

Νέφη και θερμοκρασία

1. Χρησιμοποιήστε τα "Φύλλο νεφών" (P17b) και τα φύλλα πληροφοριών "Τύποι νεφών" (P17c) για να μάθετε ποια σύννεφα βρίσκονται στον ουρανό. Γράψτε τις παρατηρήσεις σας στον πίνακα.
2. Χρησιμοποιήστε το θερμόμετρο για να μετρήσετε τη θερμοκρασία του αέρα και τη θερμότητα του εδάφους (άσφαλτος ή πλακόστρωτο) στην αυλή του σχολείου. Εισαγάγετε τις μετρήσεις σας στον παρακάτω πίνακα.

Date and time: _____

		Παρατήρηση / μέτρηση
νέφη	νεφοκάλυψη	
	Χρώμα ουρανού	
	Τύπος νεφών	
	Συνθήκες στο έδαφος	
θερμοκρασία	Θερμοκρασία εδάφους	
	Θερμοκρασία αέρα	

Φύλλο νεφών

Ελέγξτε τις παρατηρήσεις σας. Σε ορισμένα κουτιά, θα δείτε ένα λευκό βέλος. Μόνο όταν έχετε τοποθετήσει έναν σταυρό εκεί, πηγαίνετε στο πλαίσιο στο οποίο δείχνει το βέλος. Εάν δεν έχετε τοποθετήσει σταυρό εκεί, μπορείτε να παραλείψετε αυτό το πλαίσιο.

1. What do you see in the sky?

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

2. Color and visibility of the sky

Color	☐ sky invisible	☐ deep blue	☐ blue	☐ light blue	☐ pale blue	☐ milky
Visibility	☐ sky invisible	☐ very clear	☐ clear	☐ slightly hazy	☐ very hazy	☐ extremely hazy

3. High clouds and condensation trails

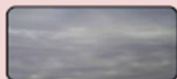
☐ No high clouds to be seen Go to box 4. Type of clouds: ☐ condensation trails (number) ☐ cirrus ☐ cirrocumulus ☐ cirrostratus	Number of condensation trails that are ... ☐ short-lived ☐ lasting, not scattered ☐ lasting scattered	Degree of coverage ☐ clear (<10%) ☐ isolated (10-25 %) ☐ scattered clouds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

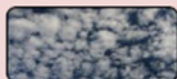
- ☐ No middle clouds to be seen
Go to box 5.

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**

snow / ice ☐ yes ☐ no



stagnant water ☐ ☐



boggy ☐ ☐



dry ☐ yes ☐ no



trees with leaves ☐ ☐



it rains / snows ☐ ☐

**Voluntary**

temperature: _____ °C

air pressure: _____ mb

relative humidity: _____ %



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



Τύποι νεφών



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



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

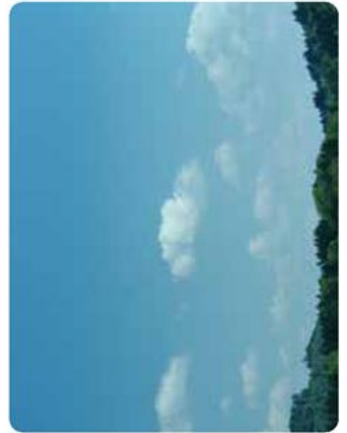
Info: seldom rain or snow; if sun visible then sharply outlined



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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