



Moln och temperatur

1. Använd "databladmoln" (P17b) och faktablad "Typer moln" (P17c) för att ta reda på vilka moln som finns på himlen. Skriv dina observationer i tabellen.
2. Använd termometern för att mäta luftens värme och markens värme (tjära eller stenläggning) på skolgården. Ange dina mått i tabellen nedan.

Datum och tid: _____

		observation / mått
<u>moln</u>	molntäcke	
	himmelfärg	
	typ av moln	
	förhållanden vid marknivå	
<u>temperatur</u>	marktemperatur	
	lufttemperatur	





Datablad moln

Kontrollera dina observationer. I vissa rutor ser du en vit pil. Först när du har placerat ett kors där, går du till rutan som pilen pekar på. Om du inte har lagt ett kors där kan du hoppa över den här rutan.

1. What do you see in the sky?

Degree of coverage (clouds, vapor trails) <input type="radio"/> darkened <input type="radio"/> nothing <input type="radio"/> clear (<10%) <input type="radio"/> isolated (10-25%) <input type="radio"/> scattered clouds (25-50%) <input type="radio"/> broken cloud cover (50-90%) <input type="radio"/> overcast sky (90-100%)	<input type="radio"/> fog <input type="radio"/> heavy rain <input type="radio"/> drifting snow <input type="radio"/> heavy snowfall <input type="radio"/> sand	<input type="radio"/> spray <input type="radio"/> smoke <input type="radio"/> dust <input type="radio"/> mist <input type="radio"/> volcanic ashes
		Move on to box 6.

2. Color and visibility of the sky

Color <input type="radio"/> sky invisible <input type="radio"/> deep blue <input type="radio"/> blue <input type="radio"/> light blue <input type="radio"/> pale blue <input type="radio"/> milky	
Visibility <input type="radio"/> sky invisible <input type="radio"/> very clear <input type="radio"/> clear <input type="radio"/> slightly hazy <input type="radio"/> very hazy <input type="radio"/> extremely hazy	

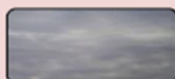
3. High clouds and condensation trails


<input type="radio"/> No high clouds to be seen Go to box 4. Type of clouds: <input type="radio"/> condensation trails (number) <input type="radio"/> cirrus <input type="radio"/> cirrocumulus <input type="radio"/> cirrostratus	Number of condensation trails that are ... <input type="radio"/> short-lived <input type="radio"/> lasting, not scattered <input type="radio"/> lasting scattered	Degree of coverage <input type="radio"/> clear (<10%) <input type="radio"/> isolated (10-25%) <input type="radio"/> scattered clouds (25-50%) <input type="radio"/> broken cloud cover (50-90%) <input type="radio"/> overcast sky (90-100%)	Opacity of the clouds <input type="radio"/> opaque <input type="radio"/> slightly translucent <input type="radio"/> highly translucent
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4. Middle clouds

No middle clouds to be seen
Go to box 5.

Type of clouds:


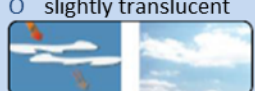
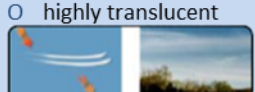
altostratus 

altocumulus 

Degree of coverage

- clear (<10%)
- isolated (10-25%)
- scattered clouds (25-50%)
- broken cloud cover (50-90%)
- overcast sky (90-100%)


Opacity of the clouds


- opaque 
- slightly translucent 
- highly translucent 


5. Low clouds


No low to be seen
Go to box 6.


Type of clouds:


fog 

nimbostratus 

cumulonimbus 

stratus 



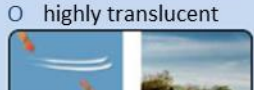
cumulus 

stratocumulus 



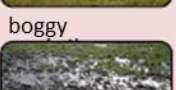

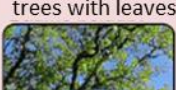
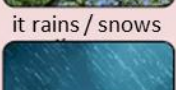

Degree of coverage

- clear (<10%)
- isolated (10-25%)
- scattered clouds (25-50%)
- broken cloud cover (50-90%)
- overcast sky (90-100%)

Opacity of the clouds

- opaque 
- slightly translucent 
- highly translucent 

6. Conditions close to the ground

Mandatory		Voluntary	
<p>snow / ice <input type="radio"/> yes <input type="radio"/> no</p>  <p>stagnant water <input type="radio"/> yes <input type="radio"/> no</p>  <p>boggy <input type="radio"/> yes <input type="radio"/> no</p> 	<p>dry <input type="radio"/> yes <input type="radio"/> no</p>  <p>trees with leaves <input type="radio"/> yes <input type="radio"/> no</p>  <p>it rains / snows <input type="radio"/> yes <input type="radio"/> no</p> 	<div style="border: 1px dashed green; padding: 10px;"> <p>temperature: _____ °C</p> <p>air pressure: _____ mb</p> <p>relative humidity: _____ %</p> </div> 	



Cloud types

Five word elements are used to designate the different cloud types:

CIRRO for clouds at a very high altitude (high clouds), **ALTO** for clouds in medium altitude (middle clouds),

CUMULUS for fleecy or heap clouds, **STRATUS** for sheet clouds, **NIMBUS** for rain clouds



High clouds 5-13 km



Cirrus

Feather clouds

Shape: fibrous or thread-like, formed by wind currents; stripes, bands, spots, sometimes bizarre structures

Thickness: very thin, sun shines through

Color: white, with a silky glimmer

Info: always consists of ice crystals



Cirrocumulus

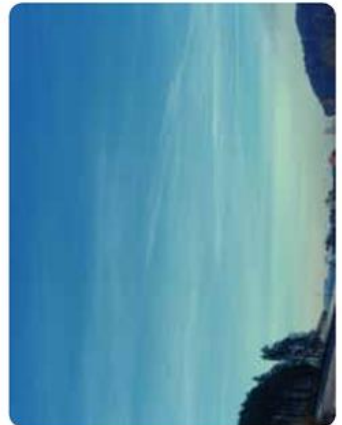
Fleecy clouds

Shape: fine white balls or flakes, thin, sometimes patchy, sheet-like

Thickness: very thin, sun shines through

Color: white

Info: consists of ice crystals, rarely also of supercooled water drops; diameter always < 0.5° (pinkish on the outstretched hand)



Cirrostratus

High sheet clouds

Shape: Thin, milky, translucent cloud veil of hairy or fibrous appearance; covers large parts of the sky

Thickness: very thin, sun always shines through and is sharply defined

Color: light grey or whitish

Info: can cause halo appearances around moon and sun

Middle clouds 2-7 km



Altostratus

Rough fleecy clouds

Shape: stripes, spots, patchy layers; often arranged in banks

Thickness: moderately thick

Color: white or grey shades, partly pearlized

Info: consists of water drops, sometimes supercooled; diameter of cloud elements 1-5° (1-3 fingers on the outstretched hand)



Nimbostratus

Rain clouds

Shape: Dense layer cloud, often even and opaque, usually covering the entire sky

Thickness: moderately thick to thick

Color: grey or blue-grey

Info: no halos; if thick enough continuous rain / snow; consists of supercooled water; if sun visible then as through a frosted glass



Cumulonimbus

Large vertical clouds

Shape: Towering clouds with anvil-like top

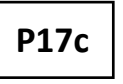
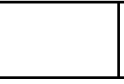
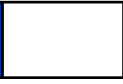
Thickness: thick

Color: dark grey to black

Info: consists of supercooled water, larger rain drops and snow crystals or snowflakes; causes continuous rain

Typer av moln

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Cloud types

Five word elements are used to designate the different cloud types:

CIRRO for clouds at a very high altitude (high clouds), **ALTO** for clouds in medium altitude (middle clouds), **CUMULUS** for fleecy or heap clouds, **STRATUS** for sheet clouds, **NIMBUS** for rain clouds



Low clouds 0-2 km



Stratocumulus

Fleecy sheet clouds

Shape: mosaic-like plaices, rollers, or banks, sharply bounded or frazzled
Thickness: moderately thick
Color: grey or whitish
Info: consists of water or ice crystals; mostly no rain or snow; partly remainders of Stratus or Cumulus clouds

Low clouds 0-2 km



Cumulonimbus

Shower- or thundercloud

Shape: bulky and dense clouds shaped like a high mountain or tower, often with an anvil
Thickness: thick, looming
Color: lower side dark grey
Info: often brings thunderstorms (lightning, thunder, hail)

Low clouds 0-2 km



Stratus

Low sheet clouds / high fog

Shape: grey even layer cloud (often high fog); lower edge usually low and rather difficult to detect
Thickness: thin to moderately thick
Color: light grey to dark grey
Info: seldom rain or snow; if sun visible then sharply outlined

Fog

Stratus

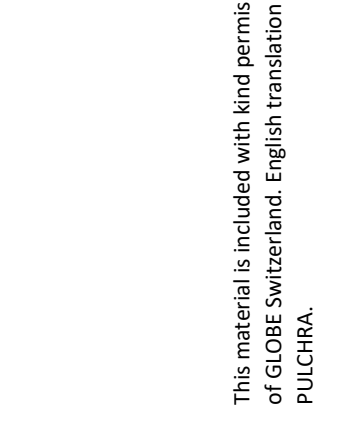
Info: Fog is a cloud that touches the ground. You don't usually see what kind of cloud that is.



Cumulus

Heap clouds

Shape: separate, sharply bounded clouds shaped like hills, knolls, or towers; lower edge flat
Thickness: moderately thick to thick
Color: shining white in sunlight
Info: seldom rain or snow; can be precursor of Cumulonimbus



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