## Welcome to the Sahara



The Sahara is the world's largest desert. It is about 24 times bigger than Germany. With a size of 8.6 million $\mathrm{km}^{2}$ it covers large parts of North Africa. About 2.5 million people live in the Sahara most of them in Morocco, Mauritania and Algeria.
1.) Find the information and complete the table.

| size of the Sahara: | km ${ }^{2}$ |  |
| :---: | :---: | :---: |
| size of Germany: | km ${ }^{2}$ | The population of the Sahara |
| population of Germany: | million people | is ___ times smaller than |
| population of the Sahara: | million people | the population of Germany. |

2.) Draw a bar chart.

a) What can you say about the size of the Sahara desert and its population?
b) Why do only few people live in the Sahara?
3.) Which of these states belong to the Sahara? Use your Atlas and cross out the wrong ones. Number the correct ones (map).

| No | STATE |
| :--- | :--- |
| 7 | Mauritania |
| $\mathbf{X}$ | Congo |
|  | Morocco |
|  | Niger |
|  | Algeria |
|  | Sudan |
|  | Cameroon |
|  | Tunisia |
|  | Mali |
|  | Sahara |
|  | Chad |
|  | Nigeria |
|  | Libya |
|  | Egypt |


4.) Have a look at the climate table of In Salah. Fill in the missing data and draw a climate graph.

In Salah [27 $\left.{ }^{\circ} \mathrm{N} / \mathbf{2}^{\circ} \mathrm{E} / 273 \mathrm{~m}\right]$

|  | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | year |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathrm{T}_{\text {in }}{ }^{\circ} \mathbf{C}$ | 13 | 15 | 20 | 24 | 30 | 34 | 37 | 36 | 33 | 27 | 20 | 14 |  |
| P in mm | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 4 | 3 |  |

In Salah $\qquad$ Stuttgart, $259 \mathrm{~m} \quad 9^{\circ} \mathrm{C} \quad 633 \mathrm{~mm}$


Compare both climate graphs and complete the table.

|  | In Salah ( | ) Stuttgart (Germany) |
| :--- | :--- | :--- |
| maximum temperature / month |  |  |
| minimum temperature / month |  |  |
| average temperature ( $\varnothing$ ) |  |  |
| most precipitation (mm) / month |  |  |
| no precipitation in... (months) |  |  |
| precipitation in a year |  |  |

5.) The Sahara is very dry but if it rains much water comes down in only a short time.

Experiment: What happens if it rains in the desert?
 dry soil

a) Complete the drawings.
b) Water means life - but in the desert water can also be dangerous. Explain.

The Sahara has many faces...

|  |  |  |
| :---: | :---: | :---: |
| erg (25\%) | serir (5\%) | hammada (70\%) |
| sand |  |  |

1.) Look at the pictures and add these words to the table:
sand - flat area - small stones - mountains - wadis (dry riverbeds)

- pebbles - sandstorms - dunes - rocks - ripples - caves
2.) Make a pie chart to show the size of erg, serir and hammada. (extra sheet)

Where does all the sand come from?
3.) Experiment: Let's heat up a stone in a pot.

Be careful! The stone might explode. Wait until the stone has cooled down.

Have a closer look at the stone. What can you see?

4.) Have a look at the 2 drawings. Can you explain them?
(these words might help you: to expand / to contract / to break / cracks )
day: $65^{\circ} \mathrm{C}$

night: $2^{\circ} \mathrm{C}$

5.) Sometimes rocks break and roll down the mountains. When they turn over many times they break again and get smaller. If it rains the smaller stones are carried to the valley. River washed pebbles are always rounded. You can find them in the serir, especially in wadis.
After some hot days and cold nights the stones crumble. The small parts are blown away by strong winds. The winds carry the sand to the erg where it forms high dunes.

(picture: Andras Zboray)
Write down important keywords which explain how rocks become sand.

6.) Experiment: Put some sand and pebbles of different size on a dark paper. Blow the sand and the pebbles away.

a) Make a drawing of the result:

b) Why are there no sand dunes in Germany? Explain. (you can use these words: temperature, precipitation, vegetation, plants, climate, ...)

