or **3**  
**4** time, and was called *tempus perfectum* (perfect time). The symbol[cut time](https://en.wikipedia.org/wiki/File:Allabreve.svg) is also a carry-over from the notational practice of late-Medieval and Renaissance music, where it signified *tempus imperfect diminutum* (diminished imperfect time)—more precisely, a doubling of the speed, or *proportion duple*, in duple meter. In modern notation, it is used in place of **2**  
**2** and is called *all a brave* or, colloquially, *cut time* or *cut common time*.

## **Compound time signatures**

## **i**n compound meter, subdivisions (which are what the upper number represents in these meters) of the main beat are in three equal parts, so that a [dotted note](https://en.wikipedia.org/wiki/Dotted_note) (half again longer than a regular note) becomes the beat unit. Compound time signatures are named as if they were simple time signatures, in which the one-third part of the beat unit is the beat, so the top number is commonly 6, 9 or 12 (multiples of 3). The lower number is most commonly an 8 (an eighth-note): as in **9** **8** or **12** 8.

### An example

### **4** is a simple signature that represents three quarter notes. It has a basic feel of (**Bold** denotes a stressed beat):

**One** *two* *three* (as in a waltz)

Each quarter note might comprise two eighth-notes (quavers) giving a total of six such notes, but it still retains that three-in-a-bar feel:

**One** and *two* and *three* and

**6**  
**8**: Theoretically, this can be thought of as the same as the six-quaver form of **3**  
**4** above with the only difference being that the eighth note is selected as the one-beat unit. But whereas the six quavers in **3**  
**4** had been in three groups of two, **6**  
**8** is practically understood to mean that they are in two groups of three, with a two-in-a-bar feel (**Bold** denotes a stressed beat):

**One** and a, **two** and a or one two three, **four** five six.

## **Beat and time.**

Time signatures indicating two beats per bar (whether it is simple or compound) are called [duple time](https://en.wikipedia.org/wiki/Duple_time); those with three beats to the bar are [triple time](https://en.wikipedia.org/wiki/Triple_time). To the ear, a bar may seem like one singular beat. For example, a fast waltz, notated in **3**  
**4** time, may be described as being *one in a bar*. Terms such as *quadruple* (4), *quintuple* (5), and so on are also occasionally used.

In compound time signature, each beat is dotted note which can be further sub-divided but this time, it split into three.

I Compound duple time

Ii Compound triple time

Iii Compound quadruple time.

**CLASS; J S S 2 WEEK 6** **TOPIC; CROCHETING.**

# **Crochet**

**Crochet** is a process of creating fabric by interlocking loops of [yarn](https://en.wikipedia.org/wiki/Yarn), [thread](https://en.wikipedia.org/wiki/Thread_(yarn)), or strands of other materials using a [crochet hook](https://en.wikipedia.org/wiki/Crochet_hook). The name is derived from the French term "crochet", meaning *small hook.* These are made of materials such as metal, wood, or plastic and are manufactured commercially and produced in artisan workshops. The salient difference between crochet and [knitting](https://en.wikipedia.org/wiki/Knitting), beyond the implements used for their production, is that each stitch in crochet is completed before proceeding with the next one, while knitting keeps a large number of stitches open at a time. (Variant forms such as [Tunisian crochet](https://en.wikipedia.org/wiki/Tunisian_crochet) and [broomstick lace](https://en.wikipedia.org/wiki/Broomstick_lace) keep multiple crochet stitches open at a time.)



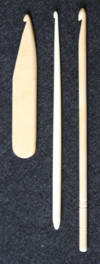
Crochets is a method by which a fabric if formed with a single thread and hook. The word ‘crochet’ is derived from the French word meaning ‘hook’. Crochet was traditionally used to make lacy pattern for doilies and edgings. Nowadays, with modern designs, it is used to to make verities of articles both for personal and household use. Examples of these are; baby’s clothes and blankets, ladies and blouses and gowns, shawls, bags, belts, caps, lampshade, tables, or plate mats, bedspreads and rugs.

Sins a ball of thread and a hook are all needed for crocheting, one can carry these items around in a bag and crochet practically everywhere.

## **Materials**

Basic materials required for crochet are a hook and some type of material that will be crocheted, most commonly yarn or thread. Additional tools are convenient for keeping stitches counted, measuring crocheted fabric, or making related accessories. Examples include cardboard cutouts, which can be used to make [tassels](https://en.wikipedia.org/wiki/Tassels), [fringe](https://en.wikipedia.org/wiki/Fringe_(trim)), and many other items; a pom-pom circle, used to make pom-poms; a [tape measure](https://en.wikipedia.org/wiki/Tape_measure) and a gauge measure, both used for measuring crocheted work and counting stitches; a [row counter](https://en.wikipedia.org/wiki/Row_counter_(hand_knitting)); and occasionally plastic rings, which are used for special projects. In recent years, yarn selections have moved beyond synthetic and plant and animal-based fibers to include bamboo, qiviut, hemp, and banana stalks, to name a few.

### **Crochet hook**

[](https://en.wikipedia.org/wiki/File:Crohook.jpg) [](https://en.wikipedia.org/wiki/File:Crochet_sweden_2.jpg) 

Aluminum crochet hooks

The crochet hook comes in many sizes and materials, such as bone, bamboo, aluminum, plastic, and steel. Because sizing is categorized by the diameter of the hook's shaft, a crafter aims to create stitches of a certain size in order to reach a particular gauge specified in a given pattern. If gauge is not reached with one hook, another is used until the stitches made are the needed size. Crafters may have a preference for one type of hook material over another due to aesthetic appeal, yarn glide, or hand disorders such as arthritis, where bamboo or wood hooks are favored over metal for the perceived warmth and flexibility during use. Hook grips and ergonomic hook handles are also available to assist crafters.

Steel crochet hooks range in size from 0.4 to 3.5 millimeters, or from 00 to 16 in American sizing. These hooks are used for fine crochet work such as doilies and lace.

Aluminum, bamboo, and plastic crochet hooks are available from 2.5 to 19 millimeters in size, or from B to S in American sizing.

Artisan-made hooks are often made of hand-turned woods, sometimes decorated with semi-precious stones or beads.

Crochet hooks used for Tunisian crochet are elongated and have a stopper at the end of the handle, while double-ended crochet hooks have a hook on both ends of the handle. There is also a double hooked apparatus called a [Cro-hook](https://en.wikipedia.org/wiki/Cro-hook) that has become popular.

A hairpin loom is often used to create lacy and long stitches, known as hairpin lace. While this is not in itself a hook, it is a device used in conjunction with a crochet hook to produce stitches.

**CROCHET EQUIPMENTS.**

* Ball of wool \* A small bag to keep equipment’s clean. \* A tape measure.
* A small pair of soccer’s. \* A needle with a blunt point. \* Different sizes of crochet hook.

**CLASS; J S S 2 WEEK 7** **TOPIC; PAPER MACHE.**

## : **Paper Mach**

Paper-Mach is the art of modelling with torn or shredded paper bound together with glue. Usually a water-based type. The techniques are quickly mastered and offer endless variation. Almost any object can be used as a mold for Paper-Mach, although round objects are easier to cover smoothly if the mold is to be removed later. Bowls and large dishes are excellent. Wire mesh shapes can be molded to produce any number of interesting shapes, and structures made from cardboard, known as armatures, can also be covered. You can use Paper-Mach pulp to make bowls or to build up sculpted images. Just push it into shape with your hands or a stiff paintbrush. Drying may take several days. To make your own paper pulp. Tear five sheets of newspaper in to 2.3 cm (1 in) squares and place in a saucepan. Cover with water and simmer for 30 minutes, Spoon the paper and water into a blender and process to a pulp. Transfer the pulp to a lidded plastic box and store until required (it will keep for several weeks). When ready to use, add 2½ tablespoons PVA (white) glue and 1 tablespoon each wallpaper paste. Plaster of Paris and linseed oil and stir vigorously.

## **Preparation methods**

[](https://en.wikipedia.org/wiki/File:Papier_mache.jpg)

Papier-mâché with the strips method for the creation of a pig.

[](https://en.wikipedia.org/wiki/File:Paper_mache_mask_with_feet_with_grey_background.JPG)

Papier-mâché mask created with the pulp method

Two main methods are used to prepare papier-mâché; one makes use of paper strips glued together with adhesive, and the other method uses paper pulp obtained by soaking or boiling paper to which glue is then added.

With the first method, a form for support is needed on which to glue the paper strips. With the second method, it is possible to shape the pulp directly inside the desired form. In both methods, reinforcements with wire, [chicken wire](https://en.wikipedia.org/wiki/Chicken_wire), lightweight shapes, balloons or textiles may be needed.

The traditional method of making papier-mâché adhesive is to use a mixture of water and flour or other starch, mixed to the consistency of heavy [cream](https://en.wikipedia.org/wiki/Cream). Other adhesives can be used if thinned to a similar texture, such as [polyvinyl acetate](https://en.wikipedia.org/wiki/Polyvinyl_acetate)-based glues (wood glue or, in the [United States](https://en.wikipedia.org/wiki/United_States), white [Elmer's](https://en.wikipedia.org/wiki/Elmer%27s_Products,_Inc.) glue). Adding [oil of cloves](https://en.wikipedia.org/wiki/Oil_of_cloves) or other additives such as salt to the mixture reduces the chances of the product developing [mold](https://en.wikipedia.org/wiki/Mold).

For the paper strips method, the paper is cut or torn into strips, and soaked in the paste until saturated. The saturated pieces are then placed onto the surface and allowed to dry slowly. The strips may be placed on an *armature*, or skeleton, often of wire mesh over a structural frame, or they can be placed on an object to create a cast. Oil or grease can be used as a release agent if needed. Once dried, the resulting material can be cut, sanded and/or painted, and waterproofed by painting with a suitable water-repelling paint.Before painting any product of papier-mâché, the glue must be fully dried, otherwise mold will form and the product will rot from the inside out.

For the pulp method, the paper is left in water at least overnight to soak, or boiled in abundant water until the paper dissolves in a pulp. The excess water is drained, an adhesive is added and the papier-mâché applied to a form or, especially for smaller or simpler objects, sculpted to shape.

#### **Paper boats**

One common item made in the 19th century in America was the paper [canoe](https://en.wikipedia.org/wiki/Canoe), most famously made by Waters & Sons of [Troy](https://en.wikipedia.org/wiki/Troy,_New_York), New York. The invention of the continuous sheet paper machine allows paper sheets to be made of any length, and this made an ideal material for building a seamless boat [hull](https://en.wikipedia.org/wiki/Hull_(watercraft)). The paper of the time was significantly stretchier than modern paper, especially when damp, and this was used to good effect in the manufacture of paper boats. A layer of thick, dampened paper was placed over a hull mold and tacked down at the edges. A layer of glue was added, allowed to dry, and sanded down. Additional layers of paper and glue could be added to achieve the desired thickness, and cloth could be added as well to provide additional strength and stiffness. The final product was trimmed, reinforced with wooden strips at the [keel](https://en.wikipedia.org/wiki/Keel) and[gunwales](https://en.wikipedia.org/wiki/Gunwale) to provide stiffness, and waterproofed. Paper [racing shells](https://en.wikipedia.org/wiki/Racing_shell) were highly competitive during the late 19th century. Few examples of paper boats survived. One of the best known paper boats was the canoe, the "Maria Theresa," used by Nathaniel Holmes Bishop to travel from New York to Florida in 1874–75. An account of his travels was published in the book "Voyage of the Paper Canoe."

#### **Paper masks**

Creating papier-mâché masks is common among elementary school children and craft lovers. Either one's own face or a balloon can be used as a mold. This is common during Halloween time as a facial mask complements the costume.



**TEARING NEWSPAPER**

1. Tearing rather than cutting newspaper creates less obvious joins between strips. Newspaper has a grain and will tear much more easily in one direction than the other. Generally, the grain runs from the top to the bottom of the newspaper. If you try to tear against the grain, it becomes impossible to control.
2. To make paper strips, grasp several folded sheets of newspaper in one hand. Begin to tear about 2.5 cm (1 in) from the edge, along the grain. Pull directly down, and the paper will tear into long, straight strips. Strips of almost any width can be produced this way.

**PREPARING A MOLD**

* Before applying Paper-Mach to a mold, the surface must be lightly greased with petroleum jelly to create a barrier between the glue and the mold, preventing the Paper-Mach from sticking to it. It will then be easy to remove the Paper-Mach when it has dried. Cling film (plastic wrap) can sometimes be used Instead.

**LAYERING**

* Cover large molds with five to six layers of paper strips, 2.5 cm (1 in) wide. Spread the strips with PVA (white) glue on both sides and lay them individually in the greased mold from top to bottom, The strips should protrude slightly beyond the mold. Lay the second and third layers at right angles to the first. Smooth each strip with your fingers and press out any air bubbles.

**REMOVING FROM A MOLD AND FINISHING**

1. When the surface of the paper in the mold is dry, gently pull back the edge and, if it seems almost dry underneath, insert a blunt knife and gently pries (pry) the paper away from the mold. Leave the Paper-Mach upside down to dry completely.
2. Trim the raw edge from the paper shape using scissors. Following the indent of the edge of the mold to ensure an accurate curve. To prevent the layers of paper from coming apart, bind the edges of the shape using thin strips of newspaper.

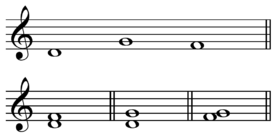
**DRYING FLAT OBJECTS**

* Paper-Mach objects such as picture frames and wall panels should be dried flat after sealing to prevent warping. Place the object on a wire cake rack or a sheet of thin plastic the glue will stick to the plastic as It dries, but the plastic can easily be peeled away once the Paper-Mach is dry.

**CLASS; J S S 2 WEEK 8** **TOPIC; INTERVALS.**

# **Interval (music)**

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[](https://en.wikipedia.org/wiki/File:Melodic_and_harmonic_intervals.png)

Melodic and harmonic intervals.

In [music theory](https://en.wikipedia.org/wiki/Music_theory), an **interval** is the difference between two [pitches](https://en.wikipedia.org/wiki/Pitch_(music)). An interval may be described as **horizontal**, **linear**, or **melodic** if it refers to successively sounding tones, such as two adjacent pitches in a melody, and **vertical** or **harmonic** if it pertains to simultaneously sounding tones, such as in a [chord](https://en.wikipedia.org/wiki/Chord_(music)).

In [Western](https://en.wikipedia.org/wiki/Western_culture) music, intervals are most commonly differences between [notes](https://en.wikipedia.org/wiki/Musical_note) of a [diatonic scale](https://en.wikipedia.org/wiki/Diatonic_scale). The smallest of these intervals is a [semitone](https://en.wikipedia.org/wiki/Semitone). Intervals smaller than a semitone are called [microtones](https://en.wikipedia.org/wiki/Microtone). They can be formed using the notes of various kinds of non-diatonic scales. Some of the very smallest ones are called [commas](https://en.wikipedia.org/wiki/Comma_(music)), and describe small discrepancies, observed in some [tuning systems](https://en.wikipedia.org/wiki/Tuning_system), between [enharmonically equivalent](https://en.wikipedia.org/wiki/Enharmonic) notes such as C♯ and D♭. Intervals can be arbitrarily small, and even imperceptible to the human ear.

In physical terms, an interval is the [ratio](https://en.wikipedia.org/wiki/Interval_ratio) between two sonic frequencies. For example, any two notes an octave apart have a frequency ratio of 2:1. This means that successive increments of pitch by the same interval result in an exponential increase of frequency, even though the human ear perceives this as a linear increase in pitch. For this reason, intervals are often measured in [cents](https://en.wikipedia.org/wiki/Cent_(music)), a unit derived from the [logarithm](https://en.wikipedia.org/wiki/Logarithm) of the frequency ratio.

In Western music theory, the most common naming scheme for intervals describes two properties of the interval: the [quality](https://en.wikipedia.org/wiki/Interval_(music)#Quality) (perfect, major, minor, augmented, and diminished) and [number](https://en.wikipedia.org/wiki/Interval_(music)#Number) (unison, second, third, etc.). Examples include the [minor third](https://en.wikipedia.org/wiki/Minor_third) or [perfect fifth](https://en.wikipedia.org/wiki/Perfect_fifth). These names describe not only the difference in semitones between the upper and lower notes, but also how the interval is spelled. The importance of spelling stems from the historical practice of differentiating the frequency ratios of enharmonic intervals such as G–G♯ and G–A♭.

## **Main intervals.**

The table shows the most widely used conventional names for the intervals between the notes of a [chromatic scale](https://en.wikipedia.org/wiki/Chromatic_scale). A [perfect unison](https://en.wikipedia.org/wiki/Perfect_unison) (also known as perfect prime)is an interval formed by two identical notes. Its size is zero [cents](https://en.wikipedia.org/wiki/Cent_(music)). A [semitone](https://en.wikipedia.org/wiki/Semitone) is any interval between two adjacent notes in a chromatic scale, a [whole tone](https://en.wikipedia.org/wiki/Whole_tone) is an interval spanning two semitones (for example, a [major second](https://en.wikipedia.org/wiki/Major_second)), and a [triton](https://en.wikipedia.org/wiki/Tritone) is an interval spanning three tones, or six semitones (for example, an [augmented fourth](https://en.wikipedia.org/wiki/Augmented_fourth)). Rarely, the term [denote](https://en.wikipedia.org/wiki/Ditone) is also used to indicate an interval spanning two whole tones (for example, a [major third](https://en.wikipedia.org/wiki/Major_third)), or more strictly as a synonym of major third.

Intervals with different names may span the same number of semitones, and may even have the same width. For instance, the interval from D to F♯ is a [major third](https://en.wikipedia.org/wiki/Major_third), while that from D to G♭ is a [diminished fourth](https://en.wikipedia.org/wiki/Diminished_fourth). However, they both span 4 semitones. If the [instrument](https://en.wikipedia.org/wiki/Musical_instrument) is tuned so that the 12 notes of the chromatic scale are equally spaced (as in [equal temperament](https://en.wikipedia.org/wiki/Equal_temperament)), these intervals will also have the same width. Namely, all semitones will have a width of 100 [cents](https://en.wikipedia.org/wiki/Cent_(music)), and all intervals spanning 4 semitones will be 400 cents wide.

The names listed here cannot be determined by counting semitones alone. The rules to determine them are explained below. Other names, determined with different naming conventions, are listed in [a separate section](https://en.wikipedia.org/wiki/Interval_(music)#Alternative_interval_naming_conventions). Intervals [smaller than one semitone](https://en.wikipedia.org/wiki/Interval_(music)#Minute_intervals) (commas or microtones) and [larger than one octave](https://en.wikipedia.org/wiki/Interval_(music)#Compound_intervals) (compound intervals) are introduced below.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Number of** [**semitones**](https://en.wikipedia.org/wiki/Semitone) | [**Minor, major, or perfect**](https://en.wikipedia.org/wiki/Interval_(music)#Quality)**intervals** | **Short** | [**Augmented or diminished**](https://en.wikipedia.org/wiki/Interval_(music)#Quality)**intervals** | **Short** | **Widely used** [**alternative names**](https://en.wikipedia.org/wiki/Interval_(music)#Alternative_interval_naming_conventions) | **Short** | **Audio** |
| 0 | [Perfect unison](https://en.wikipedia.org/wiki/Perfect_unison)[[5]](https://en.wikipedia.org/wiki/Interval_(music)#cite_note-prime-5)[[7]](https://en.wikipedia.org/wiki/Interval_(music)#cite_note-P1A1-7) | P1 | [Diminished second](https://en.wikipedia.org/wiki/Diminished_second) | d2 |  |  | [About this sound](https://en.wikipedia.org/wiki/File:Unison_on_C.mid) [Play](https://upload.wikimedia.org/wikipedia/commons/4/4c/Unison_on_C.mid) (help info) |
| 1 | [Minor second](https://en.wikipedia.org/wiki/Minor_second) | m2 | [Augmented unison](https://en.wikipedia.org/wiki/Augmented_unison)[[5]](https://en.wikipedia.org/wiki/Interval_(music)#cite_note-prime-5)[[7]](https://en.wikipedia.org/wiki/Interval_(music)#cite_note-P1A1-7) | A1 | [Semitone](https://en.wikipedia.org/wiki/Semitone),[[8]](https://en.wikipedia.org/wiki/Interval_(music)#cite_note-8) half tone, half step | S | [About this sound](https://en.wikipedia.org/wiki/File:Minor_second_on_C.mid) [Play](https://upload.wikimedia.org/wikipedia/commons/8/8a/Minor_second_on_C.mid) (help info) |
| 2 | [Major second](https://en.wikipedia.org/wiki/Major_second) | M2 | [Diminished third](https://en.wikipedia.org/wiki/Diminished_third) | d3 | [Tone](https://en.wikipedia.org/wiki/Whole_tone), whole tone, whole step | T | [About this sound](https://en.wikipedia.org/wiki/File:Major_second_on_C.mid) [Play](https://upload.wikimedia.org/wikipedia/commons/b/b9/Major_second_on_C.mid) (help info) |
| 3 | [Minor third](https://en.wikipedia.org/wiki/Minor_third) | m3 | [Augmented second](https://en.wikipedia.org/wiki/Augmented_second) | A2 |  |  | [About this sound](https://en.wikipedia.org/wiki/File:Minor_third_on_C.mid) [Play](https://upload.wikimedia.org/wikipedia/commons/3/31/Minor_third_on_C.mid) (help info) |
| 4 | [Major third](https://en.wikipedia.org/wiki/Major_third) | M3 | [Diminished fourth](https://en.wikipedia.org/wiki/Diminished_fourth) | d4 |  |  | [About this sound](https://en.wikipedia.org/wiki/File:Major_third_on_C.mid) [Play](https://upload.wikimedia.org/wikipedia/commons/9/91/Major_third_on_C.mid) (help info) |
| 5 | [Perfect fourth](https://en.wikipedia.org/wiki/Perfect_fourth) | P4 | [Augmented third](https://en.wikipedia.org/wiki/Augmented_third) | A3 |  |  | [About this sound](https://en.wikipedia.org/wiki/File:Perfect_fourth_on_C.mid) [Play](https://upload.wikimedia.org/wikipedia/commons/8/87/Perfect_fourth_on_C.mid) (help info) |
| 6 |  |  | [Diminished fifth](https://en.wikipedia.org/wiki/Tritone) | d5 | [Triton](https://en.wikipedia.org/wiki/Tritone)[[6]](https://en.wikipedia.org/wiki/Interval_(music)#cite_note-TritoneA4-6) | TT | [About this sound](https://en.wikipedia.org/wiki/File:Tritone_on_C.mid) [Play](https://upload.wikimedia.org/wikipedia/commons/5/58/Tritone_on_C.mid) (help info) |
| [Augmented fourth](https://en.wikipedia.org/wiki/Tritone) | A4 |
| 7 | [Perfect fifth](https://en.wikipedia.org/wiki/Perfect_fifth) | P5 | [Diminished sixth](https://en.wikipedia.org/wiki/Diminished_sixth) | d6 |  |  | [About this sound](https://en.wikipedia.org/wiki/File:Perfect_fifth_on_C.mid) [Play](https://upload.wikimedia.org/wikipedia/commons/2/20/Perfect_fifth_on_C.mid) (help info) |
| 8 | [Minor sixth](https://en.wikipedia.org/wiki/Minor_sixth) | m6 | [Augmented fifth](https://en.wikipedia.org/wiki/Augmented_fifth) | A5 |  |  | [About this sound](https://en.wikipedia.org/wiki/File:Minor_sixth_on_C.mid) [Play](https://upload.wikimedia.org/wikipedia/commons/9/9a/Minor_sixth_on_C.mid) (help info) |
| 9 | [Major sixth](https://en.wikipedia.org/wiki/Major_sixth) | M6 | [Diminished seventh](https://en.wikipedia.org/wiki/Diminished_seventh) | d7 |  |  | [About this sound](https://en.wikipedia.org/wiki/File:Major_sixth_on_C.mid) [Play](https://upload.wikimedia.org/wikipedia/commons/d/df/Major_sixth_on_C.mid) (help info) |
| 10 | [Minor seventh](https://en.wikipedia.org/wiki/Minor_seventh) | m7 | [Augmented sixth](https://en.wikipedia.org/wiki/Augmented_sixth) | A6 |  |  | [About this sound](https://en.wikipedia.org/wiki/File:Minor_seventh_on_C.mid) [Play](https://upload.wikimedia.org/wikipedia/commons/a/a5/Minor_seventh_on_C.mid) (help info) |
| 11 | [Major seventh](https://en.wikipedia.org/wiki/Major_seventh) | M7 | [Diminished octave](https://en.wikipedia.org/wiki/Diminished_octave) | d8 |  |  | [About this sound](https://en.wikipedia.org/wiki/File:Major_seventh_on_C.mid) [Play](https://upload.wikimedia.org/wikipedia/commons/c/cb/Major_seventh_on_C.mid) (help info) |
| 12 | [Perfect octave](https://en.wikipedia.org/wiki/Octave) | P8 | [Augmented seventh](https://en.wikipedia.org/wiki/Augmented_seventh) | A7 |  |  | [About this sound](https://en.wikipedia.org/wiki/File:Perfect_octave_on_C.mid) [Play](https://upload.wikimedia.org/wikipedia/commons/f/f0/Perfect_octave_on_C.mid) (help info) |

## **Interval number and quality**

**CLASS; J S S 2 WEEK 9** **TOPIC; TIE – DYE.**

Tie-dye is a modern term invented in the mid-1960s in the United States for a set of ancient [resist-dyeing](https://en.wikipedia.org/wiki/Resist_dyeing) techniques, and for the products of these processes. The process of tie-dye typically consists of folding, twisting, pleating, or crumpling fabric or a garment and binding with string or rubber bands, followed by application of dye(s). The manipulations of the fabric prior to application of dye are called resists, as they partially or completely prevent the applied dye from coloring the fabric. More sophisticated tie-dyes involve additional steps, including an initial application of dye prior to the resist, multiple sequential dye and resist steps, and the use of other types of resists (stitching, stencils) and discharge.

Unlike regular resist-dyeing techniques, tie-dye is characterized by the use of bright, saturated primary colors and bold patterns. These patterns, including the spiral, mandala, and peace sign, and the use of multiple bold colors, have become cliched since the peak popularity of tie-dye in the 1960s and 1970s. The vast majority of currently produced tie-dyes use these designs, and many are mass-produced for [wholesale distribution](https://en.wikipedia.org/wiki/Wholesale_fashion_distribution). However, a new interest in more 'sophisticated' tie-dye is emerging in the fashion industry, characterized by simple motifs, monochromatic color schemes, and a focus on fashionable garments and fabrics other than cotton. A few artists continue to pursue tie-dye as an art form rather than a commodity.

# **Dyeing**

# [https://upload.wikimedia.org/wikipedia/commons/thumb/f/fb/Indian_pigments.jpg/220px-Indian_pigments.jpg](https://en.wikipedia.org/wiki/File:Indian_pigments.jpg) [https://upload.wikimedia.org/wikipedia/commons/thumb/8/8a/Cotton_dyeing_in_India.jpg/220px-Cotton_dyeing_in_India.jpg](https://en.wikipedia.org/wiki/File:Cotton_dyeing_in_India.jpg)

Pigments for sale at a market in[Goa](https://en.wikipedia.org/wiki/Goa), [India](https://en.wikipedia.org/wiki/India). Cotton being dyed manually in contemporary India.

**Dyeing** is the process of adding color to [textile](https://en.wikipedia.org/wiki/Textile) products like [fibers](https://en.wikipedia.org/wiki/Fiber), [yarns](https://en.wikipedia.org/wiki/Yarn), and [fabrics](https://en.wikipedia.org/wiki/Fabric). Dyeing is normally done in a special [solution](https://en.wikipedia.org/wiki/Solution) containing [dyes](https://en.wikipedia.org/wiki/Dye) and particular chemical material. After dyeing, dye [molecules](https://en.wikipedia.org/wiki/Molecule) have uncut [chemical bond](https://en.wikipedia.org/wiki/Chemical_bond) with fiber molecules. The[temperature](https://en.wikipedia.org/wiki/Temperature) and time controlling are two key factors in dyeing. There are mainly two classes of dye, [natural](https://en.wikipedia.org/wiki/Natural_dye) and [man-made](https://en.wikipedia.org/wiki/Dye).

The primary source of dye, historically, has generally been [nature](https://en.wikipedia.org/wiki/Nature), with the dyes being extracted from [animals](https://en.wikipedia.org/wiki/Animal) or [plants](https://en.wikipedia.org/wiki/Plant). Since the mid-18th century, however, humans have produced artificial dyes to achieve a broader range of colors and to render the dyes more stable to resist washing and general use. Different classes of dyes are used for different types of fiber and at different stages of the textile production process, from loose fibers through [yarn](https://en.wikipedia.org/wiki/Yarn) and cloth to complete garments.

[Acrylic fibers](https://en.wikipedia.org/wiki/Acrylic_fiber) are dyed with basic dyes, while [nylon](https://en.wikipedia.org/wiki/Nylon) and protein fibers such as [wool](https://en.wikipedia.org/wiki/Wool) and[silk](https://en.wikipedia.org/wiki/Silk) are dyed with [acid dyes](https://en.wikipedia.org/wiki/Acid_dye), and [polyester](https://en.wikipedia.org/wiki/Polyester) yarn is dyed with [disperse dyes](https://en.wikipedia.org/wiki/Disperse_dye). [Cotton](https://en.wikipedia.org/wiki/Cotton) is dyed with a range of dye types, including [vat dyes](https://en.wikipedia.org/wiki/Vat_dye), and modern synthetic reactive and direct dyes.

A variety of dyes can be used in tie-dyeing, including household, fiber reactive, acid, and vat dyes. Most early (1960s) tie-dyes were made with retail household dyes, particularly those made by Rit. In order to be effective on different fibers, these dyes are composed of several different dyes, and thus are less effective, and more likely to bleed and fade, than pure dyes designed for specific fibers. This is the basis for the famous 'pink socks' phenomenon that occurs when fabrics dyed with mixed dyes are washed with other garments. Most tie-dyes are now dyed with [Procion](https://en.wikipedia.org/wiki/Procion) MX fiber [reactive dyes](https://en.wikipedia.org/wiki/Reactive_dyes), a class of dyes effective on [cellulose fibers](https://en.wikipedia.org/wiki/Cellulose_fiber) such as cotton, hemp, rayon, and linen. This class of dyes reacts with fibers at [basic (high) pH](https://en.wikipedia.org/wiki/Base_(chemistry)), forming a wash-fast, permanent bond. Soda ash ([sodium carbonate](https://en.wikipedia.org/wiki/Sodium_carbonate)) is the most common agent used to raise the [pH](https://en.wikipedia.org/wiki/PH) and initiate the reaction, and is either added directly to the dye, or in a solution of water in which garments are soaked before dyeing. Procion dyes are relatively safe and simple to use, and are the same dyes used commercially to color cellulosic fabrics.

[](https://en.wikipedia.org/wiki/File:TieDyeShirtMpegMan.jpg)

[Protein-based fibers](https://en.wikipedia.org/wiki/Animal_fiber) such as silk, wool, and feathers, as well as the synthetic polyamide fiber, [nylon](https://en.wikipedia.org/wiki/Nylon), can be dyed with [acid dyes](https://en.wikipedia.org/wiki/Acid_dye). As may be expected from the name, acid dyes are effective at [acidic (low) pH](https://en.wikipedia.org/wiki/Acid), where they form [ionic bonds](https://en.wikipedia.org/wiki/Ionic_bonding) with the fiber. Acid dyes are also relatively safe (some are used as food dyes) and simple to use. [Vat dyes](https://en.wikipedia.org/wiki/Vat_dye), including [indigo](https://en.wikipedia.org/wiki/Indigo), are a third class of dyes that are effective on cellulosic fibers and silk. Vat dyes are insoluble in water in their unreduced form, and the vat dye must be [chemically reduced](https://en.wikipedia.org/wiki/Organic_redox_reaction) before they can be used to color fabric. This is accomplished by heating the dye in a strongly basic solution of [sodium hydroxide](https://en.wikipedia.org/wiki/Sodium_hydroxide) ([lye](https://en.wikipedia.org/wiki/Lye)) or [sodium carbonate](https://en.wikipedia.org/wiki/Sodium_carbonate) ([caustic potash](https://en.wikipedia.org/wiki/Caustic_potash)) containing a [reducing agent](https://en.wikipedia.org/wiki/Reducing_agent) such as [sodium hydrosulfite](https://en.wikipedia.org/wiki/Sodium_hydrosulfite) or [thiourea dioxide](https://en.wikipedia.org/wiki/Thiourea_dioxide). The fabric is immersed in the dye bath, and after removal the vat dye [oxidizes](https://en.wikipedia.org/wiki/Redox) to its insoluble form, binding with high wash-fastness to the fiber. However, vat dyes, and especially indigo, must be treated after dyeing by 'soaping' to prevent the dye from rubbing (crocking) off. Vat dyes can be used to simultaneously dye the fabric and to remove underlying fiber-reactive dye (i.e., can dye a black cotton fabric yellow) because of the bleaching action of the reducing bath (see below). The extra complexity and safety issues (particularly when using strong bases such as lye) restrict use of vat dyes in tie-dye to experts.

Discharge agents are used to bleach color from previously-dyed fabrics, and can be used in a sort of reverse tie-dye. Household bleach (sodium hypochlorite) can be used to discharge fiber reactive dyes on bleach-resistant fibers such as cotton or hemp (but not on wool or silk), though the results are variable, as some fiber reactive dyes are more resistant to bleach than others. It is important to bleach only as long as required to obtain the desired shade, and to neutralize the bleach with agents such as [sodium bisulfite](https://en.wikipedia.org/wiki/Sodium_bisulfite), to prevent damage to the fibers. [Thiourea dioxide](https://en.wikipedia.org/wiki/Thiourea_dioxide) is another commonly used discharge agent that can be used on cotton, wool, or silk. A thiourea dioxide discharge bath is made with hot water is made mildly basic with sodium carbonate. The results of thiourea dioxide discharge differ significantly from bleach discharge. Discharge techniques, particularly using household bleach, are a readily accessible way to tie-dye without use of often messy and relatively expensive dyes.

Designs and patterns

[](https://en.wikipedia.org/wiki/File:Tie-dyed_lab_coat.jpg)

Tie-dying, particularly after the introduction of affordable [Rit](https://en.wikipedia.org/wiki/Rit) dyes, became popular as a cheap and accessible way to customize inexpensive T-shirts, singlet, dresses, jeans, army surplus clothing, and other garments into psychedelic creations.Some of the leading names in tie-dye at this time were Water Baby Dye Works (run by Ann Thomas and Maureen Mubeem), Bert Bliss, and [Up Tied](https://en.wikipedia.org/wiki/Up_Tied), the latter winning a [Coty Award](https://en.wikipedia.org/wiki/Coty_Award) for "major creativity in fabrics" in 1970. Up Tied created tie-dyed velvets and silk chiffons which were used for exclusive one-of-a-kind garments by [Halston](https://en.wikipedia.org/wiki/Halston), [Donald Brooks](https://en.wikipedia.org/wiki/Donald_Brooks), and Gayle Kirkpatrick, whilst another tie-dyer, Smooth Tooth Inc. dyed garments for [Dior](https://en.wikipedia.org/wiki/Christian_Dior_S.A.) and Jonathan Logan. In late 1960s London, Gordon Deighton created tie-dyed shirts and trousers for young fashionable men which he sold through the [Simpsons of Piccadilly](https://en.wikipedia.org/wiki/Simpsons_of_Piccadilly) department store in London.

**CLASS; J S S 2 WEEK 10**

**TOPIC; SINGING AND RECORDER PLAYING.**

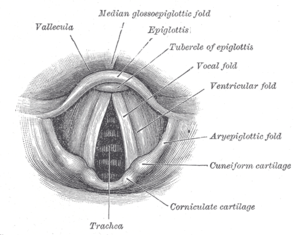
**Singing**

[](https://en.wikipedia.org/wiki/File:Harry_Belafonte_singing_1954.jpg)

**Singing** is the act of producing [musical](https://en.wikipedia.org/wiki/Music) sounds with the [voice](https://en.wikipedia.org/wiki/Human_voice), and augments regular [speech](https://en.wikipedia.org/wiki/Speech) by the use of [tonality](https://en.wikipedia.org/wiki/Tonality), [rhythm](https://en.wikipedia.org/wiki/Rhythm), the use of sustained tones and a variety of vocal techniques. A person who sings is called a **singer** or **vocalist**. Singers perform [music](https://en.wikipedia.org/wiki/Music) ([arias](https://en.wikipedia.org/wiki/Aria), [recitatives](https://en.wikipedia.org/wiki/Recitative), [songs](https://en.wikipedia.org/wiki/Song), etc.) that can be sung [without accompaniment](https://en.wikipedia.org/wiki/Acapella) or with [accompaniment](https://en.wikipedia.org/wiki/Accompaniment) by [musical instruments](https://en.wikipedia.org/wiki/Musical_instrument). Singing is often done in a group of other musicians, such as in a [choir](https://en.wikipedia.org/wiki/Choir) of singers with different voice ranges, or in an ensemble with instrumentalists, such as a [rock group](https://en.wikipedia.org/wiki/Rock_group) or [baroque ensemble](https://en.wikipedia.org/wiki/Baroque_orchestra). Singers may also perform as soloist with accompaniment from a piano (as in [art song](https://en.wikipedia.org/wiki/Art_song) and in some [jazz](https://en.wikipedia.org/wiki/Jazz) styles) or with a [symphony orchestra](https://en.wikipedia.org/wiki/Symphony_orchestra) or [big band](https://en.wikipedia.org/wiki/Big_band). There are a range of different singing styles, including [art music](https://en.wikipedia.org/wiki/Art_music) styles such as [opera](https://en.wikipedia.org/wiki/Opera) and [Chinese opera](https://en.wikipedia.org/wiki/Chinese_opera), [religious music](https://en.wikipedia.org/wiki/Religious_music) styles such as [Gospel](https://en.wikipedia.org/wiki/Gospel), [traditional music](https://en.wikipedia.org/wiki/Traditional_music) styles, [world music](https://en.wikipedia.org/wiki/World_music), [jazz](https://en.wikipedia.org/wiki/Jazz), [blues](https://en.wikipedia.org/wiki/Blues) and popular music styles such as [pop](https://en.wikipedia.org/wiki/Pop_music) and [rock](https://en.wikipedia.org/wiki/Rock_music).

Singing can be formal or informal, arranged or improvised. It may be done for religious devotion, as a hobby, as a source of pleasure, comfort, or ritual, as part of [music education](https://en.wikipedia.org/wiki/Music_education), or as a profession. Excellence in singing requires time, dedication, instruction, and regular [practice](https://en.wikipedia.org/wiki/Practice_(learning_method)). If practice is done on a regular basis then the sounds can become more clear and strong.[[1]](https://en.wikipedia.org/wiki/Singing#cite_note-Musicguides-1)Professional singers usually build their [careers](https://en.wikipedia.org/wiki/Careers) around one specific [musical genre](https://en.wikipedia.org/wiki/Musical_genre), such as [classical](https://en.wikipedia.org/wiki/Classical_music) or [rock](https://en.wikipedia.org/wiki/Rock_music), although there are singers with crossover success (singing in more than one genre). They typically take [voice training](https://en.wikipedia.org/wiki/Vocal_pedagogy) provided by voice teachers or [vocal coaches](https://en.wikipedia.org/wiki/Vocal_coach) throughout their careers.

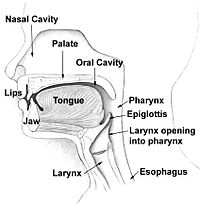
## **Voices**

[](https://en.wikipedia.org/wiki/File:Gray1204.png)

A labeled anatomical diagram of the [vocal folds](https://en.wikipedia.org/wiki/Vocal_folds) or cords

In its physical aspect, singing has a well-defined technique that depends on the use of the lungs, which act as an air supply, or [bellows](https://en.wikipedia.org/wiki/Bellows); on the [larynx](https://en.wikipedia.org/wiki/Larynx), which acts as a [reed](https://en.wikipedia.org/wiki/Reed_(instrument)) or [vibrator](https://en.wikipedia.org/wiki/Vibrator_(mechanical)); on the [chest](https://en.wikipedia.org/wiki/Chest) and head cavities, which have the function of an [amplifier](https://en.wikipedia.org/wiki/Amplifier), as the tube in a [wind instrument](https://en.wikipedia.org/wiki/Wind_instrument); and on the [tongue](https://en.wikipedia.org/wiki/Tongue), which together with the palate, teeth, and [lips](https://en.wikipedia.org/wiki/Lip) articulate and impose [consonants](https://en.wikipedia.org/wiki/Consonant) and [vowels](https://en.wikipedia.org/wiki/Vowel) on the amplified sound. Though these four mechanisms function independently, they are nevertheless coordinated in the establishment of a [vocal technique](https://en.wikipedia.org/wiki/Vocal_technique) and are made to interact upon one another.[[2]](https://en.wikipedia.org/wiki/Singing#cite_note-2) During passive breathing, air is inhaled with the diaphragm while exhalation occurs without any effort. Exhalation may be aided by the [abdominal](https://en.wikipedia.org/wiki/Abdominal), [internal intercostal](https://en.wikipedia.org/wiki/Internal_intercostal) and lower pelvis/pelvic muscles. Inhalation is aided by use of [external intercostal](https://en.wikipedia.org/wiki/External_intercostals), scalene and sternocleidomastoid. The [pitch](https://en.wikipedia.org/wiki/Pitch_(music)) is altered with the [vocal cords](https://en.wikipedia.org/wiki/Vocal_cords). With the lips closed, this is called humming.

### **Vocal resonation.**

[](https://en.wikipedia.org/wiki/File:Illu01_head_neck.jpg)

**Vocal resonation** is the process by which the basic product of phonation is enhanced in timbre and/or intensity by the air-filled cavities through which it passes on its way to the outside air. Various terms related to the resonation process include amplification, enrichment, enlargement, improvement, intensification, and prolongation, although in strictly scientific usage acoustic authorities would question most of them. The main point to be drawn from these terms by a singer or speaker is that the end result of resonation is, or should be, to make a better sound. There are seven areas that may be listed as possible vocal resonators. In sequence from the lowest within the body to the highest, these areas are the [chest](https://en.wikipedia.org/wiki/Chest), the [tracheal tree](https://en.wikipedia.org/wiki/Vertebrate_trachea), the larynx itself, the [pharynx](https://en.wikipedia.org/wiki/Human_pharynx), the [oral cavity](https://en.wikipedia.org/wiki/Human_oral_cavity), the [nasal cavity](https://en.wikipedia.org/wiki/Nasal_cavity), and the [sinuses](https://en.wikipedia.org/wiki/Sinuses).

[**How to Learn to Play an Instrument**](http://www.wikihow.com/Learn-to-Play-an-Instrument)

**Three Parts:**

[**Choosing an Instrument**](http://www.wikihow.com/Learn-to-Play-an-Instrument#Choosing_an_Instrument_sub)[**Learning Fundamentals**](http://www.wikihow.com/Learn-to-Play-an-Instrument#Learning_Fundamentals_sub)[**Making Music**](http://www.wikihow.com/Learn-to-Play-an-Instrument#Making_Music_sub)[**Community.**](http://www.wikihow.com/Learn-to-Play-an-Instrument#Questions_and_Answers_sub)

Learning to play an instrument the right way can be one of the most satisfying and exciting ways to spend your free time. With the right dedication and training, you can learn to play any style of sound, any kind of instrument, and start speaking the language of music. Pick an instrument from the suggestions offered below, learn to play with the correct fundamentals, and start making music.

### Part1

### Choosing an Instrument

1. [**EXPERIMENT WITH MANY INSTRUMENTS BEFORE COMMITTING TO ONE**](http://www.wikihow.com/Choose-an-Instrument)**.** Deciding to start learning to play an instrument can be as simple as picking one up at a store or a friend's house and making a few notes. You might not be making music yet, but try to get your hands on an instrument and get a feel for it in your hands before committing to buy one or signing up for lessons.
   * Typically, if you want to sign up for band or orchestra at your school, call-outs are regularly held during which the directors allow you to experiment with instruments and select one. Go to one of these call-outs and check out all the different kinds of instruments.
   * Most instrument stores are excited to share their instruments with you and let you give them a shot. They might even be able to show you a few things.

**2** [**TRY OUT THE CLASSIC PIANO**](http://www.wikihow.com/Play-the-Piano)**.** One of the most common instruments to start out on, used in many different styles and regions, is the piano. From children to adults, the piano is an extraordinarily popular instrument to play and learn. Because you can actually see the notes in front of you, the piano is also a good instrument to build your knowledge of how music works, and your music-reading. Once you've learned the piano, you can also specialize in:

* + [Organ](http://www.wikihow.com/Learn-to-Play-the-Organ)
  + [Accordion](http://www.wikihow.com/Play-the-Accordion)
  + [Synthesizer](http://www.wikihow.com/Utilize-Your-Synthesizer)
  + [Harpsichord](http://www.wikihow.com/Play-the-Keyboard)
  + Harmonium.

**3**[**THINK ABOUT ROCKING OUT ON GUITAR**](http://www.wikihow.com/Play-Guitar)**.** Other than the piano, the most popular instrument from Hank to Hendrix is the guitar. Technically a classical stringed instrument, the popular electric guitar put the instrument into pop culture like no other instrument. It's fun for rock and roll, jazz, and almost any kind of music. Guitar also provides a good foundation for different kinds of folk or rock instruments:

* + [Bass guitar](http://www.wikihow.com/Play-the-Bass-Guitar)
  + [Mandolin](http://www.wikihow.com/Tune-a-Mandolin)
  + [Banjo](http://www.wikihow.com/Play-a-Banjo)
  + [Harp](http://www.wikihow.com/Play-the-Harp)
  + [Dulcimer](http://www.wikihow.com/Tune-a-Lap-Harp).

**4 CONSIDER ORCHESTRAL STRINGED INSTRUMENTS.** If you want to play in an orchestra, a string quartet, or have a particular interest in classical music, a stringed instrument might be right for you.[[1]](http://www.wikihow.com/Learn-to-Play-an-Instrument#_note-1) These instruments are also commonly used for folk music and other acoustic sounds. You might consider the following instruments:

* + [Violin](http://www.wikihow.com/Play-the-Violin)
  + [Viola](http://www.wikihow.com/Play-Viola)
  + [Cello](http://www.wikihow.com/Play-the-Cello)
  + [Double bass](http://www.wikihow.com/Play-String-Bass) (also known as the upright bass).

**5 TRY YOUR HAND AT THE BRASS FAMILY.** Brass instruments are so-called because they are traditionally extremely long metal tubes, bent in intricate patterns, featuring valves or keys to change the pitch, and made entirely of brass. Now they're generally made of different metals, but still work by vibrating your lips inside a metal mouthpiece. They're used in concert bands, jazz, marching bands, and many other types of music. Brass instruments include:

* + [Trumpet](http://www.wikihow.com/Play-the-Trumpet)
  + [Trombone](http://www.wikihow.com/Play-the-Trombone)
  + [Tuba](http://www.wikihow.com/Play-a-Tuba)
  + [French horn](http://www.wikihow.com/Play-the-French-Horn)
  + [Baritone](http://www.wikihow.com/Play-the-Baritone)
  + [Sousaphone](http://www.wikihow.com/Play-the-Sousaphone).

**6 CHECK OUT THE WOODWINDS.** Like brass instruments, woodwinds are played with the power of the breath. While brass instruments use mouthpieces to blow through and vibrate your lips, however, woodwinds use reeds that vibrate themselves when you blow over them. They're made of many different combinations of metals, woods, and reeds, and no orchestra or jazz combo is complete without them. Woodwind instruments include:

* + [Flute](http://www.wikihow.com/Play-the-Flute), piccolo, or fife
  + [Saxophone](http://www.wikihow.com/Get-Started-with-the-Saxophone)
  + [Clarinet](http://www.wikihow.com/Play-the-Clarinet)
  + [Oboe](http://www.wikihow.com/Play-the-Oboe)
  + [Bassoon](http://www.wikihow.com/Play-the-Bassoon)
  + [Harmonica](http://www.wikihow.com/Play-a-Harmonica).

**7 BANG ON SOME PERCUSSION.** Holding down the bottom-end of most music groups are the percussionists. In rock bands and jazz combos, the drummer typically plays a drum kit, made of several drums organized at once to play simultaneously with sticks and pedals. In orchestras and concert bands, percussionists perform a quite large variety of instruments that are played by striking them with hands, mallets, or sticks. Percussion instruments include:

* + [The drum set](http://www.wikihow.com/Play-Drums)
  + [vibraphone](http://www.wikihow.com/Play-the-Vibraphone), [Marimba](http://www.wikihow.com/Play-the-Marimba), and [xylophone](http://www.wikihow.com/Make-a-Xylophone)
  + [Glockenspiel](http://www.wikihow.com/Play-a-Glockenspiel)
  + [bells](http://www.wikihow.com/Play-Handbells) and [Cymbals](http://www.wikihow.com/Choose-a-New-Cymbal-for-Your-Drums)
  + [Congas](http://www.wikihow.com/Buy-a-Conga-Drum) and [bongos](http://www.wikihow.com/Play-the-Bongos)
  + [Tympani](http://www.wikihow.com/Play-the-Timpani)
  + Woodblocks, cowbells, and triangles.

**8** **CONSIDER OTHER VARIETIES OF INSTRUMENT.** There are literally thousands of instruments you could take up and hundreds of teachers who offer lessons. Explore the world of music and listen for things you like and you might enjoy playing. Some difficult-to-categorize instruments:

* + [Harmonica](http://www.wikihow.com/Play-a-Harmonica)
  + [Djembe](http://www.wikihow.com/Play-African-Drums)
  + [Concertina](http://www.wikihow.com/Play-the-Concertina)
  + [Bagpipes](http://www.wikihow.com/Learn-to-Play-the-Great-Highland-Bagpipe)
  + [Singing bowls](http://www.wikihow.com/Play-a-Singing-Bowl)
  + [Ukulele](http://www.wikihow.com/Play-the-Ukulele)
  + Mbira
  + Sitar.

### Part2

### Learning Fundamental

**1 GET THE CORRECT SIZE OF INSTRUMENT.** You want to make sure you end up with both an instrument that works for your size and your hands, as well as an appropriate size of that instrument for you. Long and slender fingers are desirable for string instruments, while some brass instruments are somewhat heavy and require the strength and lung-capacity necessary to play them.

* + Some instruments, like violin and guitar, are available in lots of different sizes that can be customizable for your abilities and your size. Child-sizes are common. Look into your options, and get something in your budget that feels comfortable. Talk to the employees at the instrument store to get a sense of appropriate sizes and models.
  + Some band directors try to steer people away from particular instruments like trumpet or saxophone because they're very popular. Pursue the instrument you want to play. There are one-handed guitarists and petite tuba players.

**2 LEARN TO HOLD AND TUNE YOUR INSTRUMENT PROPERLY.** You can very quickly develop bad habits by playing your instrument without the right posture, or by playing it out of tune. You need to develop the proper technique with your particular instrument, holding it, sitting right, and blowing or striking the strings in the correct position.

* + Have your band director, teacher, or music store employee to give you a tutorial on the proper technique for your instrument. If you don't have access to teachers, videos and diagrams online are excellent resources for technique.
  + Spend time tuning every time you sit down to play. Even unexpected instruments like the trombone need tuned, or you'll develop the wrong positioning on the slide when you're trying to hit the notes.

**3** [**LEARN TO READ MUSIC NOTATION**](http://www.wikihow.com/Read-Music)**.** Though it can be a bit like learning a new language, learning how to read music will expand your musical horizons considerably. You can learn any song just by looking at the sheet music, noting the melody, the rhythm, and even the feeling of the music in the page directions. It's an invaluable tool for students of any instrument.

* + Make sure you learn to [read bass clef](http://www.wikihow.com/Read-the-Bass-Clef) if you're learning bass guitar or low brass instruments like trombone, baritone, and tuba.
  + [Learn and practice playing scales](http://www.wikihow.com/Learn-Scales). On all instruments, playing scales will help you improve faster technically and help you become more familiar with the correct notes, building your muscle memory toward them.
  + As you progress, consider learning a little theory. Knowledge of simple chords and scales will broaden your musical imagination, you can do a great deal with a just a little. Ask a friend to show you, or find an online resource. Learn these basic structures at a comfortable pace, and you'll soon be tackling more advanced ideas.

**4 PRACTICE CONSTANTLY.** The difference between learning an instrument and giving it up is practice. Develop a practice routine and commit to it. Practice at least 30 minutes a day, every day, to develop the right consistent habits and learn to play the instrument like it deserves to be played.

* + Consider taking private lessons. Instructional books and YouTube videos can only take you so far, especially with instruments like the violin or wind instruments. [Suzuki method](http://www.wikihow.com/Use-Exquisite-Bowing-Techniques-on-a-Violin) classes spend a great deal of time (sometimes years) playing on fake violin-shaped instruments to get the correct bowing technique. Having one-on-one attention is invaluable when you're trying to learn an instrument.
  + Make it easy to practice. Find a nice place in the house for your instrument. Store it where you spend your leisure time, or someplace where you're going to see it often during your day. The more accessible your instrument, the more you will pick it up and play it. Eventually you'll be picking it up every free minute you have.

**5 GET RHYTHM.** It's very important to always practice playing in time. One of the signs of a novice player is that they often will play the notes as quickly as they are able, rather than playing them appropriately. When you learn the difference between playing in 4/4 time and waltz, when you learn the difference between quarter notes and whole notes, these things will be more clear, but it's critical to play according to the rhythm of the song that you're learning to play. Even if you're practicing scales, play in time.

* + Find a beat off of which to work: there are free metronomes online. A ticking clock or the radio will function well for you too.

**6 TAKE CARE OF YOUR INSTRUMENT.** It's no fun to play a trombone with a sticky slide, a sax with old reeds, or a guitar with gnarly green strings. Learn how to take care of your instrument, taking the time to clean, maintain, and respect it for the piece of art that it is. You won't develop bad habits in your technique and you'll get more life out of your instrument, not to mention a cleaner and more true sound. Take a few minutes before and after every practice session to take care of your instrument and do it right.