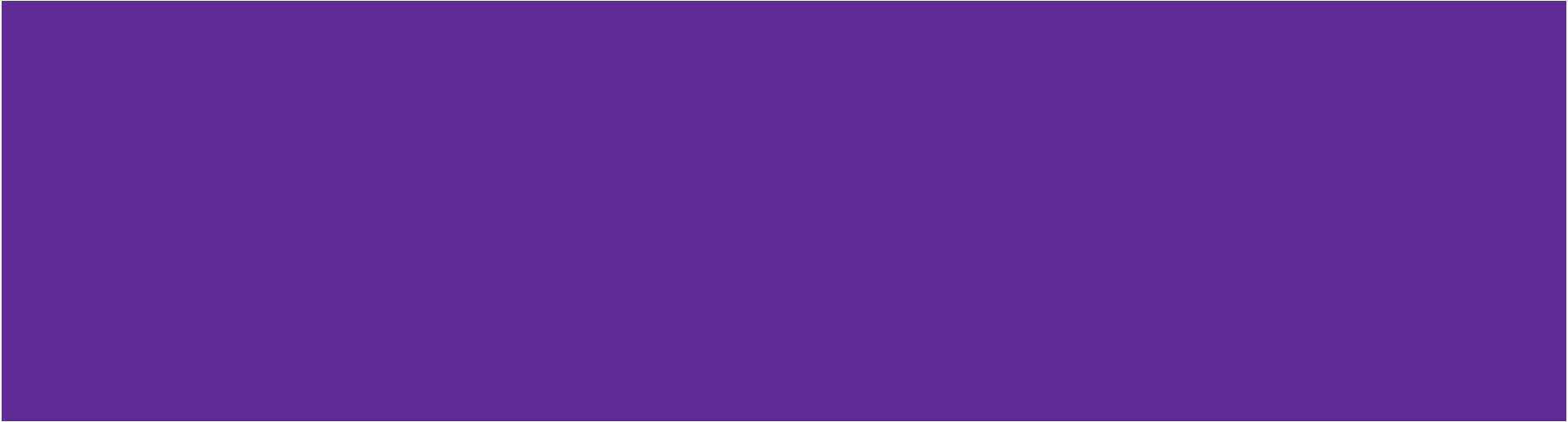# Weather Patterns

Air Masses and Fronts
Storms
Predicting the Weather

Air Masses and Fronts

What are the major types of air masses in North America, and how do they form?

- Four major types of air masses influence the weather in North America: maritime tropical, continental tropical, maritime polar, and continental polar.
- In the continental United States, air masses are commonly moved by the prevailing westerlies and jet streams.

What are the main types of fronts?

- Colliding air masses can form four types of fronts: cold fronts, warm fronts, stationary fronts, and occluded fronts.

What type of weather is associated with cyclones and anticyclones?

- Cyclones and decreasing air pressure are associated with clouds, wind, and precipitation.
- The descending air in an anticyclone generally causes dry, clear weather.

Storms

What are the main kinds of storms, and how do they form?

- Thunderstorms
  - Thunderstorms form in large cumulonimbus clouds, also known as thunderheads
- Tornadoes
  - Tornadoes most commonly develop in thick cumulonimbus clouds--the same clouds that bring thunderstorms

What are the main kinds of storms, and how do they form? continued

- Hurricanes
  - A hurricane begins over warm ocean water as a low-pressure area, or tropical disturbance.

- Winter Storms
  - All year round, most precipitation begins in clouds as snow. If the air is colder than 0℃ all the way to the ground, the precipitation falls as snow

Predicting the Weather

How do weather forecasters predict the weather?

- Meteorologists use maps, charts, and computers to analyze weather data and to prepare weather forecasts.

How has technology helped to improve weather forecasts?

- Technological improvements in gathering weather data and using computers have improved the accuracy of weather forecasts.

What can be learned from the information on weather maps?

- Standard symbols on weather maps show fronts, areas of high and low pressure, types of precipitation, and temperatures.