


# Rural Training Center – Thailand (RTC-TH)

F  C U S

**REEEPP**

**Rural Environmental Education  
Enhancement Pilot Program**



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# A Visit to the Thawangpha Weather Station

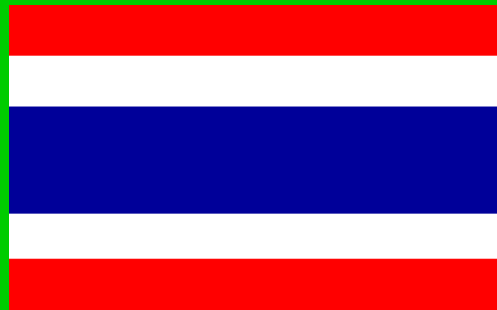


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Created by G.K. Lee for the RTC-TH REEPP

Lesson W7



# This is an English Language Training module of **REEEPP**

Rural Environmental Education Enhancement Pilot Program  
presented by

The Rural Training Center-Thailand

E-mail: [rtc2k5@gmail.com](mailto:rtc2k5@gmail.com)

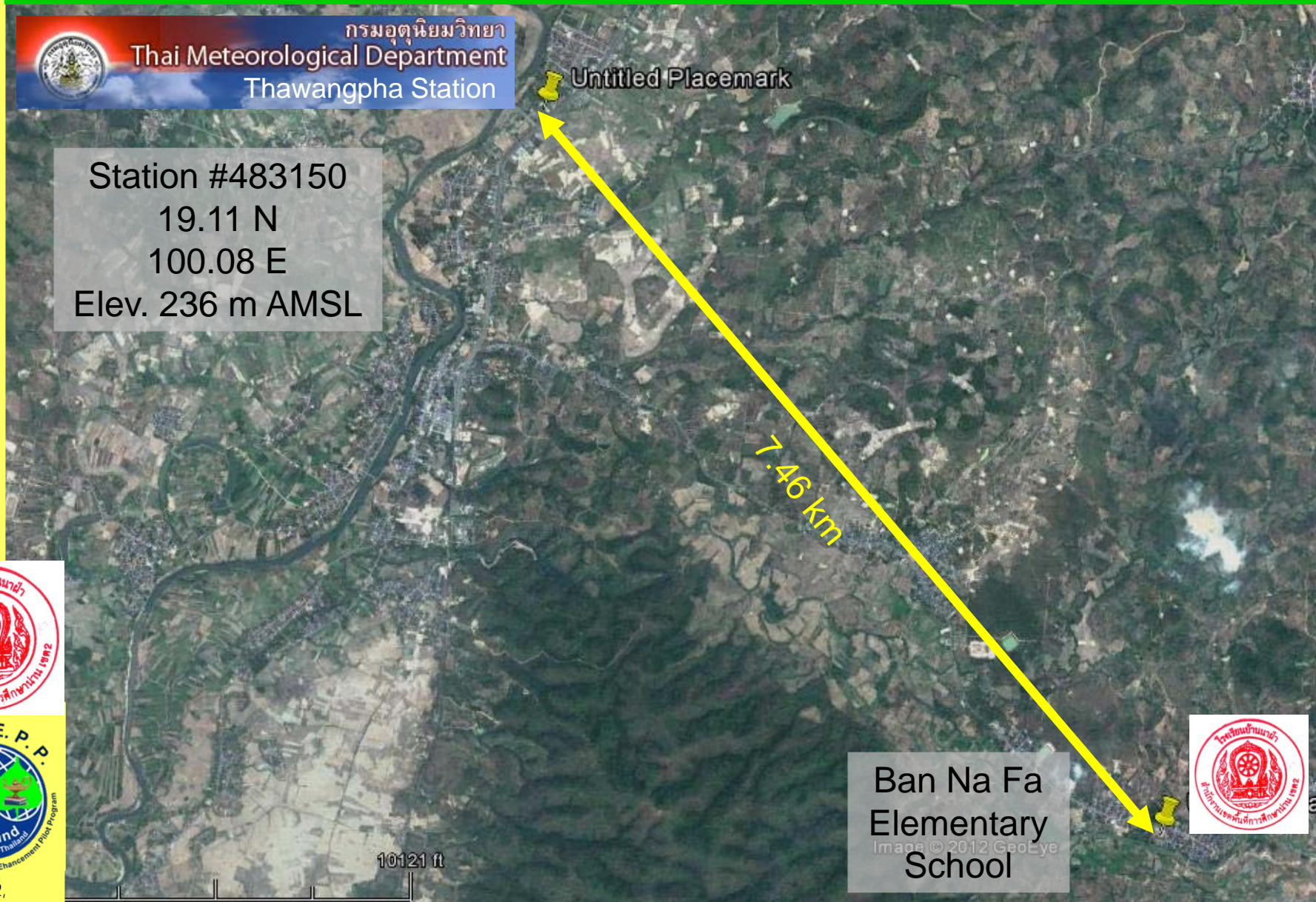
[www.neighborhoodlink.com/org/rtcth](http://www.neighborhoodlink.com/org/rtcth)



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# The station location



# Between the District Police Station and the Post Office near the Jct Hwys 1148/1080



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# Behind the station office are more weather instruments



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# Welcome to the Weather Station



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Anemometer

Wind Vane

The air terminal protects the instruments from being struck by lightning.

# Instruments on the roof

There are 2 weather instruments on the roof. The anemometer measures wind speed. The wind vane measures wind direction.



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The ground rod goes about 2 m deep into the soil.

Cable going to the air terminal.

A clamp fastens the cable to the ground rod.

A cable connects the air terminal to a ground rod. When lightning hits the air terminal, the electrical charge is conducted safely to “ground” so the weather instruments are not damaged.



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There are more instruments behind the office.



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# The fence protects the instruments

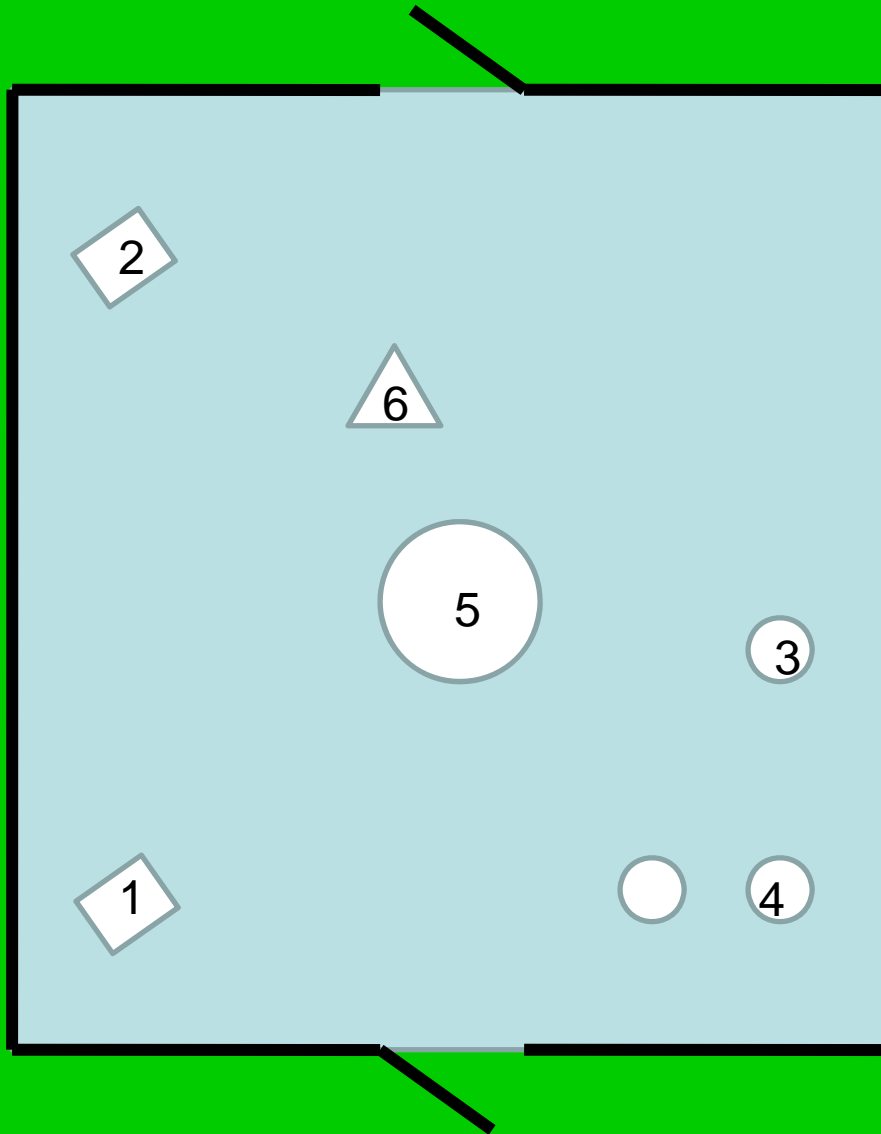
The fence keeps the instruments from being disturbed and protects them from possible damage.



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# Weather Instrument Area Diagram



1. Instrument shelter #1
2. Instrument shelter #2
3. Rain gauge #1
4. Rain gauge #2
5. Evaporation Pan
6. Tower



# Instrument Shelter #1



This Stevenson Screen contains a Dry-Wet Bulb Psychrometer (to measure relative humidity) and a set of Maximum – Minimum Thermometers (to measure the high and low temperature of the day).



# Instrument Shelter #2

This Stevenson Screen contains a thermohydrograph to record relative humidity.



เครื่องวัดอุณหภูมิและความชื้นสัมพัทธ์  
Thermohygrograph



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# Rain Gauge #1



This rain gauge must be manually read. If it fills up and overflows before the measurement is read and recorded, the rainfall data are incorrect.



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# Rain Gauge #2



. If this rain gauge fills up, the bucket automatically records the measurement, empties and continues to measure the rainfall. It keeps track of the total rainfall for the specified time period which is set ahead of time.



# Evaporation Pan (front)



- . This instrument measures how much water is evaporated from the pan each day. This data is useful for managers of reservoirs and fish ponds.



# Evaporation Pan (side)



Heat and wind evaporate water. So the wind speed near the surface of the water must also be measured.



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Some of the  
sensors are  
on the tower



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# Temperature & Rain Sensors



Shaded temperature sensor

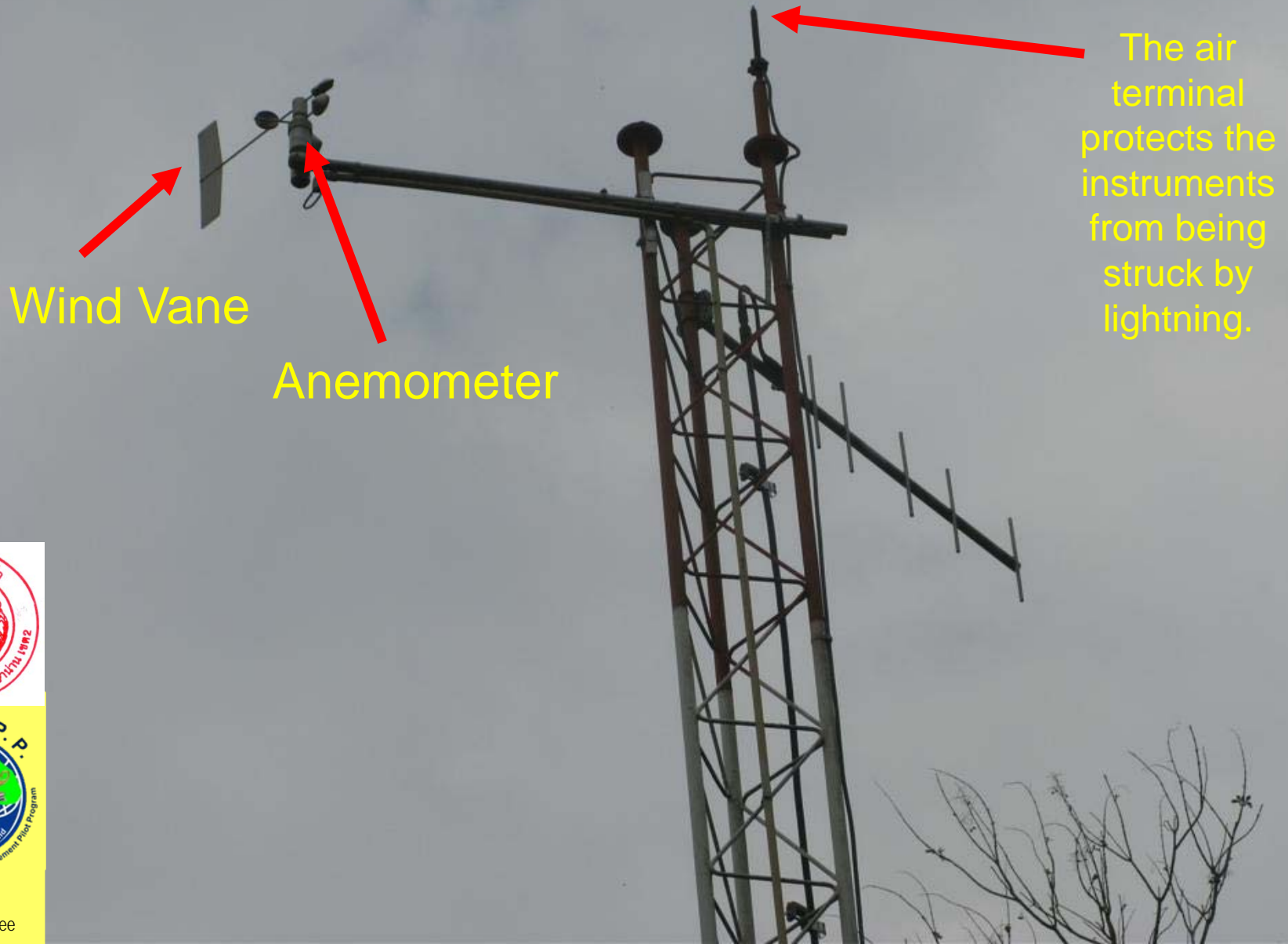
Rain gauge



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# Wind Instruments & Air Terminal



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Cable  
going to  
the air  
terminal.

A cable connects  
the air terminal to  
a ground rod.  
When lightning  
hits the air  
terminal, the  
electrical charge  
is conducted  
safely to “ground”

The  
ground  
rod goes  
about 2 m  
deep into  
the soil.



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Now you have  
seen the  
Thawangpha  
weather station.



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# Royal Thai Meteorological Department Website & Weather Data

You can find weather data for all the provinces of Thailand on the Internet. <http://www.tmd.go.th/en/index.php>

Thai Meteorological Department - Mozilla Firefox

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Weather XML

Weather

- Northern
- Northeastern
- Central
- Eastern
- Southern(East Coast)
- Southern(West Coast)

04/04 Thu 05/04 Fri 06

35°C 33°C 35°C 35°C

Aviations

Shipping Forecast

Ocean Waves

Daily forecast

Daily Summary

Three Monthly Forecast [Apr 1, 2012 - Jun 1, 2012]

Summer 2012 Forecast [February till May]

Rainfall and severe flooding over Thailand in 2011

Natural Disasters 2011

7-day forecast

Weekly Summary

Mar 26, 2012 - Apr 1, 2012

Update !

- Weather Radars
- Satellite Images
- Weather Maps
- NWP Model
- GIS

News !

- Warning News
- Storm Tracking
- Earthquake Report

Weather Symbols

Forecast Service for your website

Thai Meteorological Department

Daily Forecast Apr 5, 2012

Chiang Mai 23 35

Bangkok 26 35

Bangkok

max 35 °C wind 11 km/hr.

min 26 °C rain 40 % on area

© 2012,

Thai Meteorological D...

EN

15:04 PM





The RTC-TH was created to honor the memory of Mr. Tang Suttisan, a father, a farmer, and a man who valued education and used it in starting his family farm applying the King's Theory.



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# REEEPP

## Rural Environmental Education Enhancement Pilot Program



An innovative, non-traditional community-based environmental education program integrating math, science, geography, English language, and technology lessons for environmental stewardship using interactive experiential learning in outdoor settings at Ban Na Fa Elementary School, Nan Province, Thailand..



# To see more **REEEPP** lessons visit

[http://www.neighborhoodlink.com/RTC-TH\\_Tech/pages](http://www.neighborhoodlink.com/RTC-TH_Tech/pages)



## Weather Observing: Measuring Temperature



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W-1

## Weather Observing: Measuring Relative Humidity



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## Weather Observing: Measuring Wind Direction



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## Weather Observing: Measuring Wind Speed



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W-4

## Weather Observing: Measuring Rainfall



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W-5

## Student Weather Observers at Ban Na Fa Elementary School



Created by G.K. Lee for the  
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# The End



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[www.neighborhoodlink.com/org/rtcth](http://www.neighborhoodlink.com/org/rtcth)



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