

DIFFICULTY, GOVERNMENTS & TIME SCALE

DIFFICULTY (all players)	Easy	Casual	Normal	Tricky	Hard	Very Hard	Deadly	Extreme
Content citizens	4	4	3	3	2	2	1	1
Optimal cities adjustment	150%	120%	100%	90%	80%	70%	60%	50%
Attack bonus vs barbarians	100%	50%	0%	0%	0%	0%	0%	0%

DIFFICULTY (AI players)	Easy	Casual	Normal	Tricky	Hard	Very Hard	Deadly	Extreme
Cost factor (growth/prod./sci.)	1,5	1,2	1,0	0,9	0,8	0,7	0,6	0,5
AI to AI trade rate	110%	120%	130%	140%	150%	160%	170%	180%
Maximum turns of Anarchy	9	8	7	6	5	4	3	2
Additional free support	0	0	0	0	0	0	0	0
Bonus support for each city	0	0	0	1	2	3	4	5
Free defensive units	0	0	0	0	0	0	0	0
Free offensive units	0	0	0	0	0	0	0	0
Extra Workers	0	0	0	0	0	0	0	0
Extra Settlers	0	0	0	0	0	0	0	0

MAP SIZES	Small	Medium	Large	Huge	Mega
Max players	5	8	12	16	31
Map size (W x H)	70 x 70	100 x 100	130 x 130	160 x 160	220 x 220
Total surface area (tiles)	2.450	5.000	8.450	12.800	24.200
Tech research cost	0,75 x	1,00 x	1,33 x	1,66 x	2,16 x
Optimal City Number (OCN)	14	20	28	36	48
Forbidden Palace at city #	7	10	14	18	24

GOVERNMENTS	Corruption	Free support			Military police	Draft	Worker rate	Assimilation	Weariness	Hurry	Propaganda
		Town	City	Metropolis							
Anarchy	Catastrophic	N/A	N/A	N/A	0	0	50%	1%	---	N/A	0
Despotism	Rampant	4	4	4	4	1	100%	2%	---	Forced	15
Monarchy	Problematic	3	4	5	3	1	100%	3%	---	Paid	25
Feudalism	Nuisance	3	5	7	3	1	100%	3%	---	Paid	25
Communism	Communal	6	6	6	4	2	100%	3%	---	Forced	20
Fascism	Nuisance	4	7	10	5	2	200%	2%	---	Forced	10
Republic	Nuisance	1	1	1	1	1	100%	4%	Low	Paid	30
Democracy	Minimal	0	0	0	0	1	150%	5%	High	Paid	35
Anarchy	Tile production limited. No production, taxes or science. No maintenance paid. Conscript Spies and Diplomats										
Despotism	Tile production limited										
Monarchy											
Feudalism											
Communism	Veteran Spies										
Fascism	Can build the Secret Police HQ										
Republic	+1 commerce in tiles										
Democracy	+1 commerce in tiles. Can build the Broadcast Tower										

TIME SCALE	Start	End	Duration	Turns	Interval
Ancient Times	4000 BC	1000 BC	3000 years	75	40 years
Antiquity	1000 BC	500 AD	1500 years	75	20 years
Middle Ages	500 AD	1250 AD	750 years	75	10 years
Renaissance	1250 AD	1750 AD	500 years	100	5 years
Industrial Age	1750 AD	1900 AD	150 years	75	2 years
World Wars	1900 AD	1950 AD	50 years	50	1 year
Modern Era	1950 AD	2025 AD	75 years	75	1 year
The Future	2025 AD	2100 AD	75 years	75	1 year
FULL GAME	4000 BC	2100 AD	6100 years	600	40 – 1 years

CIVILIZATIONS & TRAITS

CIVILIZATIONS	Aggression	Trait 1	Trait 2	AI strategy	Leader	Capital	Unique unit
Barbarian Tribes	Infinite	N/A	N/A	N/A	N/A	N/A	Raider, Horse Raider, Pirate Galley
Rome	5	Industrious	Militaristic	Balanced	Caesar	Rome	Legionary
Egypt	2	Agricultural	Industrious	Builder	Cleopatra	Thebes	War Chariot
Greece	3	Scientific	Expansionist	Builder	Alexander	Athens	Hoplite
Babylon	2	Religious	Scientific	Builder	Hammurabi	Babylon	Bowman
Germany	5	Militaristic	Scientific	Warrior	Bismarck	Berlin	Panzer
Russia	5	Expansionist	Industrious	Warrior	Catherine	Moscow	Cossack
China	2	Industrious	Commercial	Balanced	Mao	Beijing	Rider
America	3	Industrious	Scientific	Balanced	Lincoln	Washington	F-15
Japan	5	Militaristic	Industrious	Warrior	Tokugawa	Kyoto	Samurai
France	3	Commercial	Scientific	Builder	Joan d'Arc	Paris	Musketeer
India	1	Agricultural	Religious	Builder	Gandhi	Delhi	War Elephant
Persia	4	Commercial	Agricultural	Balanced	Xerxes	Persepolis	Immortal
Aztec Empire	4	Militaristic	Agricultural	Balanced	Montezuma	Tenochtitlan	Jaguar Warrior
Zululand	5	Militaristic	Religious	Warrior	Shaka	Zimbabwe	Impi
Iroquois League	2	Expansionist	Commercial	Warrior	Hiawatha	Salamanca	Mounted Warrior
England	4	Seafaring	Scientific	Balanced	Elizabeth	London	Man-O-War
Mongolia	5	Expansionist	Militaristic	Warrior	Temujin	Karakorum	Keshik
Spain	3	Militaristic	Seafaring	Balanced	Isabella	Madrid	Conquistador
Scandinavia	4	Seafaring	Expansionist	Warrior	Ragnar Lodbrok	Trondheim	Berserk
Ottoman Empire	4	Militaristic	Commercial	Warrior	Osman	Istanbul	Sipahi
Celtic Nations	3	Expansionist	Religious	Warrior	Brennus	Entremont	Gallic Swordsman
Arabia	3	Religious	Expansionist	Balanced	Abu Bakr	Mecca	Ansar Warrior
Carthage	2	Seafaring	Agricultural	Balanced	Hannibal	Carthage	Numidian Mercenary
Korea	1	Industrious	Religious	Builder	Wang Kon	Seoul	Hwach'a
Sumer	1	Scientific	Agricultural	Builder	Gilgamesh	Ur	Enkidu Warrior
Hatti	4	Religious	Commercial	Warrior	Mursilis	Hattusas	Three-Man Chariot
Netherlands	1	Commercial	Seafaring	Builder	William	Amsterdam	Swiss Mercenary
Portugal	1	Seafaring	Religious	Balanced	Henry	Lisbon	Carrack
Byzantine Empire	2	Industrious	Seafaring	Balanced	Theodora	Constantinople	Dromon
Inca Empire	1	Expansionist	Agricultural	Builder	Pachacuti	Cuzco	Chasqui Scout
Maya Civilization	3	Agricultural	Scientific	Builder	Smoke-Jaguar	Chichén Itza	Javelin Thrower

TRAITS	Effects
AGRICULTURAL	The center tile in every city produces one more food. Irrigated Deserts produce one extra food. Granaries and Aqueducts cost half as many shields to build
COMMERCIAL	The center tile of all Cities produces an extra commerce, and Metropolises produce an additional one. Less corruption and waste is experienced
EXPANSIONIST	Starts the game with a Scout, and can build more later. Passive Barbarian villages (goodie huts) are always friendly and yield more positive outcomes
INDUSTRIOUS	The center tile of all Cities and Metropolises produces an extra shield. Workers complete tasks 50% faster
MILITARISTIC	Combat promotions are gained twice as often. Barracks, City Walls, Coastal Fortresses and SAM City Defenses cost half as many shields to build
RELIGIOUS	Experiences only 2 turns of Anarchy during revolutions. Temples, Colosseums and Cathedrals cost half as many shields to build
SCIENTIFIC	Receives a random free civilization advance at the start of every era. Libraries, Universities and Research Labs cost half as many shields to build
SEAFARING	Starts the game on the coast. All coastal cities receive a commerce bonus in the center city square. Ships move 1 tile faster, and are less likely to sink in Sea or Ocean. Harbors, Commercial Docks and Offshore Platforms cost half as many shields to build

AI STRATEGIES	Effect
WARRIOR	The AI values military technologies higher , and civilian technologies lower
BALANCED	The AI values military and civilian technologies equally high (same as the standard game)
BUILDER	The AI values civilian technologies higher , and military technologies lower

UNITS

INFANTRY (31)	Cost	Attack	Defense	Move	Bombard	Range	Fire Rate	Anti-Air	Special Properties	Strategic Resources		
Warrior	15	1	1	1	0	0	0	0	Foot / Pillage			
Spearman	20	1	2	1	0	0	0	0	Foot / Pillage			
- Hoplite (Greek)	25	2	3	1	0	0	0	0	Foot / Pillage			
- Numidian Merc. (Carthaginian)	20	1	3	1	0	0	0	0	Foot / Pillage			
- Enkidu Warrior (Sumerian)	20	2	2	1	0	0	0	0	Foot / Pillage			
Pikeman	30	2	3	1	0	0	0	0	Foot / Pillage	Iron		
- Swiss Mercenary (Dutch)	30	2	4	1	0	0	0	0	Foot / Pillage			
Musketman	40	3	4	1	4	0	1	0	Foot / Pillage	Saltpeter		
- Musketeer (French)	40	4	5	1	5	0	1	0	Foot / Pillage			
Rifleman	50	5	6	1	6	0	1	0	Foot / Pillage			
Infantry	60	8	10	1	10	0	1	0	Foot / Pillage			
TOW Infantry	75	10	16	1	16	0	1	2	Foot / Pillage	Aluminum		
Archer	20	2	1	1	2	0	1	0	Foot / Pillage			
- Jaguar Warrior (Aztec)	20	3	1	1	0	0	0	0	Foot / Pillage			
- Impi (Zulu)	20	3	1	1	0	0	0	0	Foot / Pillage			
- Bowman (Babylonian)	20	3	1	1	3	0	1	0	Foot / Pillage			
- Javelin Thrower (Mayan)	20	3	1	1	3	0	1	0	Foot / Pillage			
Swordsman	35	3	2	1	0	0	0	0	Foot / Pillage	Iron		
- Legionary (Roman)	35	3	3	1	3	0	0	0	Foot / Pillage / Build road			
- Immortal (Persian)	35	4	2	1	0	0	0	0	Foot / Pillage			
- Gallic Swordsman (Celtic)	30	4	1	1	0	0	0	0	Foot / Pillage			
Longbowman	30	4	1	1	4	0	1	0	Foot / Pillage			
Medieval Infantry	40	4	3	1	0	0	0	0	Foot / Pillage	Iron		
- Samurai (Japanese)	40	5	3	1	3	0	0	0	Foot / Pillage			
- Berserk (Viking)	40	5	2	1	0	0	0	0	Foot / Pillage / Amphibious			
Crusader	Wonder	5	3	1	0	0	0	0	Foot / Pillage / Build fortress / Free support			
Guerrilla	50	9	6	1	9	0	1	0	Foot / Pillage			
Marine	80	12	8	1	12	0	1	0	Foot / Pillage / Amphibious	Rubber		
Paratrooper	80	9	9	1	9	0	1	0	Foot / Pillage / Paradrop range 9	Rubber	Oil	
Modern Marine	100	16	12	1	16	0	1	2	Foot / Pillage / Amphibious	Rubber		
Modern Paratrooper	100	13	13	1	13	0	1	2	Foot / Pillage / Paradrop range 10	Rubber	Oil	

CAVALRY (22)	Cost	Attack	Defense	Move	Bombard	Range	Fire Rate	Anti-Air	Special Properties	Strategic Resources		
Horseman	30	2	1	2	0	0	0	0		Horses		
Chariot	40	3	1	2	2	0	1	0	Wheeled	Horses		
- War Chariot (Egyptian)	40	4	1	2	2	0	1	0	Wheeled			
- Three-Man Chariot (Hittite)	40	3	2	2	2	0	1	0	Wheeled			
Elephant	55	4	2	2	0	0	0	0		Ivory		
- War Elephant (Indian)	55	4	3	2	2	0	1	0				
Ancient Cavalry	Wonder	3	2	2	0	0	0	0	Free support			
Knight	60	4	3	2	0	0	0	0		Horses	Iron	
- Ansar Warrior (Arabic)	55	5	3	2	0	0	0	0				
- Rider (Chinese)	55	5	3	2	0	0	0	0				
- Keshik (Mongol)	50	5	2	2	3	0	1	0				
- Mounted Warrior (Iroquois)	50	5	2	2	3	0	1	0				
Cuirassier	70	6	3	2	4	0	1	0		Horses	Saltpeter	
- Conquistador (Spanish)	70	7	4	2	4	0	1	0				
- Sipahi (Ottoman)	70	7	4	2	4	0	1	0				
Cavalry	80	8	4	2	5	0	1	0		Horses		
- Cossack (Russian)	70	9	4	2	5	0	1	0				
Motorized Infantry	90	9	10	3	10	0	1	0	Wheeled	Rubber	Oil	
Tank	120	15	9	3	10	0	1	0	Wheeled	Iron	Rubber	Oil
- Panzer (German)	120	18	11	3	12	0	1	0	Wheeled			
Mechanized Infantry	120	12	16	3	16	0	1	1	Wheeled	Rubber	Oil	
Main Battle Tank	160	22	14	3	16	0	1	0	Wheeled	Aluminum	Rubber	Oil

ARTILLERY (10)	Cost	Attack	Defense	Move	Bombard	Range	Fire Rate	Anti-Air	Special Properties	Strategic Resources		
Catapult	25	0	0	1	2	1	1	0	Wheeled			
Trebuchet	40	0	0	1	4	1	1	0	Wheeled			
Mortar	50	0	0	1	6	1	1	0	Wheeled	Iron	Saltpeter	
- Hwach'a (Korean)	50	0	0	1	1	1	5	0	Wheeled / Lethal land			
Cannon	60	0	0	1	10	1	1	0	Wheeled	Iron	Saltpeter	
Artillery	90	0	0	1	12	2	2	0	Wheeled	Iron		
Self-Propelled Artillery	140	0	6	3	11	2	2	0	Wheeled	Iron	Oil	
Rocket Artillery	190	0	6	3	14	2	3	0	Wheeled	Aluminum	Oil	
FlaK	80	1	4	3	0	0	0	3	Wheeled			
Mobile SAM	120	1	4	3	0	0	0	6	Wheeled	Oil		

UNITS

SEA (20)	Cost	Attack	Defense	Move	Bombard	Range	Fire Rate	Anti-Air	Special Properties	Strategic Resources		
Boat	30	1	1	3	0	0	0	0	Carry 1 foot / May sink in Sea & Ocean			
Galley	60	3	2	3	0	0	0	0	Carry 2 land / May sink in Ocean			
- Dromon (Byzantine)	60	4	2	3	1	1	3	0	Carry 2 land / May sink in Ocean			
Caravel	70	3	3	4	0	0	0	0	Carry 3 land / May sink in Ocean			
- Carrack (Portuguese)	70	4	4	4	0	0	0	0	Carry 3 land			
Galleon	90	4	4	4	4	0	1	0	Carry 4 land			
Transport	140	0	5	5	0	0	0	1	Carry 6 land	Iron	Coal	
Hovercraft	180	0	6	8	0	0	0	4	Carry 6 land / Immune to sub stealth attack	Aluminum	Oil	
Carrier	320	0	10	7	0	0	0	10	Carry 4 air	Iron	Oil	
Supercarrier	500	0	15	7	0	0	0	20	Carry 6 air	Iron	Uranium	
Privateer	80	5	4	4	5	1	1	0	Hidden nationality	Saltpeter		
Frigate	90	6	5	4	6	1	1	0		Saltpeter		
- Man-O-War (English)	90	8	6	4	8	1	1	0				
Ironclad	100	8	8	4	8	1	1	0		Iron	Coal	
Destroyer	120	12	10	7	12	2	1	2	Spot subs	Iron	Oil	
Cruiser	220	22	18	7	12	2	2	3		Iron	Oil	
Battleship	400	36	30	6	12	2	3	4		Iron	Oil	
Missile Cruiser	240	24	20	7	24	3	2	8	Spot subs	Aluminum	Uranium	
Submarine	100	15	4	4	0	0	0	0	Invisible / Stealth attack	Iron		
Nuclear Submarine	200	24	8	6	0	0	0	0	Carry 1 missile / Invisible / Stealth attack / Spot subs	Iron	Uranium	

AIR (12)	Cost	Attack	Defense	Move	Bombard	Range	Fire Rate	Anti-Air	Special Properties	Strategic Resources		
Fighter	70	6	6	0	12	4	1	0	Lethal sea	Oil		
Jet Fighter	100	12	12	0	18	6	1	0	Lethal sea / Precision bomb	Aluminum	Oil	
- F-15 (American)	100	15	15	0	22	6	1	0	Lethal land & sea / Precision bomb			
Stealth Fighter	120	16	16	0	24	6	1	0	Lethal sea / Stealth / Precision bomb	Aluminum	Oil	
Bomber	120	0	3	0	8	8	4	0	Lethal sea	Oil		
Strategic Bomber	160	0	5	0	12	12	4	0	Lethal sea	Aluminum	Oil	
Stealth Bomber	200	0	7	0	16	12	4	0	Lethal sea / Stealth / Precision bomb	Aluminum	Oil	
Helicopter	100	0	2	0	0	6	0	0	Airdrop 2 foot	Rubber	Oil	
Cruise Missile	60	0	0	2	16	6	5	0	Lethal land & sea / Destroyed after attack / Free support	Aluminum		
Atomic Bomb	Wonder	0	4	0	1	10	0	0	Nuclear / Destroyed after attack / Free support			
Tactical Nuke	180	0	0	2	0	8	0	0	Nuclear / Destroyed after attack	Uranium	Aluminum	Saltpeter
ICBM	300	0	0	0	0	Infinite	0	0	Nuclear / Destroyed after attack / Immobile	Uranium	Aluminum	Oil

SPECIAL (9)	Cost	Attack	Defense	Move	Bombard	Range	Fire Rate	Anti-Air	Special Properties	Strategic Resources		
Settler	50	0	0	1	0	0	0	0	Foot / Build new Town / Join settlement			
Worker	20	0	0	1	0	0	0	0	Foot / Improve terrain / Pillage / Join settlement			
Scout	15	0	0	1	0	0	0	0	Foot / All terrain as roads			
- Chasqui Scout (Incan)	15	1	1	1	0	0	0	0	Foot / All terrain as roads			
Explorer	20	0	0	2	0	0	0	0	Foot / All terrain as roads			
Satellite	300	0	0	0	0	Infinite	0	0	Immobile / Recon only	Aluminum		
General	Battle	0	0	1	0	0	0	0	+1 movement / +3 hit points / See 2 tile radius			
King (different for each civ)	Given	1	1	1	0	0	0	0	Foot / Civilization leader / +3 hit points			
Princess	Given	0	0	0	0	0	0	0	Immobile / Flag unit			

BARBARIANS (3)	Cost	Attack	Defense	Move	Bombard	Range	Fire Rate	Anti-Air	Special Properties	Strategic Resources		
Raider	15	2	1	1	2	0	1	0	Foot / 1 bonus hit point / Pillage			
Horse Raider	30	3	1	2	2	0	1	0	1 bonus hit point / Pillage			
Pirate Galley	45	3	2	3	2	0	1	0	Carry 2 land / 1 bonus hit point / May sink in Ocean			

IMPROVEMENTS & WONDERS

IMPROVEMENTS (31)	Cost	Maintenance	Requires	Half cost	Culture	Pollution	Effect
Palace	150-500	0			1	0	Center of empire. Reduces corruption. Increases defense by 50%
Granary	60	1		Agricultural	0	0	Only half of food box empties upon city growth
Aqueduct	100	1		Agricultural	0	0	Allows Town without access to fresh water to grow beyond size 6
Hospital	160	2			0	0	Allows City to grow beyond size 12
Temple	60	1		Religious	2	0	Makes 1 unhappy citizen content
Colosseum	120	2		Religious	2	0	Makes 2 unhappy citizens content
Cathedral	160	2		Religious	3	0	Makes 3 unhappy citizens content
Marketplace	80	1			0	0	Increases taxes by 50%
Bank	160	2			0	0	Increases taxes by additional 50% (total 100%)
Stock Exchange	200	3			0	0	Increases taxes by additional 50% (total 150%)
Library	80	1		Scientific	3	0	Increases science by 50%
University	160	2		Scientific	4	0	Increases science by additional 50% (total 100%)
Research Lab	200	3		Scientific	2	0	Increases science by additional 50% (total 150%)
Courthouse	80	1			0	0	Reduces corruption. Increases resistance to propaganda
Police Station	160	2			0	0	Reduces corruption. Reduces war weariness
Factory	240	3	Iron		0	3	Increases production by 50%
Manufacturing Plant	320	4	Aluminum		0	3	Increases production by additional 50% (total 100%)
Coal Plant	160	3	Coal		0	3	Increases production by additional 50%
Hydro Plant	200	2	River		0	0	Increases production by additional 50%
Solar Plant	240	2			0	0	Increases production by additional 50%
Nuclear Plant	320	4	Uranium, Water		0	1	Increases production by additional 100%. Chance of meltdown
Barracks	80	1		Militaristic	0	0	Veteran land units. Heals land units. Allows upgrading
City Walls	80	0		Militaristic	0	0	Increases total defense of Towns to 100%. Protects against land bombardment
Coastal Fortress	40	0	Iron, Saltpeter	Militaristic	0	0	Shoots at enemy ships. Protects against naval bombardment
SAM City Defense	120	2	Aluminum	Militaristic	0	0	Chance to shoot down incoming air strikes
Harbor	120	1		Seafaring	0	0	+1 food in water tiles. Allows water trade. Veteran sea units. Heals sea units
Commercial Dock	160	2		Seafaring	0	0	+1 commerce in water tiles
Offshore Platform	240	3		Seafaring	0	2	+1 production in water tiles
Airport	200	2	Oil		0	2	Veteran air units. Allows air trade. Allows airlift. Heals air units
Mass Transit System	200	2	Rubber		0	0	Reduces population pollution to 1
Recycling Center	200	2			0	0	Reduces building pollution to 1

SMALL WONDERS (10)	Cost	Requires	Culture	Pollution	Effect
Forbidden Palace	200	Minimum # of cities (depends on map size)	1	0	Second center of empire. Reduces corruption
Secret Police HQ	200	Fascist government	1	0	Third center of empire (Fascism only). Reduces corruption
Broadcast Tower	200	Democratic government	3	0	Third center of empire (Democracy only). Reduces corruption
Military Academy	300		2	0	Generals are more likely to appear in combat. Produces a General every 50 turns
Iron Works	300	Iron & Coal in same city radius	1	2	+100% production (this city)
Battlefield Medicine	600	5 Hospitals	1	0	Allows all friendly units to heal in enemy territory
Intelligence Agency	500		2	0	Allows Spy missions
Wall Street	400	5 Stock Exchanges	2	0	Treasury earns 5% interest each turn (max 50 Gold)
Apollo Program	1000	Aluminum, Oil	2	0	Allows construction of Spaceship parts
Strategic Missile Defense	800	Aluminum	1	0	75% chance to intercept ICBMs (all cities)

GREAT WONDERS (29)	Cost	Obsolete	Requires	Golden Age	Culture	Tourist	Effect
Colossus	200		Coastal city	Seafaring	3	X	+1 commerce in all tiles already producing one (this city)
Pyramids	400			Agricultural	4	X	Gain Granaries (same continent)
Statue of Zeus	300	Chemistry		Expansionist	2	X	Produces a free Ancient Cavalry every 5 turns
Oracle	200	Theology		Religious	5	X	Doubles happiness of Temples (every city). +50% taxes (this city)
Great Wall	400	Metallurgy		Militaristic	2	X	Gain City Walls (same continent). Double strength vs Barbarians
Mausoleum of Mausollos	200			Industrious	4	X	+4 happiness (this city). Increases shield production by 25% (this city)
Great Library	400	Education		Scientific	6	X	Gain any technology discovered by 2 known civilizations
Great Lighthouse	200	Navigation	Coastal city	Seafaring	2	X	+1 ship movement. Safe travel for Coastal vessels across Sea
Temple of Artemis	400			Religious	4	X	Gain Temples (same continent)
Hanging Gardens	300	Steam Power		Agricultural	4	X	+1 happiness (every city). +3 happiness (this city)
Sun Tzu's Art of War	500			Militaristic	2		Gain Barracks (same continent)
Sistine Chapel	600			Religious	6	X	Doubles effect of Cathedrals (every city)
J.S. Bach's Cathedral	600			Religious	5	X	+2 happiness (same continent)
Knights Templar	300	Nationalism		Expansionist	3		Produces a free Crusader every 5 turns
Leonardo's Workshop	500			Commercial	2	X	Half cost of upgrading units
Copernicus' Observatory	300			Seafaring	4	X	Doubles research (this city)
Shakespeare's Theater	300		Size 7+ city	Commercial	8	X	+8 happiness (this city). Allows City to grow to Metropolis (13+)
Smith's Trading Company	500			Commercial	3		Pays maintenance for all trade buildings (every city)
Magellan's Voyage	400		Coastal city	Seafaring	3		+1 ship movement
Newton's University	300			Scientific	5	X	Doubles research (this city)
Longevity	700			Agricultural	3		Doubles city growth (every city)
Universal Suffrage	500			Industrious	4		+1 happiness (every city). -1 war weariness (every city)
Theory of Evolution	500			Scientific	3		+2 free technologies
Hoover Dam	1000		River	Industrious	2	X	Gain Hydro Plants (same continent)
Manhattan Project	900	Satellites	Uranium	Militaristic	2		Allows nuclear weapons (all civilizations). Produces an Atomic Bomb every 10 turns
United Nations	1000			Expansionist	5	X	Allows diplomatic victory. Owner is always a candidate
SETI Program	1000			Scientific	3		Gain Research Labs (same continent)
Internet	800			Commercial	8		Gain any technology known by 2 other civs. +50% research, taxes, luxuries (this city)
Cure for Cancer	600			Industrious	3		+1 happiness (every city). Doubles research (this city)

TERRAIN, RESOURCES & BONUSES

TERRAIN (14)	Food	Shields	Trade	Irrigate		Mine		Road		Railroad	Move cost	Defensive bonus
Grassland	2			+1 food	4 turns	+1 shield	6 turns	+1 trade	3 turns	6 turns	1	0%
Plains	1	1		+1 food	4 turns	+1 shield	6 turns	+1 trade	3 turns	6 turns	1	0%
Desert		1		+1 food	8 turns	+1 shield	12 turns	+1 trade	6 turns	12 turns	2	0%
Floodplain	3			+1 food	8 turns			+1 trade	6 turns	12 turns	2	0%
Tundra	1					+1 shield	12 turns	+1 trade	6 turns	12 turns	2	0%
Forest	1	2						+1 trade	6 turns	12 turns	2	50%
Hills	1	1				+2 shields	12 turns	+1 trade	6 turns	12 turns	2	50%
Marsh	1							+1 trade	9 turns	18 turns	3	20%
Jungle	1	1						+1 trade	9 turns	18 turns	3	80%
Mountain		1				+2 shields	18 turns	+1 trade	9 turns	18 turns	3	100%
Volcano		1									3	100%
Coast	1		2								1	0%
Sea	1		1								1	0%
Ocean	1										1	0%

STRATEGIC RESOURCES (8)	Food	Shields	Trade	# (8 civs)	Revealed by
Horses	+1		+1	8	Horseback Riding
Iron		+3		10	Iron Working
Saltpeter		+1	+1	8	Gunpowder
Coal		+2	+1	9	Steam Power
Oil		+1	+3	8	Refining
Rubber		+1	+1	8	Replaceable Parts
Aluminum		+3	+1	8	Advanced Flight
Uranium		+2	+3	7	Fission

LUXURIES (8)	Food	Shields	Trade	# (8 civs)	Revealed by
Ivory			+2	3-6	Polytheism
Wines	+1		+1	3-6	
Furs		+1	+1	3-6	
Dyes			+2	3-6	
Incense			+2	3-6	
Spices			+3	3-6	
Silks			+3	3-6	
Gems			+4	3-6	

BONUS RESOURCES (10)	Food	Shields	Trade	# (8 civs)
Whales	+1	+1	+2	17-21
Fish	+2		+1	17-18
Game	+2			7-10
Cattle	+2	+1		8-10
Wheat	+2			5-10
Sugar	+1		+1	7-10
Tropical Fruit	+1		+1	5-9
Tobacco			+2	8-12
Oasis	+2			5-8
Gold			+4	9-10

DEFENSIVE BONUSES	
Fortified defender	20%
Town (size 1-6)	20%
City (size 7-12)	50%
Metropolis (size 13+)	100%
Palace (capital)	50%
Town with City Walls (size 1-6)	100%
Fortress	60%
Fortress with Barricades	120%
Defend behind a river	50%
Radar Tower nearby	25%

WORKER JOBS	Turns	
Road	3-9	<p>* Work time depends on terrain type. Base work time is multiplied by terrain movement cost</p> <p>* Double time for slave Workers (captured)</p> <p>* Half time for modern Workers (after discovery of Medicine)</p> <p>* Building a Colony, Outpost, Radar Tower or Airfield consumes the Worker</p>
Railroad	6-18	
Irrigation	4-8	
Mine	6-18	
Clear Forest	6	
Plant Forest	8-16	
Clear wetlands	18	
Clear damage	10-30	
Fortress	8-24	
Barricade	8-24	
Colony	1	
Watchtower	1-3	
Radar Tower	2-6	
Airfield	4-8	