

## Cloudiness

### WORKSHEET

Cloudiness is the degree of cloud cover. The amount of cloudiness affects the air temperature at the surface of the Earth. Cloudiness is very important for weather and climate because it affects the amount of solar radiation that reaches the surface of the Earth during the day, while at night it stops the accumulated heat at the Earth, preventing the escape of heat radiation into space.

Clouds occur in different forms and at different altitudes in the troposphere. According to the World Meteorological Organization (WMO), the clouds are classified by form and level into four main cloud families - low, medium, high and vertical. Familiarize yourself with the cloud classification: levels, genres and species of clouds using the cloud atlas using website: <https://cloudatlas.wmo.int>.

**Task 1.** Take a look at the clouds shown on the photos and type the level of following clouds:

a) .....



b) .....



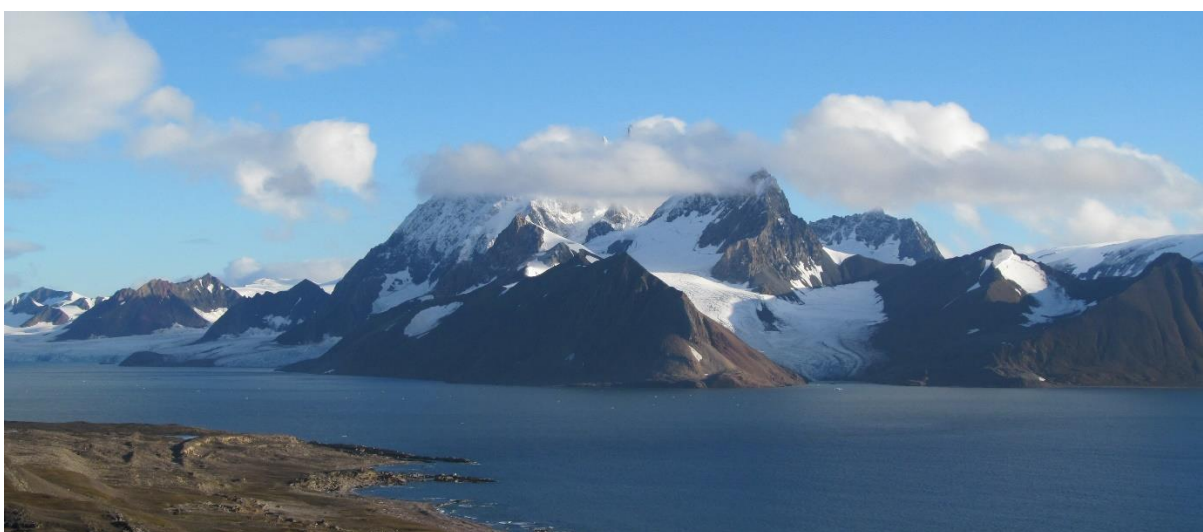
c) .....



d) .....



e) .....



**Task 2.** Open the website [www.windy.com](http://www.windy.com) and at the bottom right of the screen select overlay: clouds. Characterize the current cloudiness in chosen country in Europe.

**Task 3.** Open the website [www.windy.com](http://www.windy.com) and at the bottom right of the screen select the overlay: rain (snow / rain). List the names of three countries in Europe, where currently precipitation occurs.

**Task 4.** Visit website [www.sat24.com](http://www.sat24.com) and basing on satellite imagery characterize the cloudiness in Europe 2 hours ago and now.

**Task 5.** Using satellite images on [www.sat24.com](http://www.sat24.com), describe the cloudiness in your country 2 hours ago and now.



**Task 6.** Characterize the current differences in cloudiness and air temperature between London, Rome and your city using the data available at [www.windy.com](http://www.windy.com).

**Task 7.** Using the [www.yr.no](http://www.yr.no) portal, check the weather forecast for the next day at your hometown. How will the cloudiness change?

**Task 8.** Using the [www.yr.no](http://www.yr.no) portal, check the weather forecast for the place where you would like to go on holiday.

**Task 9.** Using internet or other source of information characterize the cumulonimbus cloud, then check the storms and lightning strikes in the world in real time at [www.blitzortung.org](http://www.blitzortung.org). Identify where there are storms with the most lightning strikes at the moment.

**Task 10.** Assign the types of clouds (genera) to the numbers in the image below.

- a) Altostratus ....    b) Stratus ....    c) Cumulonimbus ....    d) Cirrocumulus ....  
e) Cirrus ....    f) Altocumulus ....    g) Cumulus ....    h) Stratocumulus ....

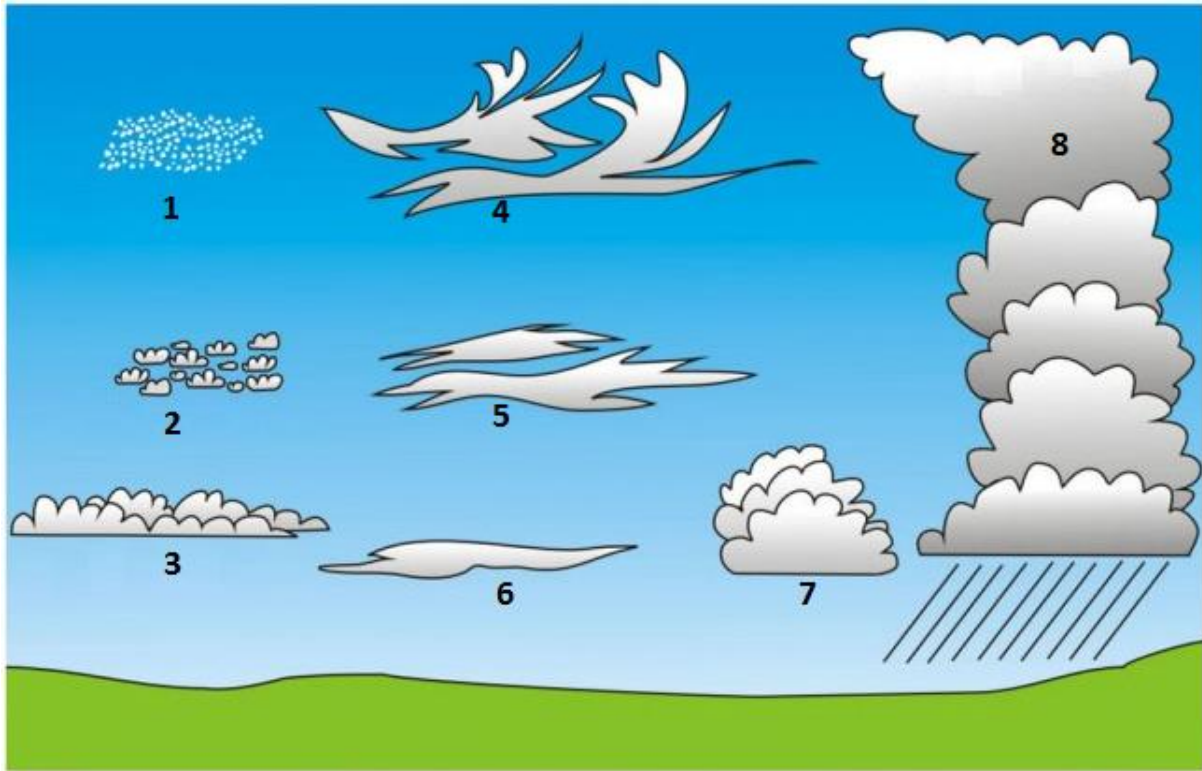


Fig. 1 Cloud genera (source: webneel.com)