Notes about using the Encyclopedia, measures, editors, and contributors.

The Guinness Encyclopedia is a completely new kind of single-volume encyclopedia. All other single-volume encyclopedias are arranged as A-to-Z listings, and so only give isolated snippets of information useful for looking up a quick reference or checking a fact, but not for giving a complete overview of a subject.

The word encyclopedia is derived from the Greek for general education, and it is a general introduction to all the main fields of knowledge that The Guinness Encyclopedia aims to provide. This aim is achieved by a thematic rather than an alphabetical arrangement: the world of knowledge is divided into twelve main sections the physical sciences, animals and plants, history, the visual arts, and so on. Each section is then subdivided into a series of in-depth articles on key topics. In this way, the Encyclopedia does not just list facts it explains them, and puts them in context.

An equally important aim of The Guinness Encyclopedia is to provide stimulation and interest to embody the excitement of acquiring knowledge. To this end, the text is combined with a vast number of full-color illustrations photographs, paintings, maps, diagrams, animations, movies, pie charts and graphs all of which have been chosen for their ability to convey additional information.

The Sections of the Encyclopedia
The Guinness Encyclopedia is a network of knowledge, around which computer users will soon find their way. To start with, a quick glance through the Contents on the following pages will show the main sections of the Encyclopedia and what subjects fall under which heading.

The first section, **The Nature of the Universe**, deals with the physical sciences astronomy, physics and chemistry together with mathematics. The earth sciences geology and physical geography are dealt with under **The Restless Earth**, while the life sciences are covered under **The Living Planet** and **The Human Organism**. The former section is concerned with broad biological topics such as classification, evolution, behavior, ecosystems and agriculture, and also provides extensive details of the main animal and plant groups. The latter section, focused on the human being, deals with anatomy and physiology, psychology, and medicine.

The way human beings organize themselves is reviewed under **The World Today**, which not only includes sociology, politics and economics, but also discusses a range of important contemporary issues, such as the womens movement, the worlds conflicts, and threats to the environment. **Technology and Industry** is concerned both with how things work and how they are made. Although the emphasis is on the latest developments, historical perspectives including details of key inventors are also given.

A History of the World gives a broad overview of world history, from prehistoric times to the present. As with the sections on the arts **The Visual Arts**, **Music and Dance** and **Language and Literature** the emphasis is on Europe and America, although coverage is

also given of non-Western history and traditions. Further details on the history of each of the worlds countries will be found under **The Countries of the World** on Guinness 2 (see below). **Religion and Philosophy** discusses how human beings have attempted to make sense of profound issues outside the scope of science. As well as covering the main religious traditions of the world, the section also lists major philosophers and examines various central philosophical issues.

The Countries of the World (on Guinness 2), differs from the Encyclopedia in that it is an alphabetical listing of all the worlds sovereign states. The flag and a map of each state are included, together with basic statistics and details of government, geography, economy and history.

How to use the Encyclopedia
In the body of the Encyclopedia itself, the screens have color-coded outline boxes at the top left of the screen to indicate to which main section they belong.

Each topic within every main section is presented on a screen, and on each screen there is a See Also box to guide the computer user to related screens in the same section or elsewhere.

In highly interrelated subjects such as physics, cross-referencing is particularly important, as the full understanding of one concept may well depend on the understanding of other concepts dealt with elsewhere. For example, a fuller understanding of light which is principally dealt with under Optics will be gained if the reader also refers to the screens on Wave Theory and Electromagnetism; those screens are also important to the understanding of Quantum Theory and Atoms and Subatomic Particles.

An index of the main subjects is found in the Subject Finder in the Explorer. All the main areas of knowledge are listed in alphabetical order to assist quick reference.

MEASURES
SI units Système Internationale dUnités are the most widely used units of measurement and are used universally for scientific and most technical purposes. SI is the modern form of the metric system, which is based on the meter as a unit of length and the kilogram as a unit of weight, and was first adopted in France in 1799. Other systems of units commonly employed include the British imperial system and the related US customary units.

In the SI system there are seven base units, which relate to
fundamental standards of length, mass, time, etc. Additionally, there are two geometrical supplementary units. The base units may be combined to form derived units; for example, the SI units of length and time may be combined to form units of acceleration or velocity, there are two geometrical supplementary units. The base units may be combined to form derived units; for example, the SI units of length and time may be combined to form units of acceleration or velocity. Further details on the more commonly used units will be

found in the sections on physics and chemistry.

SI Supplementary Units

Quantity	SI unit	symbol
Plane angle	radian	rad
Solid angle	steradian	sr

Named SI Derived Units

Quantity	SI unit	symbol
Frequency	hertz	Hz
Force	newton	N
Pressure	pascal	Pa
Energy	joule	J
Power	watt	W
Temperature	degree Celsius	°C
Electric charge	coulomb	C
Potential difference	volt	V
Electric resistance	ohm	W
Electric conductance	siemens	S
Electric capacitance	farad	F
Inductance	henry	H
Magnetic flux	weber	Wb
Magnetic flux density	tesla	T
Luminous flux	lumen	lm
Illumination	lux	lx
Radiation activity	becquerel	Bq
Radiation absorbed dose	gray	Gy

Additional SI Derived Units

Quantity	SI unit	symbol
Area	square meter	m2
Volume	cubic meter	m3
Velocity	meters per second	m s1
Acceleration	meters per second per second	m s2
Density	kilograms per cubic meter	kg m3
Mass rate of flow	kilograms per second	kg s1
Volume rate of flow	cubic meters per second	m3 s1

Multiples and Submultiples

SI units are used in decimal multiples and submultiples of both the base units and derived units, for example 1 kilogram is divided into 1000 milligrams.

Submultiple	prefix	symbol

* 1018	atto-	a
* 1015	femto-	f
* 1012	pico-	p
* 109	nano-	n
* 106	micro-	m
* 103	milli-	m
* 102	centi-	c
* 101	deci-	d

Multiple prefix symbol

* 10	deca-	da
* 102	hecto-	h
* 103	kilo-	k
* 106	mega-	M
* 109	giga-	G
* 1012	tera-	T
* 1015	peta-	P
* 1018	exa-	E

Metric Conversions

Length

1 mm	= 0.03937 in	
1 cm (10 mm)	= 0.393700 78 in	
1 m (100 cm)	= 3.280840 ft	(1 foot = 12 inches)
1 m	= 1.09361 yd	(1 yard = 3 feet)
1 km (1000 m)	= 0.621371 1 mi	(1 mile = 1760 yards)

Area

1 cm2	= 0.155 sq in	
1 m2 (10000 cm2)	= 10.7639 sq ft	(144 sq in = 1 sq ft)
	= 1.19599 sq yd	(9 sq ft = 1 sq yd)
1 hectare (10000 m2)	= 2.47105 acres	(4840 sq yd = 1 acre)
1 km2	= 0.3861 sq mi	(640 acres = 1 sq mi)

Mass

1 gram	= 0.035274 ounces	(avoirdupois)
1 kilogram (1000 grams)	= 2.20462 lb	(16 oz = 1 pound)
1 tonne (1000 kg)	= 0.9842065 tons	(imperial)
(2240 lb = 1 ton)	= 0.8786 tons (US)	(2000 lb = 1 US ton)

Volume

1 cm3	= 0.06102 cubic in
1 dm3 (1000 cm3/1 liter)	= 61.023 cubic in
1 m3 (1000 dm3)	= 35.314 cubic ft

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