

# Weather Journal

THIS BELONGS TO



# Greetings, meteorologist!

In this little book you'll find clues and information to help you interpret and forecast the weather.

You'll need to observe the sky and the air closely. Pay attention to what you see, feel, hear, and smell.

Record what you discover on your data pages. It's best if you can collect and record data twice a day, in the morning and the afternoon or evening. Print and add more data pages as you need them.

But first, assemble your weather journal:



1. Print it, with extra data pages if you like.



2. Fold all pages in half, where it says "fold here," so the blank sides face each other.



3. Stack and staple all your pages together along the short, solid lines on the left edge.

## What color is the sky?

Color can give you a hint about weather or air quality.



### Deep blue

clean sky or cold front traveling from the north or clean air from the ocean blowing over land



### Medium blue

water vapor or some dust or particles from power plants, factories, and natural sources in the air



### Pale blue or white

possibility of severe air pollution



### Green

severe thunderstorm or tornado is coming!



### Red

IN THE EVENING  
dry weather is coming (high pressure system is pulling dust particles in the air)

IN THE MORNING  
high pressure system has passed, moisture is probably coming



## WIND

### How fast is the wind?

You can estimate wind speed by observing what's moving.



### Calm

LESS THAN 1 MPH  
smoke rises straight up



### Light to gentle breeze

4-18 MPH  
feel wind on face; leaves rustle; small twigs, dust, and paper are picked up



### Fresh to strong breeze

19-31 MPH  
small trees sway, large tree branches move, can hear whistling



### Moderate to fresh gale

32-46 MPH  
whole trees move, it's hard to walk against the wind, small branches break



### Strong to whole gale

47-63 MPH  
tiles blown off roofs, trees break, buildings damaged (doesn't happen often on land)



### Storm

64-72 MPH  
lots of damage (very rarely happens on land)  
*Think the wind is faster than 73 mph? You're in a hurricane!*

Compare the actual temperature to how it looks and feels outside.

### Guess if it's warm or cold outside without going out.

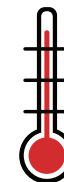
Look for water. Is it frozen or liquid? Water freezes at 32°F and 0°C. That's cold!

What are people wearing? T-shirts or jackets?

### Go outside and see how warm or cold it feels.

Can you see your breath? If so, it's 45°F or colder. What you see is condensed water vapor from your breath.

### Measure the actual temperature with a thermometer.



### How does the air feel?

#### HUMID

- air feels sticky
- if the air is holding a lot of moisture and can't absorb more, the air feels wet or damp on your skin
- wooden doors might swell and get stuck
- pinecone scales are curled up

#### DRY

- air feels dry
- pinecone scales open up

### How does the air smell?

compost or other earthy smells may indicate that rain is coming soon

Precipitation can be rain, snow, drizzle, or hail.

### Does the snow accumulate or does it melt away?

ACCUMULATES  
the ground is freezing or colder

MELTS  
the ground is warm

### Do you see a rainbow?

RAINBOWS IN THE WEST  
there's moisture in the air and a storm is coming

RAINBOWS IN THE EAST  
rain is on its way out, expect sunny days ahead



## CLOUDS

### Do you see any?

*Sometimes clouds look like animals but how they look can also tell you about the weather.*



#### **Cumulus (puffy)**

- usually out on sunny, clear days
- if very tall and gray, they can indicate a storm is coming



#### **Cirrus (thin, curly)**

- expect calm weather for now
- more or accumulating cirrus clouds can indicate a storm is coming



#### **Stratus (flat)**

- drizzle, light rain, or snow is coming



#### **Nimbostratus or Cumulonimbus (thick, grey)**

great chance of severe weather or thunderstorms

# Record your weather data here →

### Do you see cumulus clouds?

You can estimate how high they are in the sky.

*Hold up your hand to the sky at arm's length. Look at how big the clouds are compared to your hand.*

#### **Low-level**

IF THE CLOUD IS ABOUT THE SIZE OF YOUR FIST, IT'S < 6,500 FEET UP.

full of water, if they darken, expect rain or snow

#### **Mid-level**

IF THE CLOUD IS ABOUT THE SIZE OF YOUR THUMB NAIL, IT'S 6,500–23,000 FEET UP.

full of water; if they darken, expect rain or snow

#### **High**

IF THE CLOUD IS ABOUT THE SIZE OF YOUR PINKY NAIL, IT'S 16,500–45,000 FEET UP.

made of ice crystals, expect a change in weather

Date: \_\_\_\_\_

Time: \_\_\_\_\_

### SKY



What color is the sky? Record it.

### AIR




How does the air feel & smell?

### WIND




How windy is it?

### PRECIPITATION




Is it precipitating? Is there thunder or lightning?

### TEMPERATURE



Does it look and feel warm or cold?  
What's the actual temperature?

### CLOUDS



Do you see any clouds? Draw them.  
What kind are they?

Date: \_\_\_\_\_

Time: \_\_\_\_\_

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What color is the sky? Record it.

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