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**Comparative analyse of WATER in subjects related with the curriculum in:**

**Iceland Latvia Finland Portugal Spain Germany**

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| **Country** | **Level** | **Subject** | **General topics** |
| **Iceland**  C:\Users\hsm\Desktop\icelandic-flag-map.png | **4th grade** | Biology | * The importance of water in every day live. * The water cycle. The melting of ice and glaciers. |
|  | **5th grade** | Geography | * Know the nearest rivers, lakes, streams and oceans around and in Iceland |
|  |  | Chemistry and physics | * The importance of water for plants and animal life |
|  |  | Biology | Water in nature   * State of water in everyday life * Drinking water purity importance |
|  | **6th grade** | Geography | * Knowing the nearest rivers, lakes, streams and oceans around and in the Scandinavian countries |
|  |  | Chemistry and physics | * The water H20 * The main water pollution sources * Water quality by bio indicators * Water cycle in nature |
|  |  | Biology | * Water in the human body. * The proportion of water in the human body. |
|  | **7th grade** | Geography | * Knowing the nearest rivers, lakes, streams and oceans in Europe |
|  |  | Chemistry and physics | * The ocean current and the importance of climate formation * Water molecule |
|  |  | Biology | * Live organism in water. * Water in the human body . * The proportion of water in the human body. |
|  | **8th grade** | Geography | * The importance of water as the most important natural resource in the world and the basic for development of life on earth. * The proportion of water on the surface of the planet. * The location of the main oceans, freshwater lakes and rivers on the world map. * The importance and function of the rain forests. * The climate and water in atmosphere. * The role access water has on urban development and position of civilization. * The role water has as a way of transport and communication. (Oceans, rivers and canals). * Hydric resources and water energy. * Development aid in connection with water resources and use of hydric energy. * Rivers and waterfalls in landscape. * Ocean currents and the importance of the Gulf stream to human habitation in the northern part of the world. * The importance of fisheries and connected industries. * Coastline culture. * Water pollution. * The ice of the North- and South-poles as freshwater resources. * Management of the ocean resources. * Navigation routes and possible changes due to melting of the polar ice. * The effect dams and other hydrographical complexes have on the landscape and culture. |
|  |  | Chemistry and physics | * Water in the chemical reactions. * Characteristic of water molecules. * Distillation of water. * Different form of water. * Acid rain. |
|  |  | Biology | * Water in live organism. * Water in the human body. * The proportion of water in the human body. |
|  |  | Art | * Water as an endless inspiration in poetry, literature and visual arts. * Physical use of water in creating visual art. |
|  | **9th grade** | Biology | * The climate: water in atmosphere, rain and steam * The sea * The importance of water in the climate |
|  |  | Geography | * The role water has as a way of transport and communication. (Oceans, rivers and canals). * Water energy. * Rivers and waterfalls in landscape. * Ocean currents and the importance of the Gulf stream to human habitation in the northern part of the world. * Coastline culture. * Water pollution. * The ice of the North- and South-poles |
|  |  | Chemistry and physics | * water molecule structure-chemical bonds * electrolytic and water * pH |
|  | **10th grade** | Astronomy | * Water on earth and in space * Moon and tides * Winter and summer |
|  |  | Physics | * Temperature in water * Heating and cooling e.g. Icelanders heat up their houses with warm water * Electricity made from waterfalls and hot steam * Lightning’s * Sound through water l * Light and water, reflection and more * Nuclear energy and water cooling * Energy in water * Water pressure * Density in materials/water * Hydraulic equipment * Movement and water |
| **Portugal**  **C:\Users\hsm\Desktop\184px-Flag-map_of_Portugal.svg.png** | **1th grade** | Experiments with water | * Capacity/volume, regardless of shape of the object * Identify some physical properties of water * Recognize materials floating and not floating * Investigate the effect of water substances |
|  | **5th grade** | Natural sciences | * The importance of the water for living bodies * Understand the importance of water to living things * Understand the importance of water quality for human activity * Water and the influence of abiotic factors on morphological and behavioural adaptations of animals |
|  | **6th grade** | Natural sciences | * Water related to social problems, pollution, water/soil, * Water and healthy enviroments |
|  | **7th grade** | Geography | * The rivers in the landscape * The hydrography as a landscape unites * The water in atmosphere * The climate water in atmosphere, rain and steam * The marine current and sea erosion * The importance of water in the climate * Water in the atmosphere: Liquid, solid and steam * The precipitation * Hydrographical complex * Rivers as water supplies |
|  |  | Physical and  Chemistry | * Planet earth have unique characteristics related with water in liquid form |
|  | **8th grade** | Geography | * Hydric resources * Water energy |
|  |  | Physical and Chemistry | * Importance of water in the chemical reactions |
|  |  | Natural sciences | * The earth subsystem Hydrosphere * The importance of water as abiotic factor for animal and plants * Natural catastrophe Foods * Water pollution * Hydric resources * Water supplies, potable water in the planet |
|  | **9th grade** | Geography | * Acid rain, the decrease of ozone layer |
|  |  | Natural sciences | * Water in the human body * Water energy |
|  | **10th grade** | Geography | * Water resources * Underground water supplies (aquifers) Rivers, basins and lakes * Thermal water and spring water * Management of water resources and water protection * Problems connected with fresh water resources * Management of the ocean and maritime resources * Ocean water |
|  |  | Physic and Chemistry | * Characteristics of water molecule * Proprieties of water |
|  |  | Biology and Geology | * Water in live organism * Importance of some proprieties of water for organisms * Acid rain, the decrease of ozone layer |
|  | **11th grade** | Geography | * Water (Rivers and oceans) as systems of communications and transport |
|  |  | Physic and Chemistry | * Water resources |
|  |  | Biology and Geology | * The problems connected with: the anthropic occasions close rivers and oceans * Water supplies: rivers and underground water (aquifers) |
|  | **12th grade** | Geography | * The water wars * Ambiental problems: decreasing of fresh water |
|  |  | Geology | * Underground water supplies: Aquifers |
| **Latvia**  **C:\Users\hsm\Desktop\Latvia_flag_map.png** | **5-6th grade** | Science | * The importance of water to plant and animal life * Knowing the nearest rivers, lakes, streams * The types and precipitation Water in nature * State of eater in everyday life * Drinking water purity importance * The main water pollution sources * Water quality by bioindicators * Water cycle in nature * Mountain streams an plain rivers * Formation of the waterfall and rapids * Freshwater and saltwater * Solutions in everyday live |
|  | **7-9th grade** | Biology | * Assess air or water of-pollution through bioindicators * Water role to human environmental impact of neighbourhood ecosystem an human organisms |
|  |  | Geography | Earth´s hydrosphere   * Hydrosphere components, the World Ocean, ocean floor, shelf, edges Sea, inland sea, the new line in the mountains * The importance of water resources in the natural course of the process and the lives of people in different regions of the world. * The ocean current and the importance of climate formation * Ice, glaciers and avalanche formation * Continental glaciers and their importance of the earth´s fresh water resources structure * The sources of pollution of the world´s oceans * Baltic Sea and in the Gulf   Groundwater, sources   * Latvian rivers, river basins * Types of water pollution causes and effects lakes and regional location c |
|  | **8-9th grade** | Chemistry | * Water decomposition * The pH in different water * Acid rain formation and impact to environment   Water in human life:   * Distilled water * Physical properties of pure water * Water reactions with metal oxides and non-metallic elements oxides * Solubility of substances in water * Modern drinking water treatment plants * Drinking water preparation and wastewater purification * The water pollution, water pollutants * The effects of water pollutants to environment, human health |
|  | **10-12th grade** | Chemistry | * Disperse systems * water as solvent * water molecule structure-chemical bonds * crystal hydrates * electrolytic dissociation * pH * Water solution electrolysis * Metal reacting with water * Water role to chemical and electrochemical corrosion processes * The water hardness * Analyse water quality * Hydrocarbon and other organic compound hydration. |
| **Finland**  **C:\Users\hsm\Desktop\Finland_flag_map.png** | **7th grade** | Biology | * Lake ecosystem (features of water, water cycle, flora an fauna and lakes) * Factors threatening waterways as hypertrophication |
|  |  | Geography | * Oceans * Rivers and lakes in the American Continent |
|  |  | Chemistry | * Water is essential for life/water for life * The most important properties of water |
|  |  | Physics | * Properties of water |
|  | **8th grade** | Geography | * Water cycle on earth * Saltiness of seas * Pollution of waterways (seas, lakes, rivers) * Fresh water resources and lack of clean and fresh water * Marine areas surrounding Europe * Erosion caused by water and ice * Largest rivers and lakes in Europe |
|  |  | Chemistry | * Water molecule * Acid rain * Water and sewage treatment |
|  |  | Chemistry optional course | * Water analyses |
|  |  | Physics | * Density of water, buoyancy |
|  | **9th grade** | Geography | * Special characteristics of Finnish waterways (lakes and rivers) * Finnish rivers and lakes * The Baltic sea; ice age theme water overlaps theme wind when studding e.g. the formation of cyclones |
|  |  | Physics | * Water power plants |
| **Spain**  http://upload.wikimedia.org/wikipedia/commons/8/81/Spain-flag-map-plus-ultra.png | **1th grade** | Environmental | * Responsible use of water |
|  | **2th grade** | Environmental | * Analysis of the aquatic ecosystem |
|  | **3th grade** | Environmental | * Characteristics of rivers * Water cycle. |
|  | **4th grade** | Environmental | * Metrological variables: Humidity and precipitations. * States of water. * Changes of states of water. |
|  | **5th grade** | Environmental | * Metrological variables: Humidity * Fluvial and glacial erosion. * Pollution and waste of water |
|  |  | Math | * Relation between weight and capacity of water |
|  |  | Citizenship | * Valuation of the public service: supply of drinking water |
|  | **6th grade** | Environmental | * Density. * States of water. Changes of states. * Solubility in water * Chemistry characteristics of water |
|  | **7th grade** | Biology | * Hydrosphere. * Beginning and distribution of water on earth. * Water in oceans, water in continents. * Water cycle, water characteristics, states of water. * Uses of water. * Water pollution, waste water treatment, water saving. * Meteorological variables: clouds and precipitations. * Water is essential for life on earth. * Water, molecular component of living matter * Biological importance of water. * Fluvial and glacial erosion. * Density, volume. * Solution, concentration. * States of water, changes of states. * Formula of the molecule of water. |
|  |  | Geography | * Water essential for life on earth. * Hydrosphere. * Coastal and submarine reliefs. * Fluvial erosion. * Continental water (river, lake, glacier and underground water) and marine water. * The most important rivers, lakes and seas on earth. * Water, an earth heritage. * Parts of a river. * Precipitation. Rivers and the landscape * Weather, water and coast in human life. * Over exploitation of water * Most important rivers, seas, oceans, islands and peninsulas of Spain. |
|  |  | History | * Nile river and the ancient Egypt. * River civilizations (Mesopotamia) |
|  | **8th grade** | Biology | * Plants to purify water. * Submarine relief. * Tsunami. |
|  | **9th grade** | Biology | * Management, pollution and treatment of water. * Acid rain * Coastal relief. * Geological action of the continental water. * Underground water * Rapids * Torrent * Rivers * Fluvial terraces. * Infiltration. * Aquifer. * Glacier. * Sea. |
|  |  | Geography | * Ocean, river, lake and underground water. * Water and human occupation * Precipitations * Climograph. * Europe's coasts. * The most important rivers and lakes in Europe. * Aquaculture. |
|  |  | Chemistry | * Solubility in water. * Solutions. * Water molecule |
|  |  | Phycology | * Density of water. * Changes of states of water. |
|  |  | Technology | * Water pollution because of the production of electric energy |
|  | **10th grade** | Biology | * Water (terrestrial modelling agents) * Water (environmental factor in the terrestrial environment) |
|  |  | Physics | * Communicating vessels. * Hydraulic systems * Archimedes' Principle. |
|  |  | Technology | * Water installation in a house. * Hydraulic installation. |
| **Germany** | **5th grade** | German | * Being creative with language rhymes and riddles about water * Factual and functional text about water * Literary texts(nature-water-related poems) * Young readers literature(water-related) * Various water-related texts |
|  |  | GSE=  Geography  History and social studies | * Evolution, Genesis, and earth * Orientation on maps(oceans) * Environnemental protection (Rainwater utilisation etc.) * The Nile-lifeline of Egypt |
|  |  | PCB=  Physical, biology and Chemistry | * Nature in the course of the year * Properties of chem. Substances(solubility, boiling- and melting temperature) |
|  | **6th grade** | German | * Being creative with language rhymes and riddles about water * Factual and functional text about water * Literary texts(nature-water-related poems) |
|  |  | GSE=  Geography  History and social studies | * Roman Empire(aqueducts, fountains, spas) * Bavaria (rivers, lakes, channels) |
|  |  | PCB=  Physical, biology and Chemistry | * Basic of life: water * Properties of water * Quality of water * Habitat: water * Organisms who live near/in water * Adapting of organisms to the habitat water |
|  |  | Religion  (C and P) | * Symbols and sacraments(original symbol of mankind : baptism, water, etc.) |
|  | **8th grade** | German |  |
|  |  | GSE=  Geography  History and social studies | * Europe tourism, oceans, lakes, rivers i.e. river cruises on the Main River * Europe Single Market: getting to know rivers, seas and oceans as important traffic routes |
|  |  | PCB=  Physical, biology and Chemistry | * Quality of soil: water-holding capacity, pH-level, compaction of soil * Function of forests: water reservoir, recreation area (lakes, rivers, moors, etc.) * material properties in daily life and technology * environmental protection environmental hazards of water (chemical substances, fertilizers, acid rain, road salt) |
|  |  | Religion  (C and P) | * Water of life (catholic and protestant) symbols, rituals, baptism. |
|  |  | Politic | * Water mafia, who owns water rights? |