Activity 03: Analysis data

What is data analysis and which forms of presentation are available?

Objective: Learners get into a first contact with data analysis and get to know its different forms of representation.
Learning outcomes: Learners are able to describe the purpose of data analysis, they can distinguish between and assign different forms of representation. Learners are able to explain geographically relevant forms of information.
Previous knowledge: No previous knowledge required
Duration: 30 min
Materials / Conditions: 1 text (cf. Resource 1), 4 pictures (cf. Resource 2)
Methods / Techniques: Reading comprehension, description, recognition and matching.
Learning subject: Biodiversity / Module 3: collection, processing and analysis of environmental data / Level: First contact

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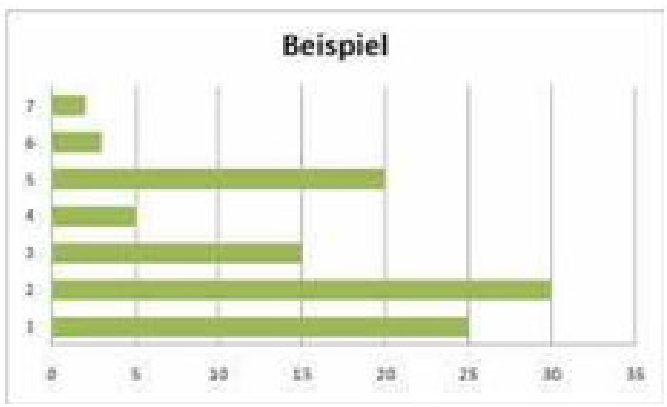
Introduction:
You need data analysis to identify and illustrate biodiversity. In this task, you will get to know and get to work with different types of data representation.

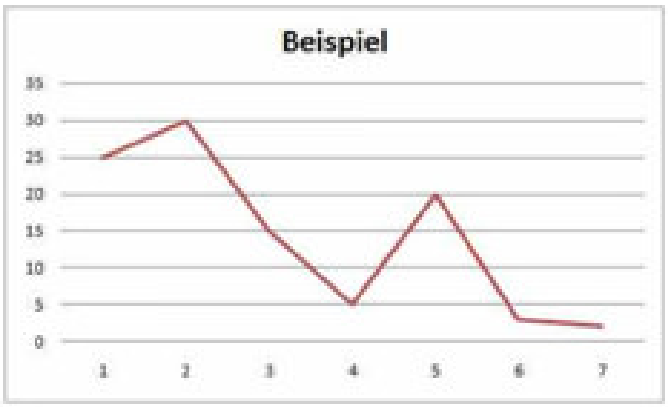
Instruction:
Read the text about data analysis. Afterwards, look at the 4 different pictures showing different forms of data representation.
1. Try to match the headings to their corresponding diagrams.

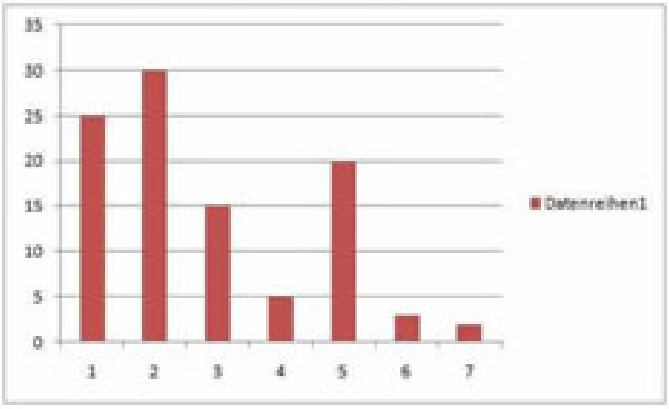
2. the text describes the terms average, single value and distribution. Find your own examples that fit to those definitions.

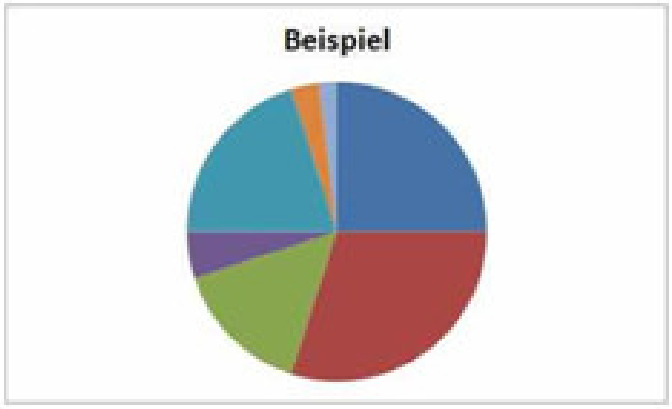
Resources:
In general, data analysis is about extracting and analyzing information from present data. In this process, data is restructured and transferred into different forms of representation to facilitate its analysis.
There are, amongst others, three different forms of data representation: pie charts, line graphs and bar charts. Pie charts consist of what looks like “pieces of cake/pie” in different colors. Line graphs represent developments over a certain period of time in form of a coherent line. There are two different forms of bar charts, vertical and horizontal ones.
Graphs can either visualize arithmetic mean, single values or distributions. Arithmetical mean is the average of a certain amount, single values represent a value related to a very specific space etc. and a distribution shows where a certain amount of a species is located. One fictional example of an arithmetic mean and a single value can be temperature. In a certain place, a temperature of 2°C is measured on January 12th whereas the mean average temperature at the same place in January is 10°C. As an example of distribution, we’ll take a closer look at hibiscus. There are 700 species of hibiscus worldwide and 200 of them are distributed within Europe.

Resource 2:









Possible results / Results:
1. The terms pie chart , bar chart , bar graph and line diagram fit to the images

2. Here learners asked to be creative.

Related activities:

Author: Natalia Roth and Dennis Spieß
Aus dem Deutschen übersetzt von Jana Prokaka