

Program for the teacher

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Class: Secondary school

Quality assurance: Prof. Dr. Carsten Hobohm (UF)

Material: Information and worksheets

Purpose: Getting to know the rainforest and its species diversity. Introduction of a new working method: mind map.

Structure:

- Beginning: activation of prior knowledge using a mind map
- hand out the information texts
- talk about the solutions

Sources

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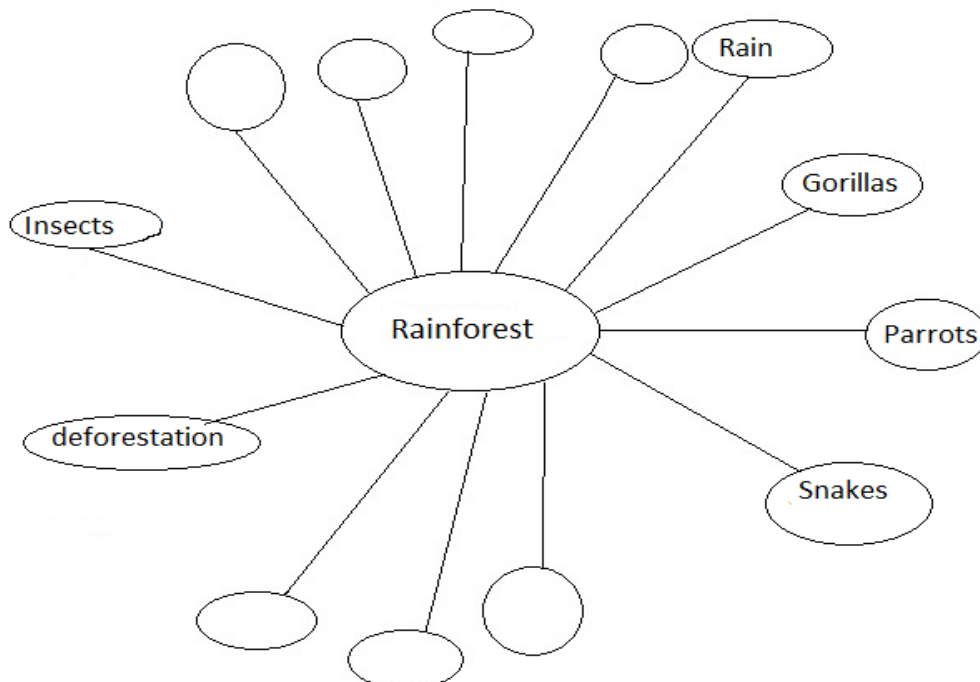
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In order to activate the pupils' prior knowledge about the rainforest, it is helpful to construct a mind map on the board.

It may look like this, for example



Solutions:

Task:

Use your atlas to find out where the rainforests are located in Africa.

1. Search for the following countries and write them on the lines. Afterwards colour them green. The rainforests are located in these countries:

Democratic Republic of Congo, Gabon, Ghana, Cameroon, Liberia, Madagascar, Guinea, Sierra Leone, Benin, Nigeria, Togo, Ivory Coast, Equatorial Guinea, Congo



(Psych3, 2006)

1 **Guinea**

3 **Liberia**

5 **Ghana**

7 **Benin**

9 **Cameroon**

11 **Gabon**

13 **Democratic Republic of Congo**

2 **Sierra Leone**

4 **Ivory Coast**

6 **Togo**

8 **Nigeria**

10 **Equatorial Guinea**

12 **Congo**

14 **Madagascar**

Task: Match the animals to the different forest ‘floors’.



Boomslang (Magnus Manske/Wikipedia 2009) (1)



Grey parrot (Quartl/Wikipedia 2010) (2)



Army ant (MehmetKaratay/Wikipedia 2007) (‘ground floor’)



Common pipistrelle (Jeffdelonge/Wikipedia2005) (3)

Task: Name reasons why the rainforest is being deforested (poss. discuss how you can preserve the rainforest)

- furniture and paper production
- mineral resources (oil, gas, gold and iron ore)
- cultivation of plantations (bananas, palm oil, soy, coffee, eucalyptus)

stimulus for a discussion:

- do not buy any product which contains, for example, palm oil
- collect donations, for example by selling home-made chocolate
- arouse the interest of the other pupils
- using recycled paper

Task: Fill out the following profile using the information text.

profile gorilla



male gorilla (Raul654, 2005)

height: 1.50 m – 1.90 m

weight: 60-200 kg

age: up to 50 years

food: leaves, fruits and insects

lifestyle: They are diurnal and live in small groups on the ground.

Recipe for chocolate

ingredients	steps	material
<p>75g powdered (icing) sugar or milk powder 1 tablespoon pure cocoa powder 1 tablespoon cocoa butter 2 tablespoons milk</p>	<p>Weigh the powdered (icing) sugar (or the milk powder) and put it into a bowl. Add the cocoa powder.</p> <p>Add the milk and stir everything with the hand mixer until it becomes creamy.</p> <p>Slowly melt the cocoa butter in the pot. Mix the melted butter with the cocoa paste.</p> <p>Spread the paste on the baking parchment using the dough scraper.</p> <p>Leave the paste to rest until it hardens. Place it in the refrigerator, it will harden faster.</p>	<p>bowl kitchen scales hand mixer pot dough scraper baking parchment (paper)</p>

The tropical rainforest in Africa

The African rainforest is the second largest on earth. It is located in the Congo Basin, which is five times bigger than Germany. There are many different plant- and animal species. Many species are still unexplored.

Instead of seasons there is a diurnal climate in the rainforest. Diurnal climate means that the temperature fluctuation temperature between day and night is very high. The average temperature is about 26 to 28 °C. The rainforest gets its name because it's so hot that water evaporates very quickly and therefore it rains every day.

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(Psych3 verändert von Rieck/Wikipedia 2006)

- 1** _____
- 3** _____
- 5** _____
- 7** _____
- 9** _____
- 11** _____
- 13** _____

- 2** _____
- 4 Ivory Coast** _____
- 6** _____
- 8** _____
- 10 Equatorial Guinea** _____
- 12 Congo** _____
- 14** _____

The „floors“ of the rainforest

The African rainforest has different “floors” (also called ‘layers’) where different plants and animals live. You can compare them with a house.

Ground floor - cellar: The ground, where mushrooms, ants, beetles and many other insects live.

1st floor: A lot of snakes and small rodents live in the so-called undergrowth with shrubs, bushes and flowers.

2nd floor: A lot goes on in the canopy, the so-called crown region. The trees can grow up to 35 m. Monkeys, snakes, tree frogs and colorful birds such as parrots live here. Vines and strangler figs creep around the branches.

3rd floor - roof : Particularly birds and bats live in the giant trees that stick out of the canopy like towers. Giant trees are, for example, mahogany and the Brazil nut tree.



Task: Match the animals to the different forest 'floors'.



Boomslang (Magnus Manske/Wikipedia 2009)



grey parrot (Quartl/Wikipedia 2010)



Army ant (MehmetKaratay/Wikipedia 2007)



Common pipistrelle (Jeffdelonge/Wikipedia2005)

Threats to the rainforest

The rainforest in the Congo Basin is becoming smaller - and it is the fault of us humans.

Approximately 550.000.000 m² of the rainforest are deforested or burned daily. This is about 200.000 m³ annually. That means 35 soccer fields per minute.

The wood is used to produce furniture and paper, for example. The ground is used for the cultivation of plantations like oil palm, bananas, eucalyptus and coffee. In addition, cattle are kept on these areas.

People want to exploit the mineral resources of the African rainforest. Huge areas of the rainforest have to be cut down in order to reach the iron ore, gold, oil or gas. Due to the deforestation many animals lose their habitat. They have to flee to other areas. But the animals also face another threat. Many animals are hunted and some species are even threatened with extinction. Because the meat of these animals is particularly popular, many animals are hunted although it is not allowed. A high penalty must be paid if hunters are caught. The result of these illegal hunts is that many species, such as the gorilla now only have small populations.

Task: Name reasons why the rainforest is being deforested. Discuss how you can preserve the rainforest.

The gorilla

Gorillas belong to the great apes and are threatened with extinction. This soft giant lives in the forests of west and central Africa. They have grey-black fur. They are about 1.50 to 1.90 metres high, which makes them the biggest species of the great apes. They can live up to 50 years and weigh between about 60 and 200 kg. Gorillas live in small groups which are led by one leader - usually the oldest male. During the day they stay on the ground in order to look for food and wander around their territory. They eat leaves, fruits and insects. A full-grown gorilla needs up to 25 kg of food daily. At night they build a nest of twigs and branches in the trees. Gorillas have a unique fingerprint like human beings. Gorillas communicate by making noises like roaring, howling and drumming on their chest.

Task: Fill out the following profile using the information text.

profile gorilla



male gorilla (Raul654/ Wikipedia 2005)

height:

weight:

age:

food:

lifestyle: