

National Weather Study Project

Proposed Projects

Meteorological Services Division, NEA

Proposed Projects

- Few suggestions only; Working Committee will brainstorm for more potential projects and circulate to schools at the time of equipment installation
- Encourage students, under guidance of mentor teachers, to come up with innovative and creative projects
- Related to school life, community and the environment
- Some are pure weather pattern and climate projects
- Improve general knowledge on weather and environmental issues (e.g. Kyoto Protocol)

Weather and the Economy

- Relate weather parameters (temperature, rainfall, PSI) to economy
- Relate weather and school utilities consumption
 - Suggest ways to reduce electricity and water consumption
- To educate students on their water and electricity consumption behaviour
- To promote water and electricity conservation



Weather and the Economy



- Relate weather and sale of drinks or ice cream stall
- Relate temperature and sale of spicy food
- To show the importance of weather to the economy and everyday life

Weather and Health

- Human Comfort Index
- Write computer program to calculate from data
- Deduce
 - Best time for outdoor activities
 - Best time to dry clothes
 - Ways to save electricity (therefore reduce greenhouse gas) through appropriate setting of fans/air conditioning



Weather and Health

- Relate the PSI sub-indices with wind direction and rainfall
- Obtain information from air monitoring station closest to school
- Correlate values with wind direction and rainfall
- Hypothesize on reasons for correlations, if any

Weather and Health

- Relate health of school community with PSI and any other weather parameters
- Obtain e.g. number of MCs (to indicate “health of school population”)
- Explain correlation between weather (T, PSI) with “health of school population” if any



Weather and Community



- Research and develop a fire risk index for school and community
- Enable timely implementation of fire prevention activities
 - Alerts when index is high
 - Fire prevention activities and education



Weather and the Environment



- Research the link between weather and vegetation growth
- Practical way to teach students about biology

Weather and the Environment

- Correlate temperature, solar radiation with generation of solar electricity
 - Students gain understanding of the weather parameters with generation of solar electricity
- Study effects of wind on high rise buildings
 - Collaboration with HDB

Weather Patterns and Characteristics of Singapore

- Correlation between parameters
 - Temperature and wind speed
 - Humidity and rainfall
 - Wind direction and Pollution Standards Index
- Explain relationship
- Allows students to understand the science behind the relationship
- Educates students on how weather parameters are interlinked

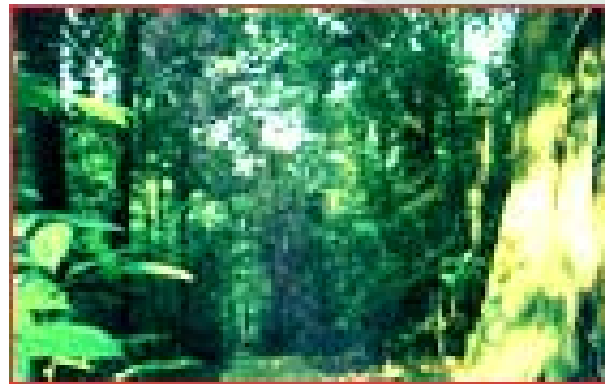


Weather Patterns and Characteristics of Singapore

- Compare parameters with schools from other areas of Singapore
 - Temperature
 - Rainfall
 - Wind speed and direction
- Explain similarities and difference
- Enable students to gain understanding of the terrain effects on the microclimate of each school

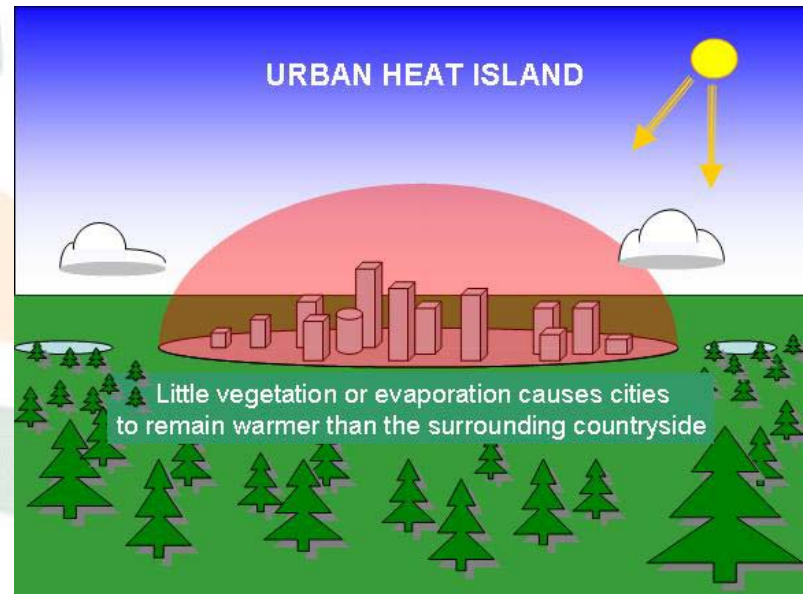
Weather Patterns and Characteristics of Singapore

- Work with NParks to study microclimate around nature reserves
- Enable students to gain understanding of the terrain effects on the microclimate of different environments



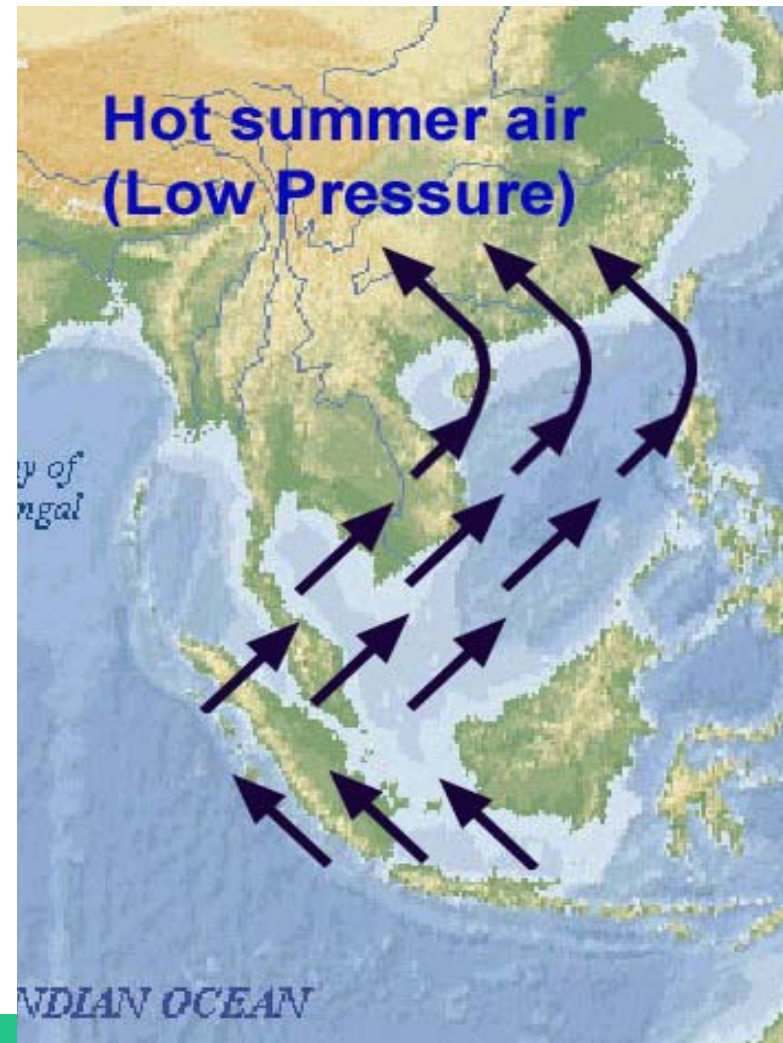
Weather Patterns and Characteristics of Singapore

- Research on the urban heat island effect in Singapore
- Utilise information from weather sensors around the island to study
- Collaborate with NUS



Climatology of Singapore

- With 2-3 months of data (T, wind, rainfall, humidity), infer the monsoon season
Singapore is currently in
- Compare with analysis of MSD
- Students can gain understanding on weather patterns in Singapore



Where do I get more information?

- Internet websites
- Weather related information can be obtained from MSD's website

www.nea.gov.sg/metsin

- For specialised information that is not found on our website, contact:

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