

WALDEN GREEN MONTESSORI

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GEOGRAPHY LOCATION COORDINATES AREA CLIMATE TERRAIN LAND AND WATER FORMS BIOMES FLORA FAUNA NATURAL RESOURCES NATIONALITY LANGUAGES RELIGION POPULATION HISTORY MAJOR CITIES LIFE EXPECTANCY GOVERNMENT CAPITAL CONSTITUTION BUDGE GRICULTURE INDUSTRIES EXPORTS IMPORTS CULTURE RENEWABLE ENERGY TRANSPORTATION MILITARY RAILWAYS ROADWAYS AIRPORTS NATIONAL PARKS TOURISM NATIONAL ANTHEM ETHNIC GROUPS FUNDAMENTAL NEEDS

prepared by Mark Roessing

THE IMAGINARY ISLAND CAPSTONE PROJECT WALDEN GREEN MONTESSORI LEVELS & EXPECTATIONS

Level 1: Latitude & Longitude	Level 2: Global Marine & Wind Currents	Level 3: Global Precipitation & Biomes
O Instructions/Directions	O Instructions/Directions	O Instructions/Directions
O Video Presentations: 1A, 1B, 1C	O Video Presentations: 2A, 2B, 2C, 2D	O Video Presentations: 3A, 3B, 3C, 3D, 3E
O Follow-Up Activity	O Follow-Up Activity	O Follow-Up Activity
Level 4: Initial Map/Island Sketch	Level 5: The Big Picture	Level 6: Island Climates & Biomes
O Instructions/Directions	O Instructions/Directions	O Instructions/Directions
O Video Presentations: 4A	O Video Presentations: 5A	O Video Presentations: none <i>(individual research)</i>
O Follow-Up Activity	O Follow-Up Activity	O Follow-Up Activity
Level 7: Island Land & Water Forms	Level 8: Island Flora (plants)	Level 9: Island Fauna (animals)
O Instructions/Directions	O Instructions/Directions	O Instructions/Directions
O Video Presentations: 7A, 7B, 7C, 7D, 7E	O Video Presentations: none <i>(individual research)</i>	O Video Presentations: none <i>(individual research)</i>
O Follow-Up Activity	O Follow-Up Activity	O Follow-Up Activity
Level 10: Natural Resources (biotic/abiotic)	Level 11: Island Energy Consumption	Levels 12-13: Urban, Suburban, Rural Areas
O Instructions/Directions	O Instructions/Directions	O Instructions/Directions
O Video Presentations: 10A, 10B	O Video Presentations: 11A, 11B, 11C, 11D	O Video Presentations: 12A, 12B
O Follow-Up Activity	O Follow-Up Activity	O Follow-Up Activity
Level 14: Island Political Physical Map	Levels 15-17: Island Flag & Collage	Levels 18: Island History
O Instructions/Directions	O Instructions/Directions	O Instructions/Directions
O Video Presentations: 14A, 14B	O Video Presentations: 16A, 16B	O Video Presentations: 18A, 18B, 18C
O Follow-Up Activity	O Follow-Up Activity	O Follow-Up Activity
Levels 19: Island Area, Climate, Terrain	Levels 20: Island Resources & Hazards	Levels 21: Island Ethnic Groups
O Instructions/Directions	O Instructions/Directions	O Instructions/Directions
O Video Presentations: none (individual research)	O Video Presentations: 20A	O Video Presentations: 21A, 21B, 21C, 21D
O Follow-Up Activity	O Follow-Up Activity	O Follow-Up Activity
Levels 22: Island Languages & Religion	Levels 23: Island Age Demographics	Levels 24-25: Island Form of Government
O Instructions/Directions	O Instructions/Directions	O Instructions/Directions
O Video Presentations: 22A, 22B, 22C, 22D, 22E, 22F	O Video Presentations: 23A, 23B	O Video Presentations: 24A, 24B, 24C, 24D, 24E
O Follow-Up Activity	O Follow-Up Activity	O Follow-Up Activity
Levels 26: Island Capital & Constitution	Levels 27: Island National Anthem	Levels 28: Island Budget & Exports/Imports
O Instructions/Directions	O Instructions/Directions	O Instructions/Directions
O Video Presentations: none (individual research)	O Video Presentations: 27A	O Video Presentations: 28A, 28B, 28C, 28D, 28E
O Follow-Up Activity	O Follow-Up Activity	O Follow-Up Activity
Levels 29: Transportation & Infrastructure	Levels 30: Island Stances on Social Issues	Island Extension Activities
O Instructions/Directions	O Instructions/Directions	O Choice 1:
O Video Presentations: 29A, 29B, 29C	O Video Presentations: "Social Issues" folder	O Choice 2:
O Follow-Up Activity	O Follow-Up Activity	O Choice 3:

MAP LOCATION SYSTEMS/LONGITUDE AND LATITUDE







https://www.findlatitudeandlongitude.com

	PLACE	ABSOLUTE LOCATION
	Spring Lake, MI	
)	San Francisco, CA	
	Paris, France	
	Sydney, Australia	
	Other:	
λ	Other:	
\rangle	Other:	
1	Other:	

LABEL DEGREES WITH: N, E, S, W





AVERAGE GLOBAL PRECIPITATION (label & color)





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THE BIG PICTURE



ISLAND CLIMATES AND BIOMES RESEARCH: draw island on globe



- 1. How will the island's location to the equator and the poles impact its climate?
- 2. Which biomes will be on the island? (Note: must have at least 3 biomes)
- 3. Why will these biomes be present on the island? (Note: draw/color on map above)
- 4. How will the **marine currents** and **winds currents** of the world **impact** the island? (Note: cold marine currents usually dry out the winds that blow over them, while warm marine currents can bring very warm and humid air into latitudes of colder climates)
- 5. How will the the average rainfall for that part of the world impact the island?
- 6. How many **seasons** will the island have? Why? When?

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ISLAND FLORA RESEARCH: draw/color the island with biomes

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Alpine	Tropical Forest	Tropical Grassland	Desert/ Aridland	Temperate Grassland	Temperate Forest	Coniferous Forest	Tundra	Marine

BIO	ME 1:	BIO	ΛE 2:	BIOME 3:				
PLANT	PICTURE	PLANT	PICTURE	PLANT	PICTURE			

ISLAND FAUNA RESEARCH: draw/color the island with biomes

1-		

Alpine	Tropical Forest	Tropical Grassland	Desert/ Aridland	Temperate Grassland	Temperate Forest	Coniferous Forest	Tundra	Marine

BIO	ME 1:	BIOI	ME 2:	BIOME 3:				
ANIMAL	PICTURE	ANIMAL	PICTURE	ANIMAL	PICTURE			



NATURAL RESOURCES

Classification of these resources can be done by means of many different criteria. However, on the basis of origin, two main categories of natural resources are formed: **biotic** and **abiotic**. The resources extracted from the **earth's biosphere** are categorized as **biotic**. Minerals, metals and other such materials (**non-living**) fall in the category of **abiotic** natural resources.

BIOTIC NATURAL RESOURCES:

The biotic resources can be obtained in the raw form, or by means of cultivation through agriculture. The following list provides names of resources directly obtained from the biosphere. Petroleum (oil) and natural gas are formed from the remains of animals and plants that lived many years ago in a marine (water) environment before the dinosaurs. The remains of plants and animals decayed and built up in thick layers. This decayed matter from plants and animals is called organic material --- it was once alive (therefore, biotic). Over time, the mud and soil changed to rock, covered the organic material and trapped it beneath the rock. Pressure and heat changed some of this organic material into **coal**, some into **oil** (petroleum), and some into **natural gas** -- tiny bubbles of odorless gas. Most of the biotic resources are non-renewable in nature.

Here are some biotic natural resources:

- Timber
- Petroleum/Oil (A fossil fuel found underground. It can be present almost anywhere on Earth but is often found in arid lands).
- Natural Gas (Found in deep underground rock formations. It is recovered by a machine that pumps it out of the ground in pipelines).
- ➡ Coal (A combustible brownish-black sedimentary rock mined from the ground).

➡ Fruits/Vegetables

Biotic Resources (Agriculture): Crops obtained through farming are the important natural resources. Here are a few:

- Rice, Wheat and Corn: These are the cereals widely used by people the world over. Wheat, rice and corn form the bulk of grains cultivated by farmers for consumption.
- Cotton: It is a cash crop which produces raw material for manufacturing of garments. Nowadays, even synthetic fibers are used for manufacturing garments, however, cotton holds the major share.
- Sugarcane: The sugarcane crop, just like cotton is considered a cash crop for farmers. Sugar prepared from its cane is used in a variety of food products. In fact, the bakery products and other sweetmeats require sugar as its basic ingredient.

ABIOTIC NATURAL RESOURCES (a short list):

Gold, Silver, Nickel, Copper, Iron Ore, Zinc, Lead, Marble, Limestone, Platinum, Salt, Sand, Gravel

*ISLAND RESOURCES: analyze your island's biomes and determine its most likely natural resources (create pictures)



Renewable Resources: any natural resource (as wood or solar energy) that can be replenished naturally with the passage of time.

Non-Renewable Resources: resources that are consumed much faster than nature can create them.

- 1. Analyze the island's terrain. Select the best 3 renewable resources and 3 nonrenewable resources for the island.
- 2. Using the diagrams below, draw/color/label the energy sources on the island map above.
- 3. Show any other energy resources and complete the energy consumption percentage chart below.

ISLAND ENERGY CONSUMPTION BY SOURCE (must equal 100%)



ISLAND HABITATION: urban, suburban, and rural areas



People often define **urban areas**, or cities, as land occupied by buildings and other structures used for residences and institutional and industrial sites. Urban areas often have some form of public transportation, such as buses, subways, or trains and have high population densities. Buildings are often closer together and built higher than those in suburban or rural areas.



Suburban areas are those on the outskirts of cities. Residents of suburban areas often commute to the cities for work. Some suburban areas have commuter trains and buses that shuttle people to and from the cities. Structures in suburban communities are often lower and farther apart than in cities. Though they have smaller populations than cities, suburbs offer the same services including schools, health care facilities, and public works.



Rural areas have large amounts of land with significantly lower populations than urban or suburban areas. Structures are often far apart and some rural communities share hospitals or schools. Rural areas tend to be far from urban areas. When many students think of rural areas, they think of farmland. However, people live in woodland forests, plains, deserts, and prairies, which are examples of rural areas.

HABITATION AREAS: analyze the island's **biomes** and determine the most probable **urban**, **suburban**, and **rural** areas. **Cut out** the **necessary stamps** below and glue to the **island map** on the **next page**.



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ISLAND PHYSICAL AND POLITICAL POSTER MAP LEGEND ¹⁴

STEPS: 1. lines of latitude & longitude 2. island coastline 3. elevation 4. land/water legend items 5. remaining legend items

	compass	HIGHWAY	highway
200 km	scale	• • • •	tollway
	national boundary line		airport
	national capital		pipeline
	elevation		railway
	1,500 - 3,000 feet	K A	recreation area
	3,000- 4,500 feet		port, ferry point
	above 4,500 feet		tourist attraction
	lake		
		0	populated places/cities
	river	0	1,000 people
			1,000-5,000
	forest		5,000-10,000
A			10,000-30,000
2	mountain(s)		30,000-50,000
			50,000-100,000
3(F3(F3(F	grassland	\diamond	100,000-500,000
			500,000-1,000,000
	desert	\blacklozenge	1,000,000 + people

14 ISLAND PHYSICAL AND POLITICAL POSTER MAP ICONS

