##

## Lesson Plan Title: India, geographical characterization

## Google product(s) used: Google Earth, Google Docs, Google Search;

**Contributor:** Galbin Florin Claudiu, geography teacher**,** Radu Petrescu high school, Prundu Bargaului, Bistrita-Nasaud, Romania

### Overview

**Subject(s):** Social Studies - Geography (World geography)

**Grade level(s): 7-9**

**Lesson topic: India**

 **Lesson aim:** Familiarize students with the geography of India

**Reference objectives**

R 1 - Acquisition of knowledge about physical and geographical characteristics of India;

R 2 - Development of cognitive skills, analysis, visualization, synthesis and evaluation using their own procedures about geography;

 R 3 - Acquiring of an responsive and positive attitude toward knowledge, culture and civilization;

 R 4 - Developing the ability to communicate using specific language of geography;

**Operational objectives.**

 At the end of the lesson students will be able to:

O 1 - to specify the location and boundaries of India using Google Earth and Maps;

O 2 - to exhibit, establish the position of landforms and other geographical features;

O 3 - skill to see through Google Earth;

O 4 - to acquire knowledge on establish geographic position, limits, neighbors, climate, hydrography, population, resources, industry, agriculture and tourism;

**Type of lesson:** Communication of new knowledge through the Google Earth

**Materials/Equipment Needed:**

**•** Computers with Internet access and Google Earth downloaded.

• Laptop computer hooked up to a projector and a computer lab.

**Organization of work:** collective, individual.

**Instructions**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  **O. obj.** |  **Time** | **Lesson stages** | **Teacher activity** | **Students activity** | **Teaching strategies** | **Evaluation** |
|  | 1' | Classroom organization | Advises students about lesson moments | Students prepare the necessary things for the lesson | Observing  | Attention, appreciation |
|  | 10' | Verification of prior learning | The teacher verify what students have learned from previous lessons through control interrogations:- What are the countries of South Asia?- What are the capitals of those countries?- What are the types of relief?- What you know about the settlements and the population of this region?- What do you know about agriculture?- Generally, is a rich or poor region? | Listens analyzes and formulates individual answers:- Bangladesch, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka;- Shall consist of three stages: in the south, Dekkan plateau in the center and north, Indus and Ganges plains and in the north the highest mountains of the planet Himalayas- Represents 1/3 of the continent's population and 1/5 of the world population, the population is predominantly rural.- Calcutta, Mumbai, Dhaka, Madras, Karachi etc.- Culture of rice and wheat.- Is a poor region | The dialogue | Analysis of the responses, stimulating students and evaluation of learning outcomes |
|  | 1' | Preparing apperception | Ask learners to see how we are approaching India through Google Earth and asks which is the largest state from the South Asian region;***Virtual tour****:*  *double click!*- comprises the most part from the [Indian subcontinent](http://en.wikipedia.org/wiki/Indian_subcontinent) and lies on the [Indian tectonic microplate](http://en.wikipedia.org/wiki/Indian_Plate), part of the [Indo-Australian macroplate](http://en.wikipedia.org/wiki/Indo-Australian_Plate);- Geological processes started 75 million years ago when the Indian subcontinent, moved north and collided and subduction under, the [Eurasian Plate](http://en.wikipedia.org/wiki/Eurasian_Plate) resulting in the highest mountains of the world, the [Himalayas](http://en.wikipedia.org/wiki/Himalayas) from where resulted sediments that contributed to the formation of  [Indo-Gangetic Plain](http://en.wikipedia.org/wiki/Indo-Gangetic_Plain). | Notice answer,The largest state from South Asia is India. | Heuristic conversation | Observing the student behavior, stimulate the student participation in response. |
| **O1****O2, O3** | 20'-25' | Communication of new knowledge, directing teaching and learning and  | Shall be noted new lesson title on the blackboard: [India](http://en.wikipedia.org/wiki/India)The teacher explains the geographical characteristics of India concomitantly with images from virtual tour that shows points of interest. **Lesson plan****Geographical position and boundaries:**Shall be ticked grid function from the View menu of GE. and we follow the advantage over the fixed map the fact that we can afford the approximation and finding the coordinates of any point of interest (img.1).***Virtual tour***:   *double click!* Indian's land border measuring 15,106.70 km with the countries: V-[Pakistan](http://en.wikipedia.org/wiki/Pakistan), NE, [Nepal](http://en.wikipedia.org/wiki/Nepal), [China](http://en.wikipedia.org/wiki/People%27s_Republic_of_China), [Bhutan](http://en.wikipedia.org/wiki/Bhutan) and E-[Bangladesh](http://en.wikipedia.org/wiki/Bangladesh) and [Myanmar (Burma).](http://en.wikipedia.org/wiki/Burma)India is composed from a continental part, one peninsular part and one insular part.**Relief: *virtual tour*** *double click!*W-[Western Ghats](http://en.wikipedia.org/wiki/Western_Ghats) mountains, E-[Eastern Ghats](http://en.wikipedia.org/wiki/Eastern_Ghats) mountains, NV-[Indus Plain](http://en.wikipedia.org/wiki/Indo-Gangetic_Plain), N - [Ganges Plain](http://en.wikipedia.org/wiki/Indo-Gangetic_Plain) and [The Himalayas](http://en.wikipedia.org/wiki/Himalayas) (occupying 15% of India) with the highest peak [Kangchenjunga](http://en.wikipedia.org/wiki/Kangchenjunga) 8,598 m (28,208.7 ft) in the center, [Deccan Plateau](http://en.wikipedia.org/wiki/Deccan_Plateau) and in the western continental part [Thar Desert](http://en.wikipedia.org/wiki/Thar_Desert) which shared with the Pakistan.**Climate:** shall be ticked "weather founction" from Google Earth layers;are prevalent four types climate: [tropical wet](http://en.wikipedia.org/wiki/Climate_of_India#Tropical_wet), [tropical dry](http://en.wikipedia.org/wiki/Climate_of_India#Tropical_dry), [subtropical humid](http://en.wikipedia.org/wiki/Climate_of_India#Subtropical_humid), and [montane](http://en.wikipedia.org/wiki/Climate_of_India#Montane). Img.2**Hydrography:** ***Virtual Tour***   *double click!* The most important rivers are: [Ganges](http://translate.google.com/translate?hl=ro&prev=_t&sl=ro&tl=en&u=http://en.wikipedia.org/wiki/Ganges)-[Brahmaputra](http://translate.google.com/translate?hl=ro&prev=_t&sl=ro&tl=en&u=http://en.wikipedia.org/wiki/Brahmaputra_River), [Indus](http://translate.google.com/translate?hl=ro&prev=_t&sl=ro&tl=en&u=http://en.wikipedia.org/wiki/Indus_River) , [Narmada](http://translate.google.com/translate?hl=ro&prev=_t&sl=ro&tl=en&u=http://en.wikipedia.org/wiki/Narmada_River) , [Godavari](http://translate.google.com/translate?hl=ro&prev=_t&sl=ro&tl=en&u=http://en.wikipedia.org/wiki/Godavari_River) , [Krishna](http://translate.google.com/translate?hl=ro&prev=_t&sl=ro&tl=en&u=http://en.wikipedia.org/wiki/Krishna_River) .**Vegetation, fauna and soils:**[Monsoon forests](http://en.wikipedia.org/wiki/Tropical_Rainforest_of_India) ***Virtual tour***  *double click!*- include: [ebony](http://en.wikipedia.org/wiki/Ebony) (black wood), [bamboo](http://en.wikipedia.org/wiki/Bamboo), [teak](http://en.wikipedia.org/wiki/Teak) (very hard wood used to build ships), [mahogany](http://en.wikipedia.org/wiki/Mahogany), [sandalwood](http://en.wikipedia.org/wiki/Sandalwood) (fragrant wood), [palm](http://simple.wikipedia.org/wiki/Palm_tree).[Mangroves](http://en.wikipedia.org/wiki/Mangrove) ***Virtual tour*** *double click!*- contains a tropical vegetation comprising trees and bushes with adventitious roots, characteristic of maritime swampy shores flooded during the flux;Savanna vegetation includes tall herbs (elephant grass) where more appear (acacia, savanna palm tree).[Specific Birds](http://en.wikipedia.org/wiki/List_of_birds_of_India): [indian peafowl](http://en.wikipedia.org/wiki/Indian_Peafowl) ([Pavo cristatus](http://en.wikipedia.org/wiki/Indian_Peafowl)) steppe eagle ([Haliastur industriale](http://en.wikipedia.org/wiki/Brahminy_Kite) ) oriental white stork, eagle, owl ([Bubo zeylonensis),](http://en.wikipedia.org/wiki/Brown_Fish-owl) flamingo ([Phoenicopterus roseus](http://en.wikipedia.org/wiki/Greater_Flamingo) ) etc..[Animals](http://en.wikipedia.org/wiki/Wildlife_of_India): Indian Elephant ([Elephas maximus indicus](http://translate.google.com/translate?hl=ro&prev=_t&sl=ro&tl=en&u=http://en.wikipedia.org/wiki/Elephas_maximus_indicus)), unicorn rhinoceros ([Rhinoceros unicornis](http://translate.google.com/translate?hl=ro&prev=_t&sl=ro&tl=en&u=http://en.wikipedia.org/wiki/Rhinoceros_unicornis)), Bengal Tiger ([Panthera tigris tigris](http://en.wikipedia.org/wiki/Royal_Bengal_Tiger)), black bear ([Ursus thibetanus](http://en.wikipedia.org/wiki/Asian_black_bear)), crocodile ([Crocodylus porosus)](http://en.wikipedia.org/wiki/Asian_black_bear), Indian lion ([Panthera leo persica)](http://en.wikipedia.org/wiki/Indian_Lion), Indian leopard ( [Panthera pardus fusca](http://en.wikipedia.org/wiki/Indian_Leopard)), cobra ([Naja naja](http://en.wikipedia.org/wiki/Indian_Cobra)) dromedary, wild boar, red fox, wild cat, python, antelopes, chameleon etc.**Population**: 1,210,193,422 in 2011, second place in the world;Density: 371.6 inhabitants / km 2**Religions**: [Hinduism](http://en.wikipedia.org/wiki/Hinduism) (80.5%), [Buddhism](http://translate.google.com/translate?hl=ro&prev=_t&sl=ro&tl=en&u=http://en.wikipedia.org/wiki/Buddhist_pilgrimage) (0.8%), [Jainism](http://en.wikipedia.org/wiki/Jainism) (0.4%), [Sikhism](http://en.wikipedia.org/wiki/Takht_%28Sikhism%29) (1.9%) and [Islam](http://en.wikipedia.org/wiki/Islam_in_India) (13.4%); **Official language** is Hindi ( [Hindustani (Hindi-Urdu)](http://en.wikipedia.org/wiki/Hindi-Urdu)) and other languages ​​are: [English](http://en.wikipedia.org/wiki/English_language),  [Bengali](http://en.wikipedia.org/wiki/Bengali_language), [Tibeto-Burman](http://en.wikipedia.org/wiki/Tibeto-Burman_languages), [Marahti](http://en.wikipedia.org/wiki/Marathi_language), [Telugu](http://en.wikipedia.org/wiki/Telugu_language). Majority of the population dealing with agriculture and 73% of the total population live in rural areas.The main cities with the number of population in 2011:***Virtual tour***  *double click!* [Mumbai](http://en.wikipedia.org/wiki/Mumbai)(12478447), [Delhi](http://en.wikipedia.org/wiki/New_Delhi) (11007835), [Bangalore](http://en.wikipedia.org/wiki/Bangalore) (8425970), [Hyderabad](http://en.wikipedia.org/wiki/Hyderabad%2C_India) (6809970), [Ahmedabad](http://translate.googleusercontent.com/translate_c?depth=1&hl=ro&prev=_t&rurl=translate.google.com&sl=ro&tl=en&twu=1&u=http://en.wikipedia.org/wiki/Ahmedabad&usg=ALkJrhgBPO-Wb1Bv2RTiMX03ELnBHJeEYQ) (5,570,585), [Chennai](http://en.wikipedia.org/wiki/Chennai) or Madras (4681087), [Kolkata](http://en.wikipedia.org/wiki/Kolkata)(4486679), 46 cities with more than 1 million inhabitants (Image 3).**Natural resources and the economy:**India has large reserves of water on the outside and in the basement;In the plain areas soils are black and 56% of the land is arable where the cotton is planted (third place), tea (first place) etc.***Virtual tour*** *double click!*Forest soils are used for coffee and tea plantations and red soils are rich in iron;Approximately 5.4 billion oil barrels (No. 23) in the following areas: [Mumbai High](http://en.wikipedia.org/wiki/Bombay_High), [Assam](http://en.wikipedia.org/wiki/Assam), [Cambay](http://en.wikipedia.org/wiki/Khambhat) and [Krishna-Godavari Basin](http://en.wikipedia.org/wiki/Krishna_Godavari_Basin) and the [Cauvery](http://en.wikipedia.org/wiki/Kaveri);Natural gases about 17 billions of cubic meters (the place 18) in areas:  [Andhra Pradesh](http://en.wikipedia.org/wiki/Andhra_Pradesh), [Gujarat](http://en.wikipedia.org/wiki/Gujarat) and [Orissa](http://en.wikipedia.org/wiki/Odisha);Other important resources: [uranium](http://translate.google.com/translate?hl=ro&prev=_t&sl=ro&tl=en&u=http://en.wikipedia.org/wiki/Uranium) , diamonds, gold, titanium, mica blocks, coal (third place), [iron ore](http://translate.google.com/translate?hl=ro&prev=_t&sl=ro&tl=en&u=http://en.wikipedia.org/wiki/Iron_ore) (No. IV), manganese, aluminum, etc..(img. 5)Agriculture is based on rice cultivation, tea, wheat, cotton, coconut etc.**The economy** is growing fast but the GDP was ranked 140 in 2011;**Major industries**: textiles, telecommunications, chemicals, pharmaceuticals, biotechnology, food processing, steel, transport equipment, cement, mining, petroleum, machinery and software;**Transport**: shall be ticked "the function roads" from Google Earth layers and "the function locations" to view airports.**Tourism**:Will be activate the function "tour guide" from Google Earth window.The tourist attractions: Taj Mahal, temples, national parks, Himalayas, waterfalls, etc.. | The students wrote in their notebooks, they are attentive to the virtual tour and make responses under the guidance of the teacher;Confronting items in the geography book with those identified in the virtual tour;Locates the relief units, specifies the main types of climate and major rivers;Watching images from the virtual manual and from Google Earth, discovers vegetation types and understand the climatic conditions in wich they grow;The students actively participate in the lesson;Students are attentive to the Google Earth virtual tour and teacher’s explanation about the most populated cities;The students actively participate to the lesson;Analyzes the distribution of natural resources, diverity and their importance.Viewing in Google Earth of the touristic guide;  | Discovering, observation, visualization;Conversation, questioning, discovering new knowledgeComparision and working with virtual material; IdemIdemIdemIdemIdemIdem | Causes participation of all students and determines them to ask questions, to question themselves and to confront with other colleaguesIdemIdemIdemIdemIdemIdemIdemIdem |
| **O4** | 5 ' | Consolidation of knowledge-feedback | The teacher points out shortly each part of the lesson. | The students are very attentive to teacherthey understand, synthesizes and explains the geographical diversity depending on the surface, diversity of relief, climate, vegetation and how is populated the territory of India. | Geographical exercises; | Stimulating the participation of the students, analyzing the responses, the notation. |
|  | 5 ' | Ensuring the retention and transfer of knowledge | Deselect all the functions of Google Earth, leaving only the borders and students will be asked about India's geographical elements described above. | Formulates answers; | Control interrogations and dialogue; | Final evaluation |
|  | 1'-2' | Concerns for home | The students must learn the lesson, to achieve the following collections of images through Google Earth with the most important: mountains, rivers, cities. | The students wrote in their notebooks; | Explanation; |  |

### Related Links

1. <http://en.wikipedia.org/wiki/India>

2. [http://en.wikipedia.org/wiki/Geography\_of\_India# Water\_bodies](http://en.wikipedia.org/wiki/Geography_of_India%23%20Water_bodies)

3. <http://en.wikipedia.org/wiki/Tropical_Rainforest_of_India>

4. <http://en.wikipedia.org/wiki/List_of_most_populous_cities_in_India>

5. <http://cgge.aag.org/PopulationandNaturalResources1e/CS_India_Aug12/figure1.png>

6. <http://www.mapsofindia.com/images/India-Natural-Resources.jpg>

7. <https://productforums.google.com/forum/#!searchin/gec/galbin$20florin/gec-educators/QeQ0f6mHhZs/J_ZCz53rxB0J>

8. <http://gelessons.com/lessons/teachingwithGE.html>

9. <https://docs.google.com/document/d/1aLebcZoE7GTG1_06lFtqLlxt07v_l5OiWbJQ5NVqV9I/preview>

10. <https://sites.google.com/site/gstgearth/home>

11. <http://support.google.com/earth/bin/answer.py?hl=en&answer=173934&topic=2376989&ctx=topic>

12. [DULAMĂ, Maria Eliza, 2010, ***Didactica axata pe competente****,* Cluj-Napoca, Editura Presa Universitară Clujeană, 458 pagini](http://xa.yimg.com/kq/groups/16363543/2115969103/name/0cuprinsuri.doc)

### Evaluation



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Image2, source at:<http://www.besttofind.com/Img/india_climate_map.jpg> <http://freeimagescollection.com/images/symbols/weather-and-climate-map-of-india-showing-monsoon-temperatures-etc-f5.jpg> attached on Google Earth.



 Image 3. First cities of India Image 4. Density of population 2011



 Image5. India-Natural-Resources

Note: Kmz type attachments are opened by clicking on the link of each virtual tour and view them from there.