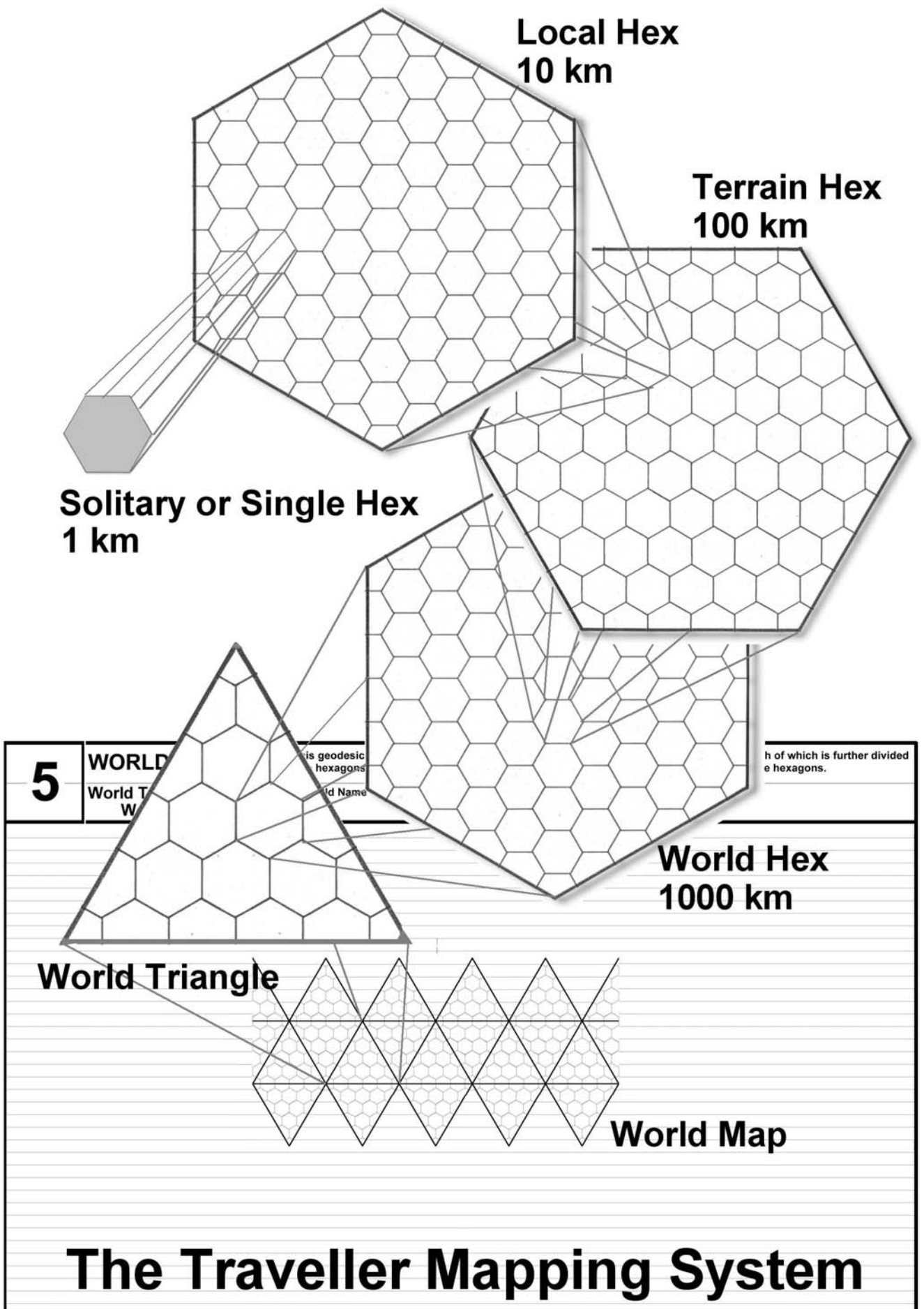
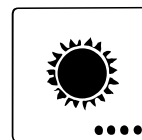






Mapping Worlds

The surface features of worlds are the key to exploring and exploiting worlds. Terrain details the character of large and small locations, controls or bars movement by vehicles, and records positions of objects and characters.

World mapping divides the surface of a world into a series of hexagons (hexes) which define location and help in computing movement. Worlds are mapped with coarse scale World Hexes grouped into triangles to form a hexagon based world map. Each of the World Hexes is further divided into Terrain hexes.

THE TRAVELLER MAPPING SYSTEM

Worlds (planets or satellites) are mapped with a hierarchy of hexes which record location, terrain, and other details.

Hexagons. Mapping is based on six-sided hexagons. Hexagon cells for mapping have long been a foundation of wargaming. They allow more flexibility than square based mapping: distance can be counted more easily and more accurately, and more directions of movement are possible.

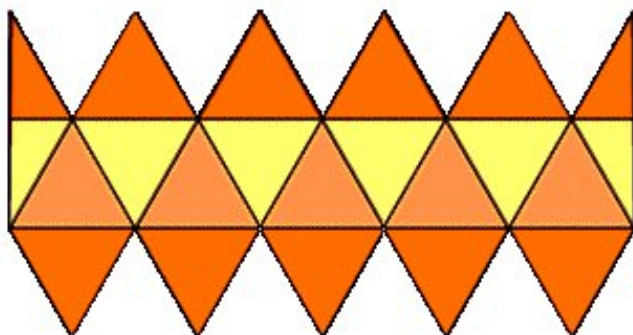
The System Hierarchy

The **Traveller Mapping System** (TMS) is a hierarchy of hexagon-based maps created to describe and detail worlds as the information is needed in the course of adventures. The TMS hierarchy consists of:

The World Map. The World Map is a flattened icosahedron (a twenty-sided regular polygon the same shape as a 20-sided die) to represent the spherical world surface.



The twenty triangles of the icosahedron are flattened into a map for ease of printing and reading.



On this map, the top is the North Pole (the bottom is the South Pole) and the left (West) side wraps to touch the right (East) side. The East and West edge triangles are divided to more easily fit on the page.

The World Triangle. Each of the triangles of the World Map is (roughly) a Continent or an Ocean.

The World Hex (1000 km). The surface of the world is

divided into World Hexes of constant size: 1000 km in diameter. While all worlds have the same number of World Triangles (twenty), larger worlds have more World Hexes than smaller worlds.

The Terrain Hex (100 km). The World Hex is divided into 75 Terrain Hexes. Each is 100 km in diameter and allows recording or interacting with terrain in greater detail.

The Local Hex (10 km). The Terrain Hex is divided into 75 Local Hexes. Each is 10 km in diameter and allows very fine scale mapping of locations.

The Single Hex (1 km). The Local hex is divided into 75 Single Hexes, each 1 km in diameter. The Single Hex is the ultimate mapping hex.

Pents. Technically, the hexagons where five Triangles meet are pentagons (or pents). They are treated in most respects like World Hexes.

There are twenty Pents on a World Map.

Movement Using The Traveller Mapping System.

The TMS allows easy distance counting. All hex distances are multiples of 10 km. A route counted in World Hexes gives the distance in thousands of kilometers; a route counted in Terrain Hexes gives the distance in hundreds of kilometers.

Tracing Routes. Any number of routes can be traced from center-of-hex to center-of-hex.

Crossing Gaps. The gaps between World Triangles are zero-distance. A route can be traced across a gap to the other half of a hex with no additional distance cost.

TERRAIN

Terrain is the nature of individual surface features on a world. Terrain governs, enhances, or obstructs movement; it identifies important resources; it reflects points of interest or danger.

Terrain Types. A selection of 36 Terrain types details most surface feature situations to be encountered.

Terrain Symbols. The Terrain Symbol chart provides hand-drawing compatible map symbols for use with TMS.

Terrain Numbers. The 36 Terrain Types are also identified by numbers using only the digits 1 through 6. The available numbers 11 through 66 can be generated randomly (when needed) using two dice.

Terrain Effects. The specific effects of terrain are detailed in the Terrain chapter.

MAPPING WORLDS

Worlds are mapped using the principals and charts of the Traveller Mapping System.

The Three Mapping Principles

The **Traveller Mapping System** is based on three Principles.

- **Map Only As Really Necessary.**
- **Map At The Highest Possible Scale.**
- **Involve The Players.**

Map Only As Really Necessary. The charts allow random selection of hexes with a few die rolls. There is no need to create complete or comprehensive maps before they are needed.

Characters on a ship entering a system can consult a UWP and databases for a general idea about the local world. The UWP provides enough basic information for most purposes.

Map At The Highest Scale Possible. Because terrain can be created as needed, reference maps for players should be enough to provide them information without needless detail. The twenty triangles of a World Map can give a basic idea of continents and oceans.

More detail and specific maps are called for only when the characters see a need.

Involve The Players. When map details are required, recruit the players to make die rolls which locate or identify terrain or details.

When a character says, "I want to see more near our destination," he becomes more involved in the process. Ships scanners, world maps in Library Data, or conversations with non-player characters can provide the needed information. Once that process has been resolved, the referee provides a blank World Hex (or Terrain Hex, or Local Hex) map and the player, with guidance from the referee, creates and enters t

The Referee's Responsibility

The referee can (and should) determine specific terrain details which are important to an adventure. He can plan and map the strategic base the enemy will defend, or note the details of the strange alien city at the edge of the remote system.

But, the other details: the other worlds in the system, the terrain near the starport, or strange mountain valleys along the way are all easily generated by involving the players as the information becomes necessary.

The Three Principles have benefits for the Referee. The burden of creating terrain is shared with the players, and when used properly transforms from a burden to an element of the adventure. Each new element of terrain involves the players and their imaginations; it is often the players who then say, "Let's see what is past that hill." Or "Why is that valley so long?" and those questions provide more support for an interesting adventure.

CREATING WORLD MAPS

The Mapping Charts detail the mapping process. The Charts include:

- Chart 1. World Dimensions
- Chart 2. The World Map (Example)
- Chart 3. The World Triangles.
- Chart 4. The World Hex.
- Chart 5. The Terrain Hex.
- Chart 6. The Local hex.
- Chart 7. The Single Hex.
- Chart 8. Terrain Types.
- Chart 9. Terrain Symbols (by hand).
- Chart 10. Randomly Selecting Places.
- Chart 11. Creating World Maps.
- Chart 12a. Populating World Hexes-1.
- Chart 12b. Populating World Hexes-2.
- Chart 13a. Populating Terrain Hexes-1.
- Chart 13b. Populating Terrain Hexes-2.
- Chart 14a. Populating Local Hexes-1.
- Chart 14b. Populating Local Hexes-2.

Absolute Mapping

It is possible to begin with a blank map and follow the process to completely define every hex and all terrain for a world. The charts make this process possible. Chart 10 governs creating the World Map, and Charts 11a and 11b govern filling in the Terrain Hexes of a World Hex.

Sensor Mapping

Space Sensors can provide the information available to for the creation of maps as it becomes available.

At each distance, available sensors produce information (in an interactive process involving the referee, the player, the tables, and dice).

The Space Sensors Charts shows the information that ordinary sensors can acquire in the course of operation.



World Dimensions

The **Traveller Mapping System** uses 12 different size World Maps corresponding to UWP Size.
The World Map Appendix provides these individual blank maps.

World Map

WORLD MAP DIMENSION DETAILS

Size	1	2	3	4	5	6	7	8	9	10
Miles	1,000	2,000	3,000	4,000	5,000	6,000	7,000	8,000	9,000	10,000
Diameter	1,600	3,200	4,800	6,400	8,000	9,600	11,200	12,800	14,400	16,000
Radius	800	1,600	2,400	3,200	4,000	4,800	5,600	6,400	7,200	8,000
Circumference	5,027	10,053	15,080	20,106	25,133	30,159	35,186	40,212	45,239	50,265
Equator	5,027	10,053	15,080	20,106	25,133	30,159	35,186	40,212	45,239	50,265
Triangle Edge	1,005	2,011	3,016	4,021	5,027	6,032	7,037	8,042	9,048	10,053
Hex	1,005	1,005	1,005	1,005	1,005	1,005	1,005	1,005	1,005	1,005
Hexes/Triangle	1	3	6	10	15	21	28	36	45	55
World Hexes	20	60	120	200	300	420	560	720	900	1100
Volume=	.002	.01	.05	.125	.25	.42	.67	1	1.424	1.95
(Density 1.0)*G=	.125	.25	.375	.50	.625	.75	.875	1	1.125	1.25

Dimensions in Km less noted (World Size equals diameter of the World in Miles). * Assumes Density comparable to Terra.
World Triangles. World Triangle size varies with World Size. A World Triangle edge has hexes equal to World Size.

WORLD MAP DIMENSION DETAILS

Size	11	12	13	14	15	16	17	18	19	20
Miles	11,000	12,000	13,000	14,000	15,000	16,000	17,000	18,000	19,000	20,000
Diameter	17,600	19,200	20,800	22,400	24,000	25,600	27,200	28,800	30,400	32,000
Radius	8800	9600	10400	11200	12000	12800	13600	14400	15200	16000
Circumference	55,292	60,319	65,345	70,372	75,398	80,425	85,451	90,478	95,504	100,531
Equator	55,292	60,319	65,345	70,372	75,398	80,425	85,451	90,478	95,504	100,531
Triangle Edge	11,058	2,011	3,016	4,021	5,027	6,032	7,037	8,042	9,048	10,053
Hex	1,005	1,005	1,005	1,005	1,005	1,005	1,005	1,005	1,005	1,005
Hexes/Triangle	66	78	91	105	120	136	153	171	190	210
World Hexes	1320	1560	1820	2100	2400	2720	3060	3420	3800	4200
Volume=	2.6	3.375	4.29	5.35	6.59	8	9.59	11.39	13.39	15.62
(Density 1.0)*G=	1.375	1.5	1.625	1.75	1.875	2.0	2.125	2.25	2.375	2.5

Dimensions in Km less noted (World Size equals diameter of the World in Miles). * Assumes Density comparable to Terra.
World Triangles. World Triangle Size varies with World Size. World Triangle Edge has hexes equal to World Size.

ALTERNATE DENSITIES-1

Size	1	2	3	4	5	6	7	8	9	10
World Hexes	20	60	120	200	300	420	560	720	900	1100
(Density 1.1) *G=	.14	.30	.49	.72	1.00	1.32	1.69	2.13	2.64	3.22

Comments= A Size=5 World with 1.1 Density has 1 G Surface Gravity and probably high concentrations of heavy metals.

ALTERNATE DENSITIES-2

Size	11	12	13	14	15	16	17	18	19	20
World Hexes	1320	1560	1820	2100	2400	2720	3060	3420	3800	4200
(Density 0.4) *G=	.55	.60	.65	.70	.75	.80	.85	.90	.95	1.00

Comments= A Size=20 World with 0.4 Density has 1 G surface Gravity and six times the surface hexes of Earth. It is probably low in heavy metals.



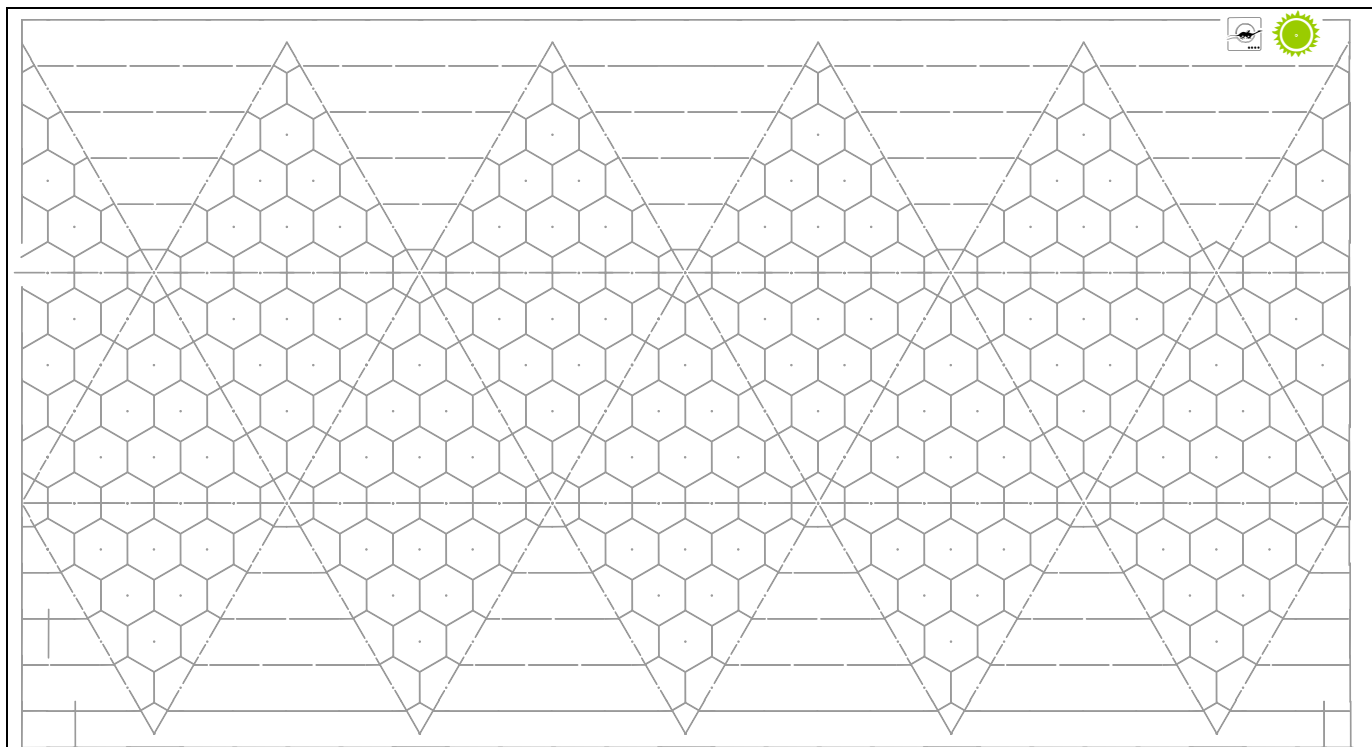


The World Map

The **Traveller Mapping System** uses constant size world hexes to map worlds over a wide range of sizes.
The World Map Appendix provides these individual blank maps.

World Map

EXAMPLE: SIZE **5** WORLD MAP



Example World Map-5

This world is Size=5 (a diameter of 5,000 miles).

Each World Hex is 1,000 km across.

Each World Triangle edge is Size times 1000 km, or Size in World Hexes.

Equatorial Circumference = Size times World Size times 5 in world Hexes.

Equatorial Circumference = World Triangle Edge times 5.

The Northern and Southern World Triangles fold to create a sphere. Moving from one edge of a World Triangle to its lateral partner traverses no space and costs no time.



The World Triangle

The World Triangle is the basic division of a world's surface.

World Triangle

THE WORLD TRIANGLE

Worlds (planets, satellites) are mapped using a standard geodesic grid composed on constant size World Hexes.

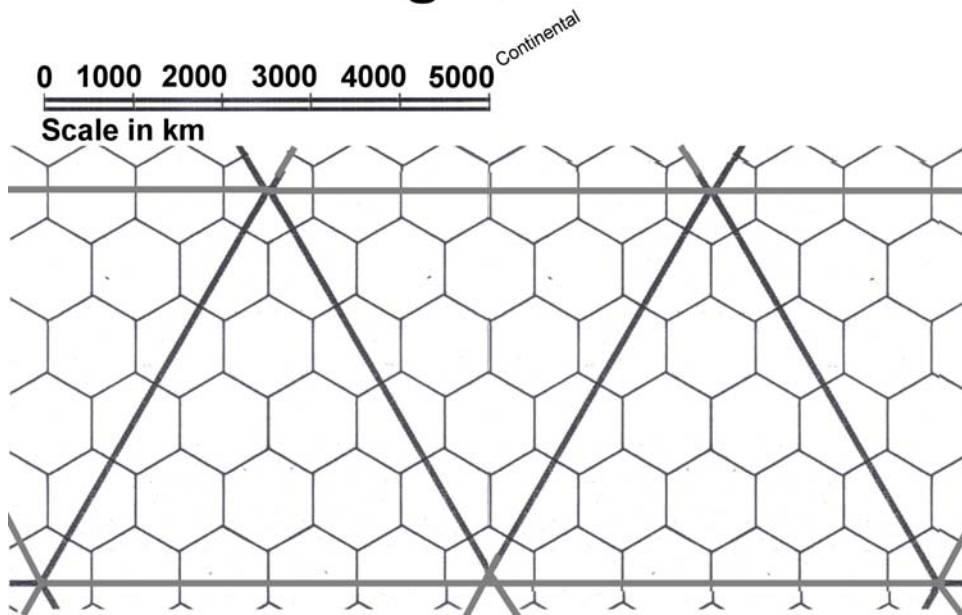
The World Triangle

Each World is divided into 20 World Triangles, each of which has a number of World Hexes along each edge equal to World Size.

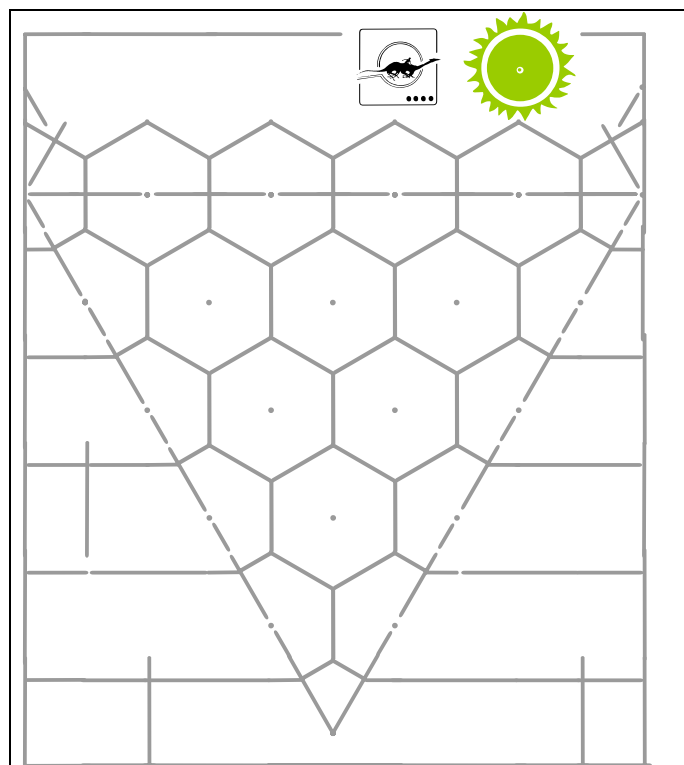
Continental. The World Triangle is described as Continental in size, a fact which makes the term variable from world to world. Continental can refer to an area as small as 1,000 km (on a Size-1 world) to 10,000 km (on a Size-10 World) or larger.

Terrain. World Triangles are not described in terms of Terrain. Each of its component World Hexes is characterized by Terrain.

World Triangles



EXAMPLE: SIZE 5 WORLD TRIANGLE





The World Hex

The World Hex is 1000 km in diameter (count 10 hexes from any edge to any opposite edge).

World Hex

THE WORLD HEX

Worlds (planets, satellites) are mapped using a standard geodesic grid composed on constant size World Hexes.

Each World Hex is 1000 km from vertex to vertex or 850 km flat to flat.

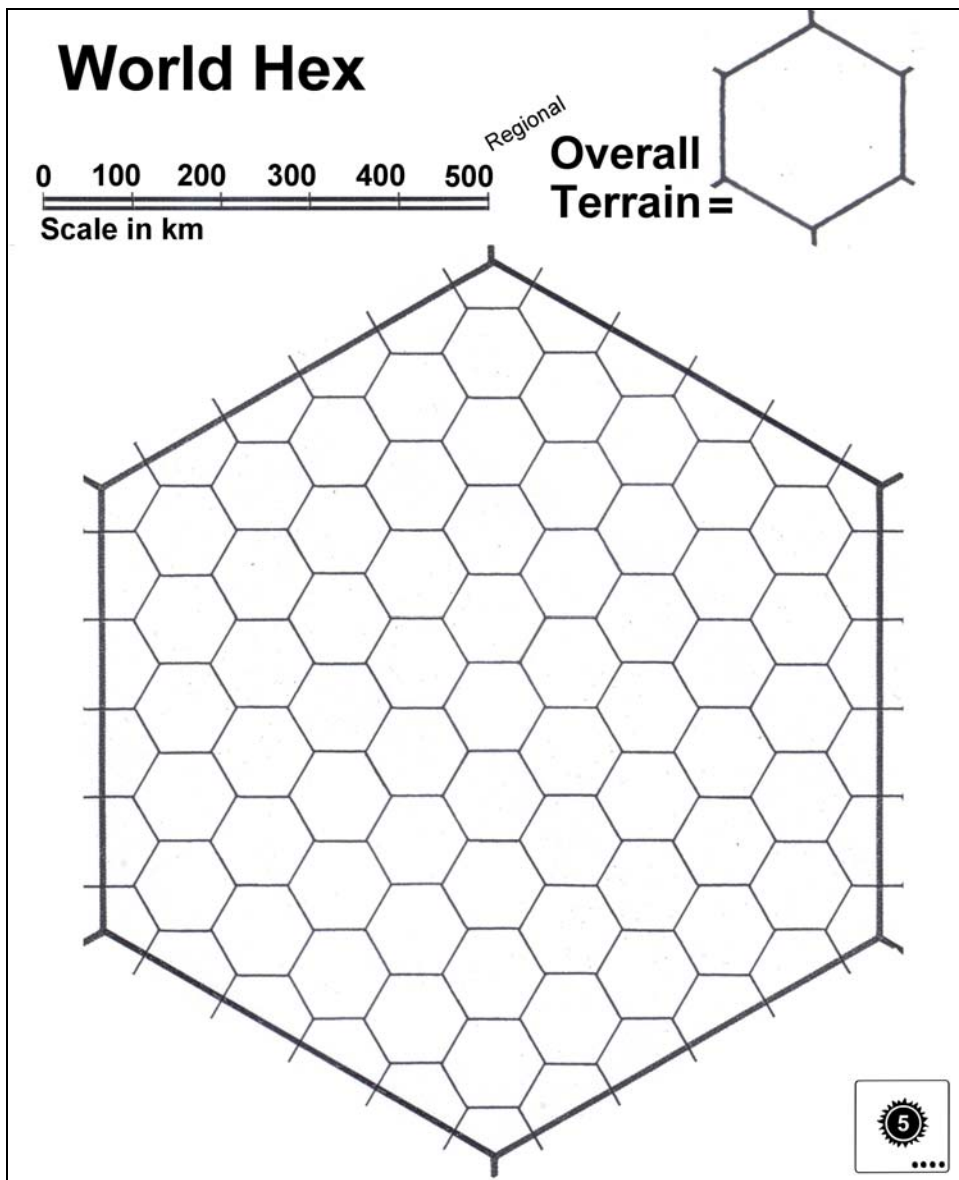
Terrain

Each World Hex overall has a basic terrain designation (or sometimes a combination of designations):

The **Overall Terrain Hex** shows this value.

The hexagons within the large World Hex are Terrain Hexes. A World Hex is composed of 75 Terrain Hexes.

A Terrain Hex is 100 km wide (flat to flat).





The Terrain Hex

The Terrain Hex is 100 km in diameter (count 10 of 10 km each from any edge to any opposite edge).

Terrain Hex

THE TERRAIN HEX

Worlds (planets, satellites) are mapped using a standard geodesic grid composed of constant size World Hexes.

The World Hex

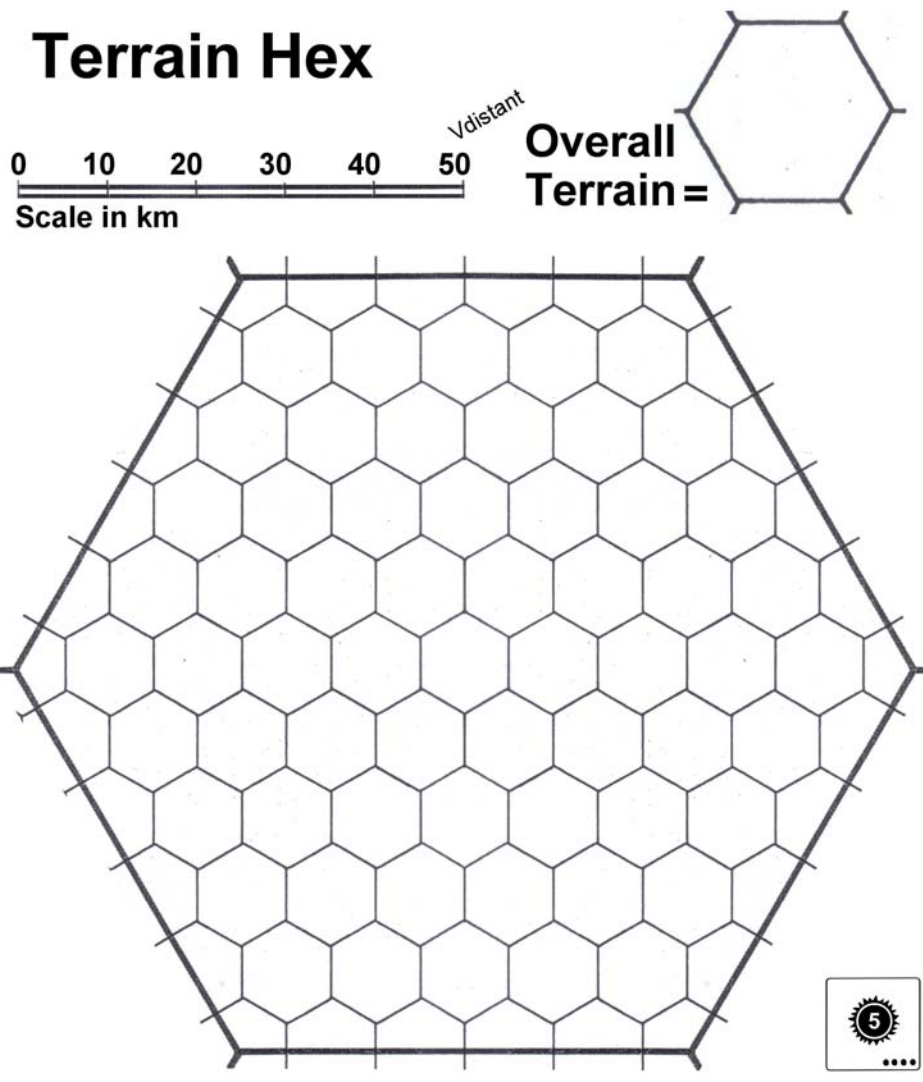
Each World Hex is 1000 km from vertex to vertex or 850 km flat to flat.

The Terrain Hex

A World Hex is composed of 60 Terrain Hexes. A Terrain Hex is 100 km wide (flat to flat) or 114 km vertex to vertex.

The Local Hex

A Terrain Hex is composed of 60 Local Hexes. Each Local Hex is 10 km wide (flat to flat) or 11.4 km vertex to vertex.





The Local Hex

The Local Hex is 10 km in diameter (count 10 hexes of 1 km each from any edge to any opposite edge).

Local Hex

THE TERRAIN HEX

Worlds (planets, satellites) are mapped using a standard geodesic grid composed on constant size World Hexes.

The World Hex

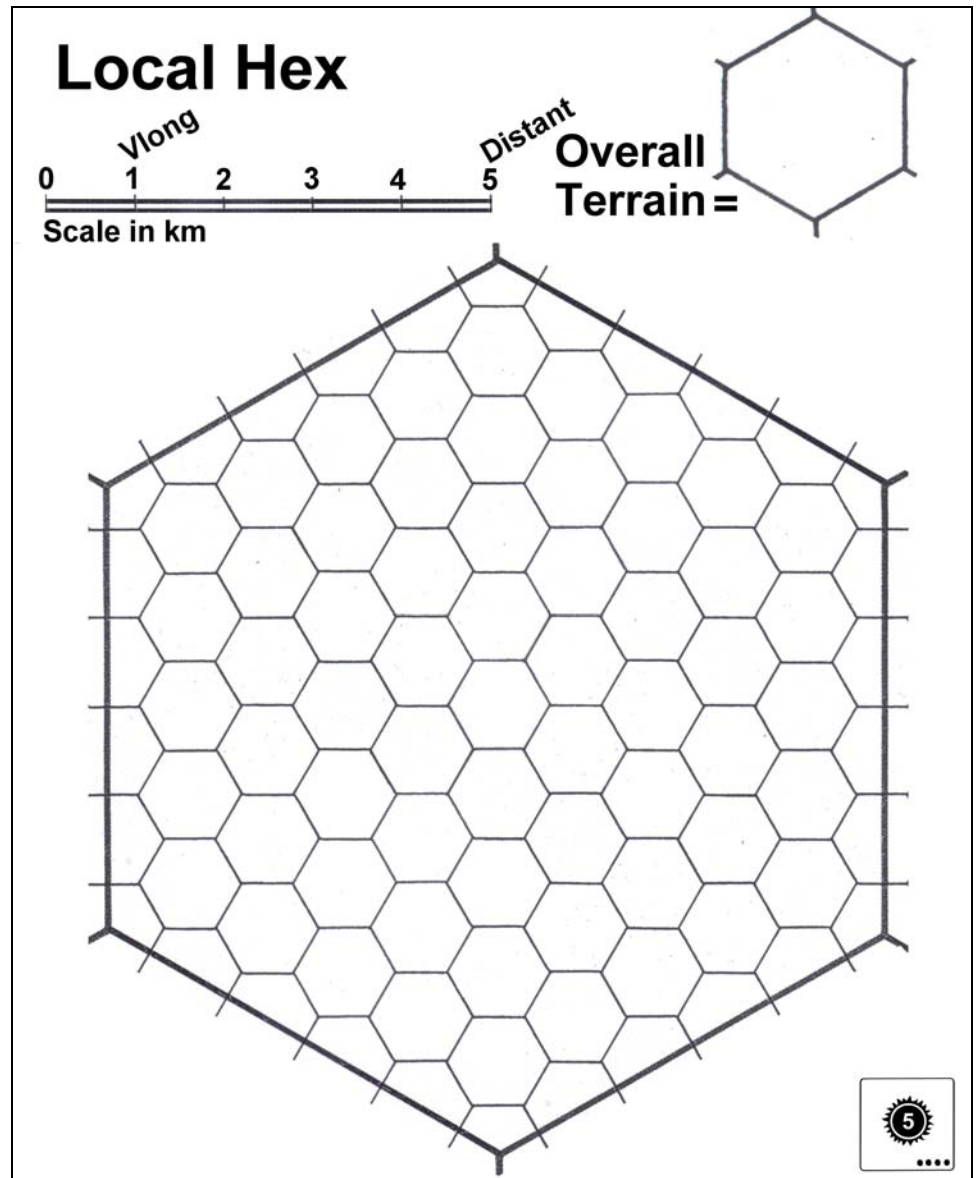
Each World Hex is 1000 km from vertex to vertex or 850 km flat to flat.

The Terrain Hex

A World Hex is composed of 60 Terrain Hexes. A Terrain Hex is 100 km wide (flat to flat) or 114 km vertex to vertex.

The Local Hex

A Terrain Hex is composed of 60 Local Hexes. Each Local Hex is 10 km wide (flat to flat) or 11.4 km vertex to vertex.





The Single Hex

The Single Hex is 1 km in diameter (count 10 hexes of 100 meters from any edge to any opposite edge).

Single Hex

THE TERRAIN HEX

Worlds (planets, satellites) are mapped using a standard geodesic grid composed on constant size World Hexes.

The World Hex

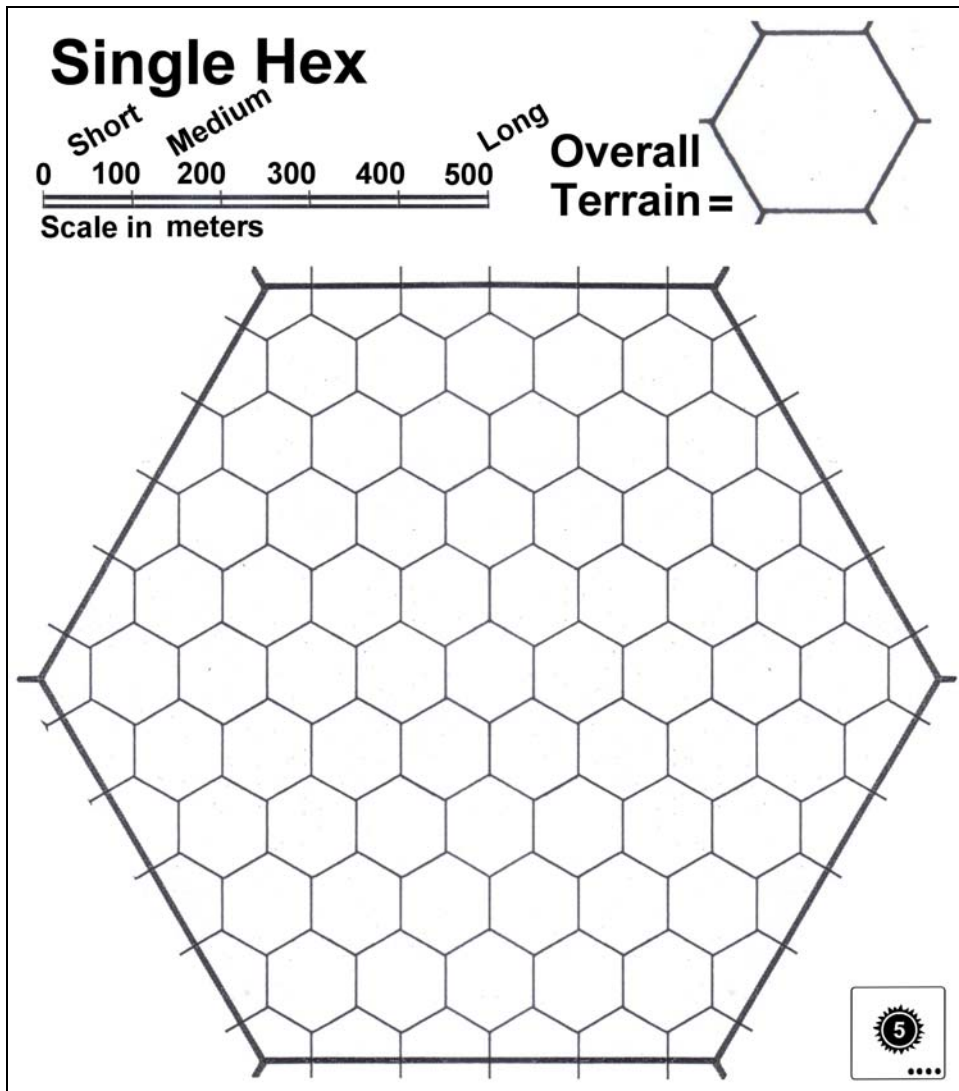
Each World Hex is 1000 km from vertex to vertex or 850 km flat to flat.

The Terrain Hex

A World Hex is composed of 60 Terrain Hexes. A Terrain Hex is 100 km wide (flat to flat) or 114 km vertex to vertex.

The Local Hex

A Terrain Hex is composed of 60 Local Hexes. Each Local Hex is 10 km wide (flat to flat) or 11.4 km vertex to vertex.





Terrain Symbols

The various terrain types are shown here for reference.

Terrain - 1



Clear



Marsh



Rough



Clear Wood



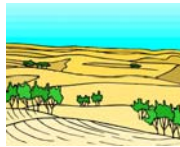
Swamp



Rough Wood



Mountain



Desert



Chasm



Cropland



Rural



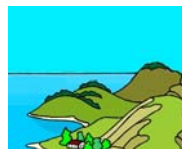
Ruins



Ocean



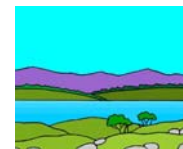
Islands



Shore



River



Lake



Ice Cap



Baked Lands



Twilight Zone



Frozen Lands



Ice Field



Precipice



Exotic



City



Dome



Arcology



Suburb



Town



Starport



Highway



Road



Trail



Air Corridor



Grid



High Speed





Terrain Symbols By Hand

The various terrain types are shown here for reference.

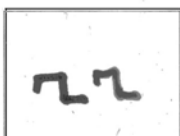
Terrain



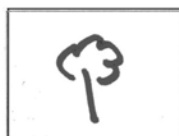
Clear 11



Marsh 12



Rough 13



Clear Wood 14



Swamp 15



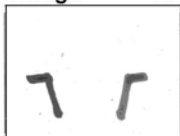
Rough Wood 16



Mountain 21



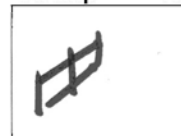
Desert 22



Chasm 23



Cropland 24



Rural 25



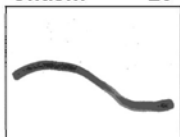
Ruins 26



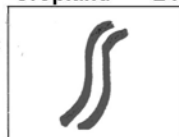
Ocean 31



Islands 32



Shore 33



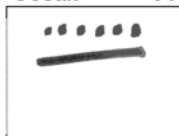
River 34



Lake 35



Ice Cap 36



Baked Lands 41



Twilight Zone 42



Frozen Land 43



Ice Field 44



Precipice 45



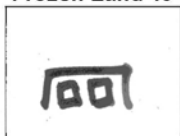
Exotic 46



City 51



Dome 52



Arcology 53



Suburb 54



Town 55



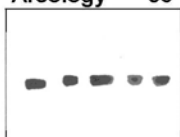
Starport 56



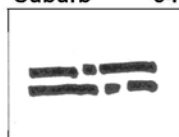
Highway 61



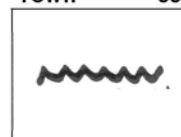
Road 62



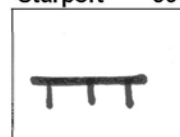
Trail 63



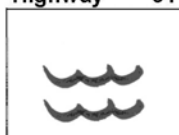
Air Corridor 64



Grid 65



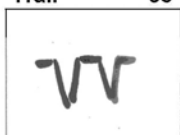
High Speed 66



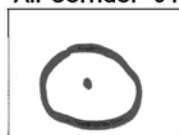
Ocean Depth 71



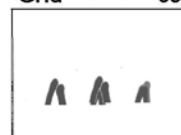
Abyss 72



Caverns 73



Crater 74



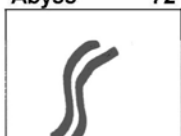
Wasteland 75



Penal 76



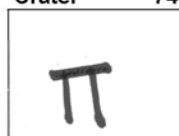
Lake 81



River 82



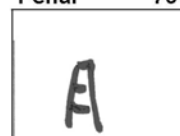
Shore 83



Mines 84



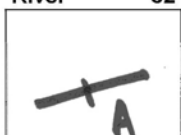
Resources 85



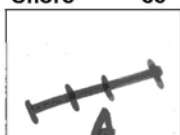
Oil 86



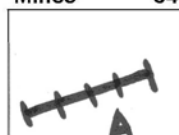
Airpad 91



Vlite Airstrip 92



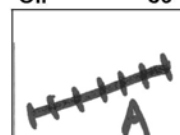
Lite Airstrip 93



Airport Med 94



Airport Hvy 95



Airport Vhvy 96





Terrain Symbols (by hand)

Record your personal preferences for hand drawn terrain symbols here.

Terrain (by hand)

11 Clear	12 Marsh	13 Rough	14 Clear Wood	15 Swamp	16 Rough Wood
21 Mountain	22 Desert	23 Chasm	24 Cropland	25 Rural	26 Ruins
31 Ocean	32 Islands	33 Shore	34 River	35 Lake	36 Ice Cap
41 Baked Lands	42 Twilight Zone	43 Frozen Lands	44 Ice Field	45 Precipice	46 Exotic
51 City	52 Dome	53 Arcology	54 Suburb	55 Town	56 Starport
61 Highway	62 Road	63 Trail	64 Air Corridor	65 Grid	66 High Speed
71 Ocean Depths	72 Abyss	73 Caverns	74 Crater	75 Wasteland	76 Penal Colony
81 Volcanic	82 Noble Estate	83 Reserve	84 Mines	85 Resources	86 Resources Oil

Terrain Numbers allow coding of terrain types in tables.





Random Place Selection

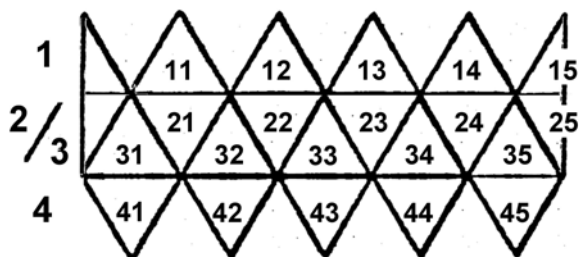
Locations for places (Triangles, World Hexes, Terrain Hexes, Local Hexes) and for the placement of terrain can be randomly selected.

Random

RANDOM PLACES

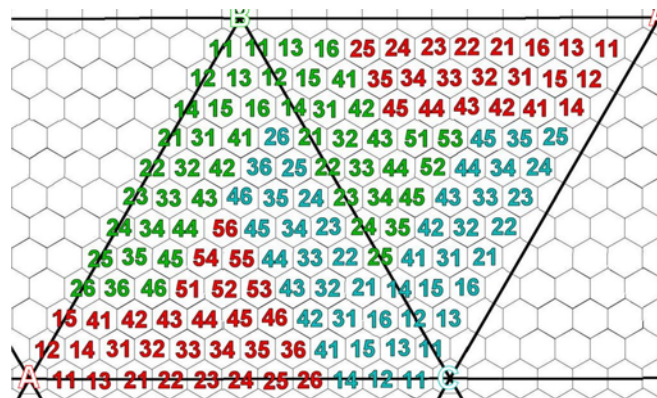
When the situation requires, a random location can be selected using die rolls.

MOARN. Consistent with the MOARN Map Only As Really Necessary concept, locations for terrain, goals, destinations, or situations can be created randomly when they are required.



Select A Triangle On The World Map

To randomly select a Triangle on the World Map, roll 1D for the row (if the roll is 5 or 6, reroll). Roll 1D for the Triangle (if the roll is 6, reroll).



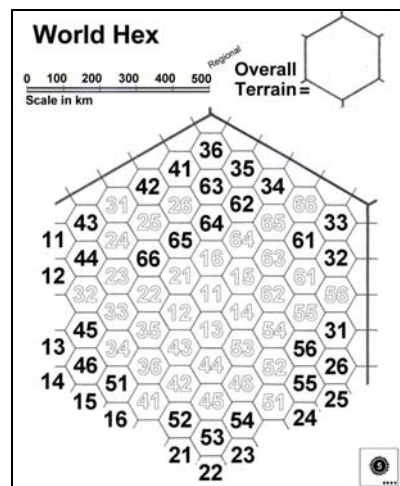
Select A World Hex In A Triangle

To randomly select a World Hex within a Triangle, determine if the Triangle is vertex UP or vertex DOWN.

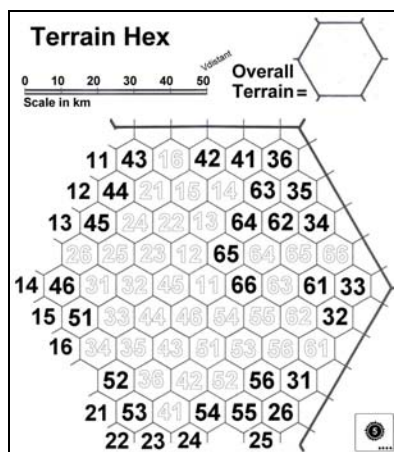
On the diagram, roll 1D to select vertex A, B, or C. Then roll 2D for the hex location.

If the Triangle is smaller than the roll, re-roll.

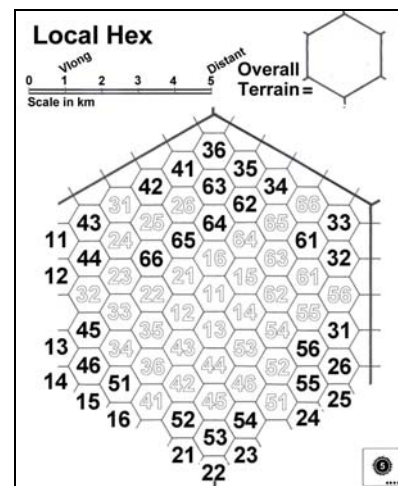
This random selection will not locate a Pent.



Select A Terrain Hex Within A World Hex



Select a Local Hex Within A Terrain Hex



Select a Single Hex Within A Local Hex

Roll 1D to determine (1-2-3=) Black or (4-5-6=) White Numbers. Roll 2D for the specific Hex. This random selection will not locate any of the three blank edge hexes.





Creating World Maps

World Maps are populated with a subset of Terrain Types to create an overview of the world's features. Individual Terrain Hexes are then created as they are needed.

World Map

WORLD DETAILS

St	S	A	H	P	G	L	T	TCs										L	R	I	B	HZ				
								-																		

Enter UWP, Trade Classifications, Ex, and HZ: applicable TCs= Ic, Va, De, Tu, Fr, Ag, Fa, Di, Lo, Ni, Hi, Tz.

GENERATING THE WORLD MAP

1. Select a blank World Map based on World Size.
2. **Resources.** Determine Resources from the Economic Extension. Subtract system GG and Belts: place the resulting number of Resource Hexes one per Triangle.
3. **Mountains.** Place 1D Mountains in each Triangle.
4. **Chasms.** Place Size x Chasms one per Triangle.
5. **Precipices.** Place Size x Precipices one per Triangle.
- If Di 6. **Die-Back.** Place 1D Ruins in each Triangle.
- If Va 7. **Vacuum Plain.** Place 1D Craters per Triangle.
- If De 8. **Desert.** Mark all unmarked hexes Desert.
9. **Oceans.** Randomly select Hyd x 2 Triangles as Oceans. Consolidate Ocean Triangles that share sides. Enclose Oceans with Shore lines. Non-Ocean Triangles are Continents (they are not consolidated; treat each Triangle as a separate Continent).
10. **Seas.** Randomly select Hyd Continents and place a one-hex Sea (Ocean) in each. Surround each with Shore in all adjacent hexes.
11. **Islands.** Convert each Mountain Hex in Ocean to Islands.
12. **Ice-Caps.** If HZ or greater, mark the top and bottom Hyd/2 rows as Ice Cap (if Hyd less than 2, no Ice Caps).
- If Ic 13. **More Ice Cap.** Add 1D rows to each Ice Cap.
- If Fr 14. **Frozen.** Mark Ocean as Ice Field and Land as Frozen Lands (except under Ice Cap).
- If Tu 15. **Tundra.** Mark a line 1D hexes above and below the Equator. Between each line and the Poles, mark Ocean as Ice Field and Land as Frozen lands (except under Ice Cap).
- If Ag 16. **Agricultural.** Place 2D Cropland in each Continent.
- If Fa 17. **Farming.** Place 1D Cropland in each Continent.
- If Lo 18. **Low Population.** Place one Town. Skip to 20.
- If Ni 19. **Non-Industrial.** Place one Town. Skip to 20.
20. **Cities.** Place Cities equal to Pop, one per Continent. If Atm=0-1, A-C, or E4, then mark as Domed.
- If Hi 21. **High Population.** Place total Pop/2 Archologies.
22. **Rural.** Mark clear hexes within Pop hexes of City as Rural.
23. **Starport.** Place the World Starport (or Spaceport).
- If Tz 24. Select one Pole Triangle and draw a vertical line directly down. Shift 2.5 times World Size hexes to one side and draw a parallel line: this is the one-World-Hex-wide Twilight Zone.
- If Tz 25. Mark one side of the Twilight Zone as Baked Lands and the other side as Frozen Lands (overlying existing terrain). Terrain in the Twilight Zone remains are previously created. Convert Ocean in Baked Lands to Desert. Convert Ocean in Frozen Lands to Ice Field.
- If Pe 26. **Penal Colony.** Mark Pop x Penal one per Triangle.
27. **Wasteland.** If TL>5, mark 1D adjacent hexes in one Triangle Wasteland.
28. **Exotic.** Place one Exotic hex in one Triangle.
29. All other terrain remains Clear.

AVAILABLE TERRAIN

Resource
Mountains
Chasm
Precipice
Ruins
Crater
Desert
Ocean
Shore
Islands
Ice Caps
Ice Field
Frozen Lands
Cropland
Town
City
Domed
Archology
Rural
Starport
Twilight Zone
Baked Lands
Penal
Wasteland
Exotic
Clear



Filling In World Hexes -1

Individual Terrain Hexes within a World Hex are created as they are needed. The process involves selecting a World Hex and generating or creating the individual Terrain hexes within it.

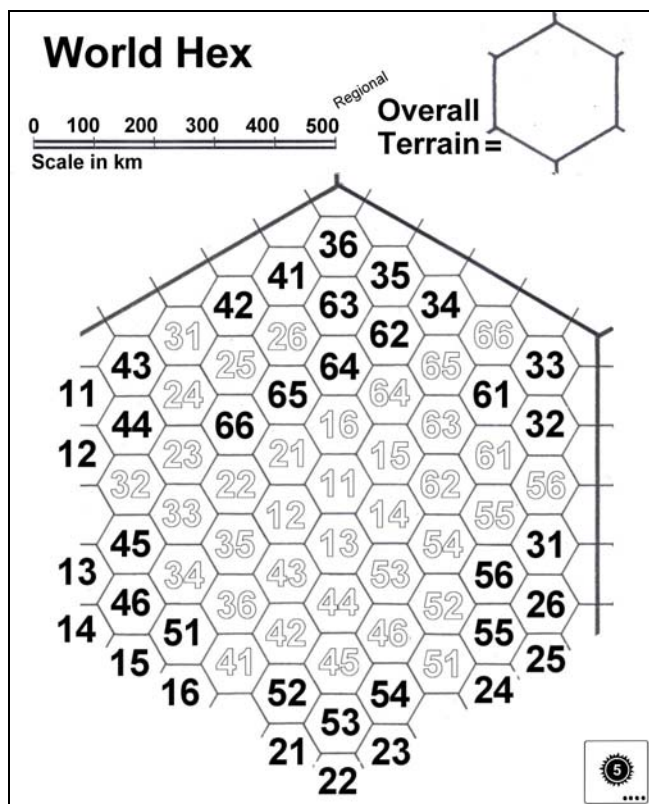
World Hex-1

SELECT THE WORLD HEX

Select the World Hex and note its Overall Terrain.

General Concept. The world Hex is divided into 75 Terrain Hexes, which are numbered 11-66 in Blank and 11-66 in White. There are also three unnumbered hexes (which are Clear on Land or Ocean if Water).

Each World Hex is 1000 km wide. The Terrain Hexes within the World Hex are 100 km wide.





Populating World Hexes-2

The detailed terrain within a World Hex is called for only when hex becomes important. The procedures below guide the creation of that terrain.

World Hex-2

ALLOCATE TERRAIN

The World Hex is 1000 km in diameter and contains 75 individual Terrain hexes, each about 100 km in diameter.

If the World Hex is Shore, draw a Shore Line through the hex.

If the Terrain is Precipice, draw a Precipice line through the hex.

If World Hex=	Note	The White Terrain hex:	The Black Terrain hex is
Ocean. Sea.	Oc	Ocean. If surrounding World Hexes are Ocean, mark Ocean Depth.	Ocean.
Shore		Ocean if on the Ocean side of Shore; otherwise Land.	Land.
Mountains		Mountain (if Shore, Land is Mountain; Ocean is Islands.).	Other.
Chasm		Select TWO WNH and connect them with a Chasm.	Other.
Precipice		Select TWO WNH and connect them with a Precipice.	Other.
Ruins		May be Ruins. Place Good Flux+1 Ruins in BNH.	Other
Crater		Place 2D Craters in WNH	Other.
Desert		Desert. Convert 2D WNH to Clear.	Desert.
Islands		May be Island. Place Good Flux+1 Islands in WNH.	Ocean.
Ice-Cap		Ice Cap.	Ice Cap.
Ice Field		Ice Field	Ice Field.
Frozen Lands		Frozen Lands.	Frozen Lands.
Cropland		Cropland.	Other
Town	Hi	May be Town. Place one Town in a WNH.	Other.
City	Hi	May be City. Place one City in a WNH.	Other.
Domed	Hi	May be Domed. Place one Domed in a WNH.	Other.
Archology		May be Archology. Place one Archology in a WNH.	Other.
Rural		Rural.	Other.
Starport		May be Starport. Place one Starport in a WNH.	Other.
Baked Lands		Baked Lands.	Baked Lands
Clear		May be Rough. Place 2D Rough in WNH.	
Clear	N1	May be Wood. Place 2D Wood in WNH.	
Clear	N2	May be Wetland. Place 2D Wetland in WNH.	
Clear	N3	May be Lake. Place Good Flux Lakes in WNH.	
Resource		May be Resource. Place 2D Resource in WNH.	
Wasteland		Wasteland.	Other
Penal		May be Town. Place one Town in WNH.	

WNH= White Numbered Hex(es). BNH= Black Numbered Hex(es).

Other= Other predominant Terrain Type (default = Clear).

Hi = If World is High Population, do this twice.

Oc= If World is Ocean World, mark Ocean surrounded by Depths as Abyss.

N1 = If Atmosphere = 3-4-5-6-7-8-9-A.

N2 = If Hydrographics = 2-3-4-5-6-7-8-9-A. May overlay Rough.

N3 = If Hydrographics = 2-3-4-5-6-7-8-9-A. May overlay Clear (creates Marsh) or Wood (creates Swamp).



Populating Terrain Hexes

The Terrain Hex is composed of 75 Local Hexes. The Overall Terrain for the Terrain Hex is transferred to about half of the Local Hexes, and the others are populated with a variety of terrain types.

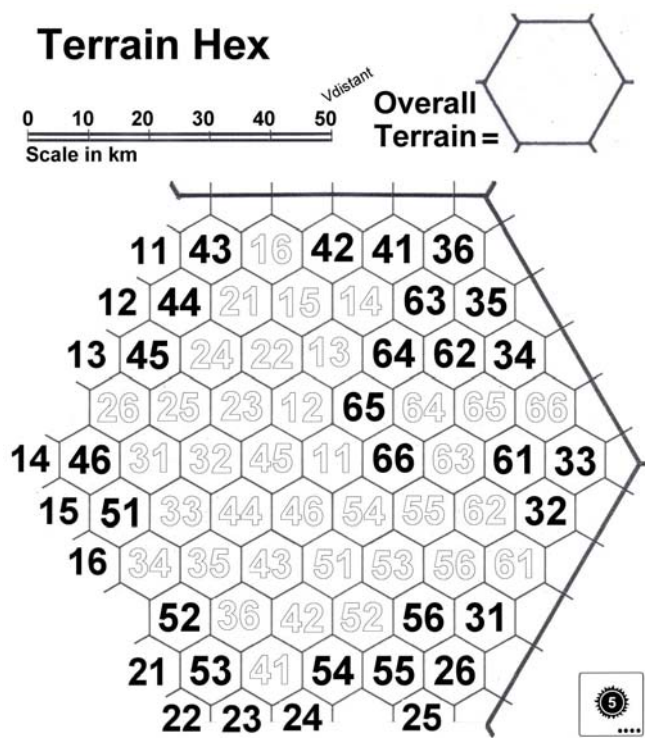
Terrain Hex

SELECT THE TERRAIN HEX

Select the Terrain Hex and note its Overall Terrain.

General Concept. The Terrain Hex is divided into 75 Local Hexes, which are numbered 11-66 in Blank and 11-66 in White. There are also three unnumbered hexes (which are Clear on Land or Ocean if Water).

Each Terrain Hex is 100 km wide. The Local Hexes within the Terrain Hex are 10 km wide.



Place appropriate terrain in the Local Hexes in the Terrain Hex.



Populating Local Hexes-1

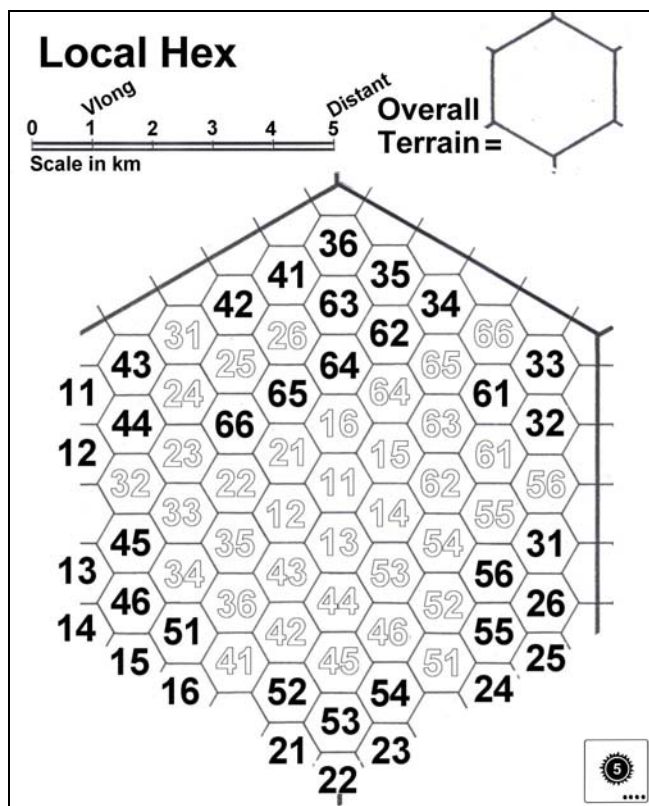
Individual Local Hexes are created as they are needed. The process involves selecting a Local Hex and generating or creating the individual Single hexes within it.

Local Hex

SELECT THE LOCAL HEX

Select the Local Hex and note its Overall Terrain.

General Concept. The Local Hex is divided into 75 Single Hexes, which are numbered 11-66 in Blank and 11-66 in White.



Place appropriate terrain in the Single Hexes in the Local Hex.