Seasons Changes In Northern Hemisphere

BY
MANOVA JOHNSON . A

Understanding the concepts of seasons

Effect on Changing Seasons:

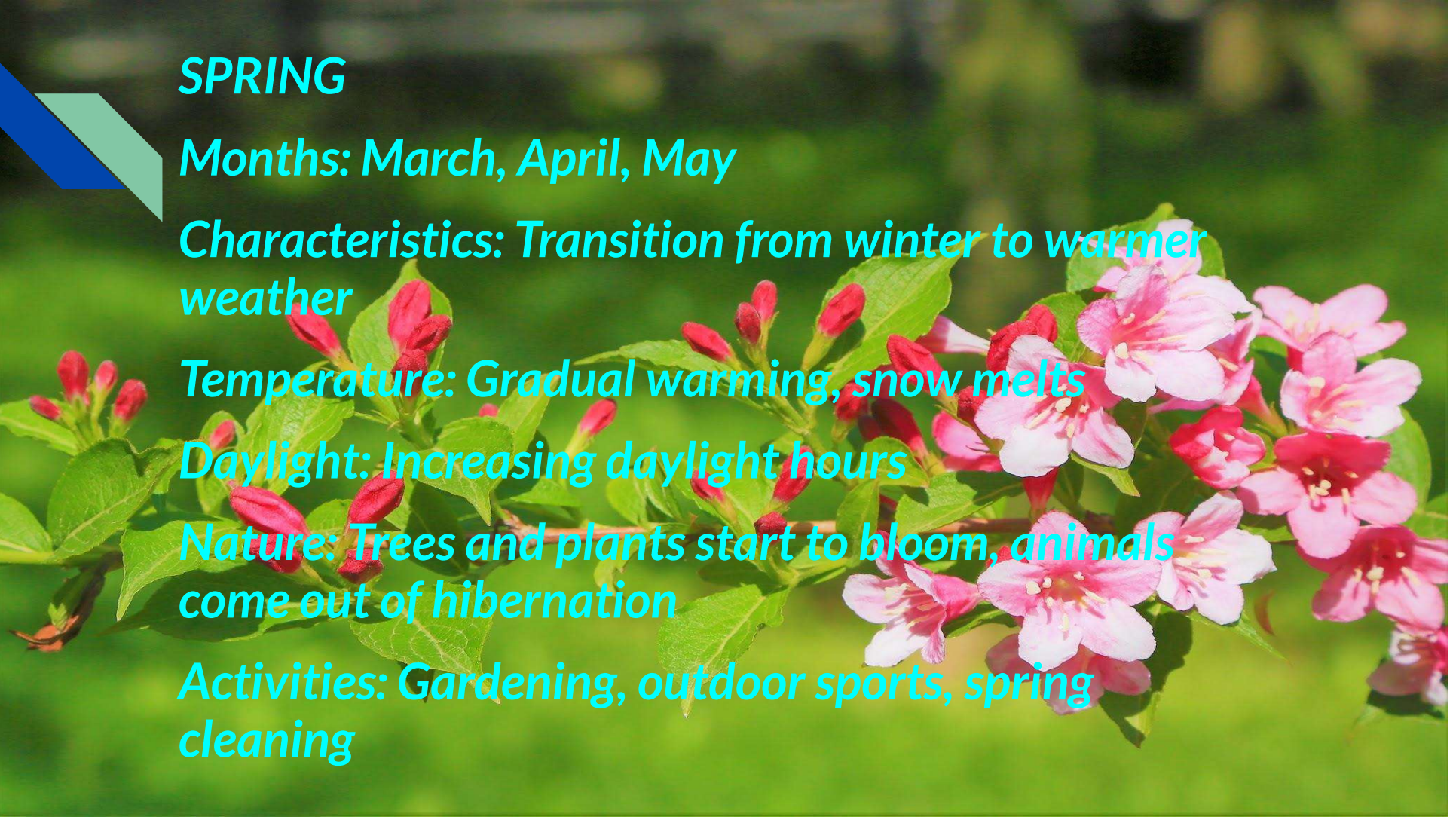
When a hemisphere is tilted towards the sun, it experiences summer because the sunlight is more direct, leading to warmer temperatures and longer daylight hours. Conversely, when a hemisphere is tilted away from the sun, it experiences winter with less direct sunlight, resulting in colder temperatures and shorter days.

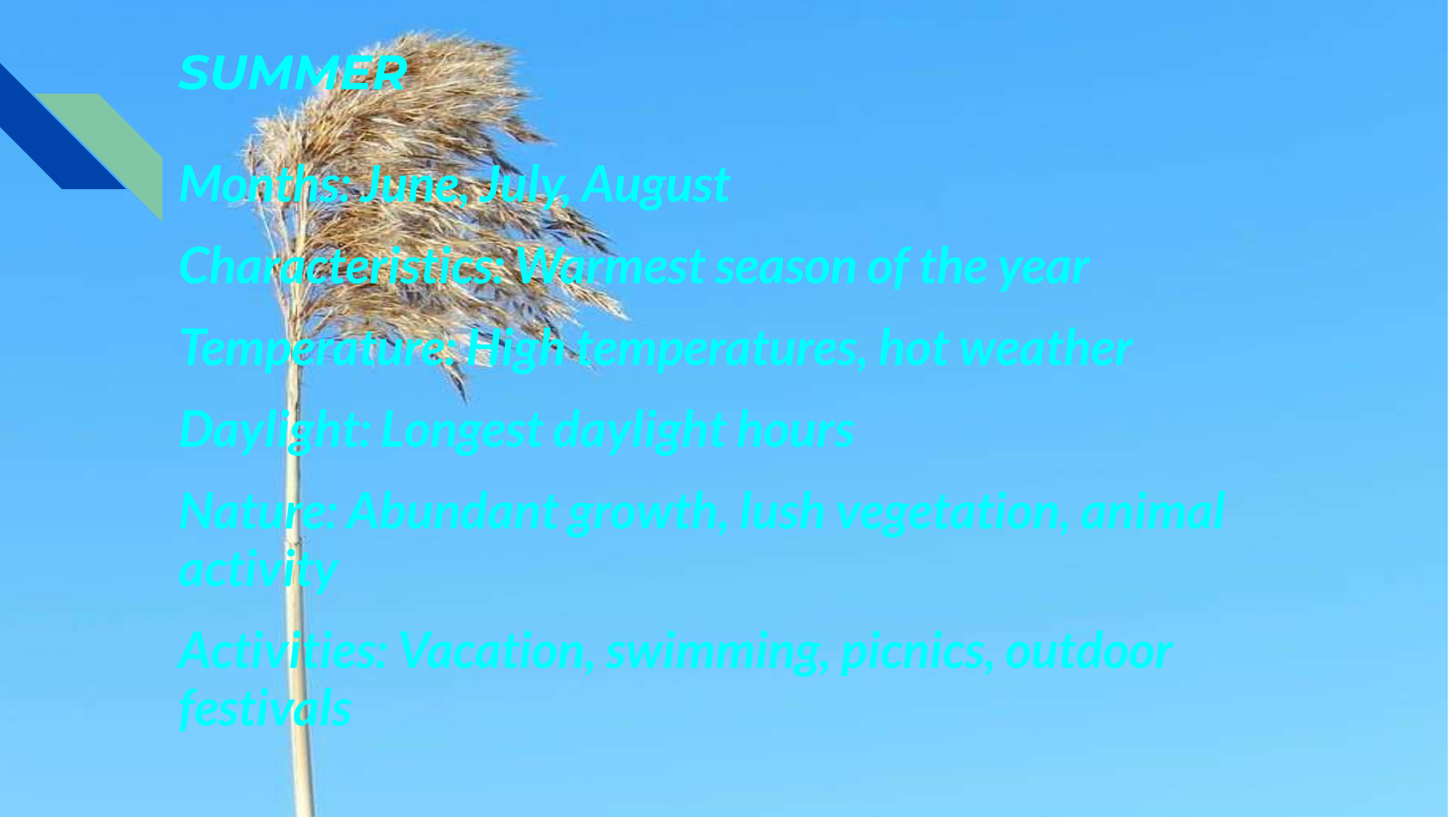
*Equinoxes and Solstices:**

Equinoxes (around March 20th and September 23rd) mark the moments when day and night are approximately equal in length. Solstices (around June 21st and December 21st) mark the longest and shortest days of the year, respectively.

*Influence on Climate and Weather:**

The changing angles of sunlight influence temperature changes and weather patterns. This axial tilt leads to the diversity of seasons we experience in the Northern Hemisphere.


SPRING
Months: March, April, May
Characteristics: Transition from winter to warmer weather
Temperature: Gradual warming, snow melts
Daylight: Increasing daylight hours
Nature: Trees and plants start to bloom, animals come out of hibernation
Activities: Gardening, outdoor sports, spring cleaning



SUMMER

Months: June, July, August

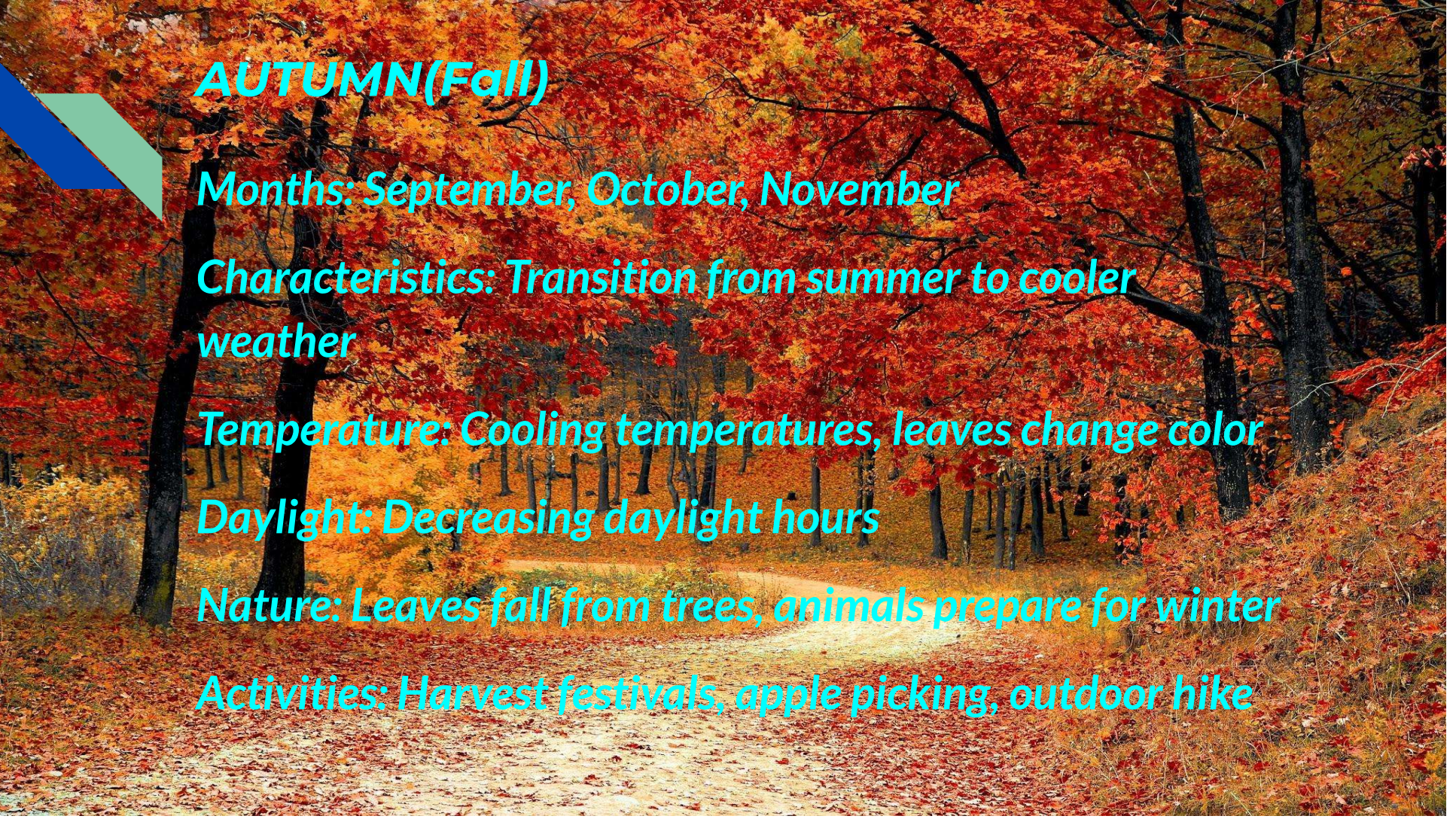
Characteristics: Warmest season of the year

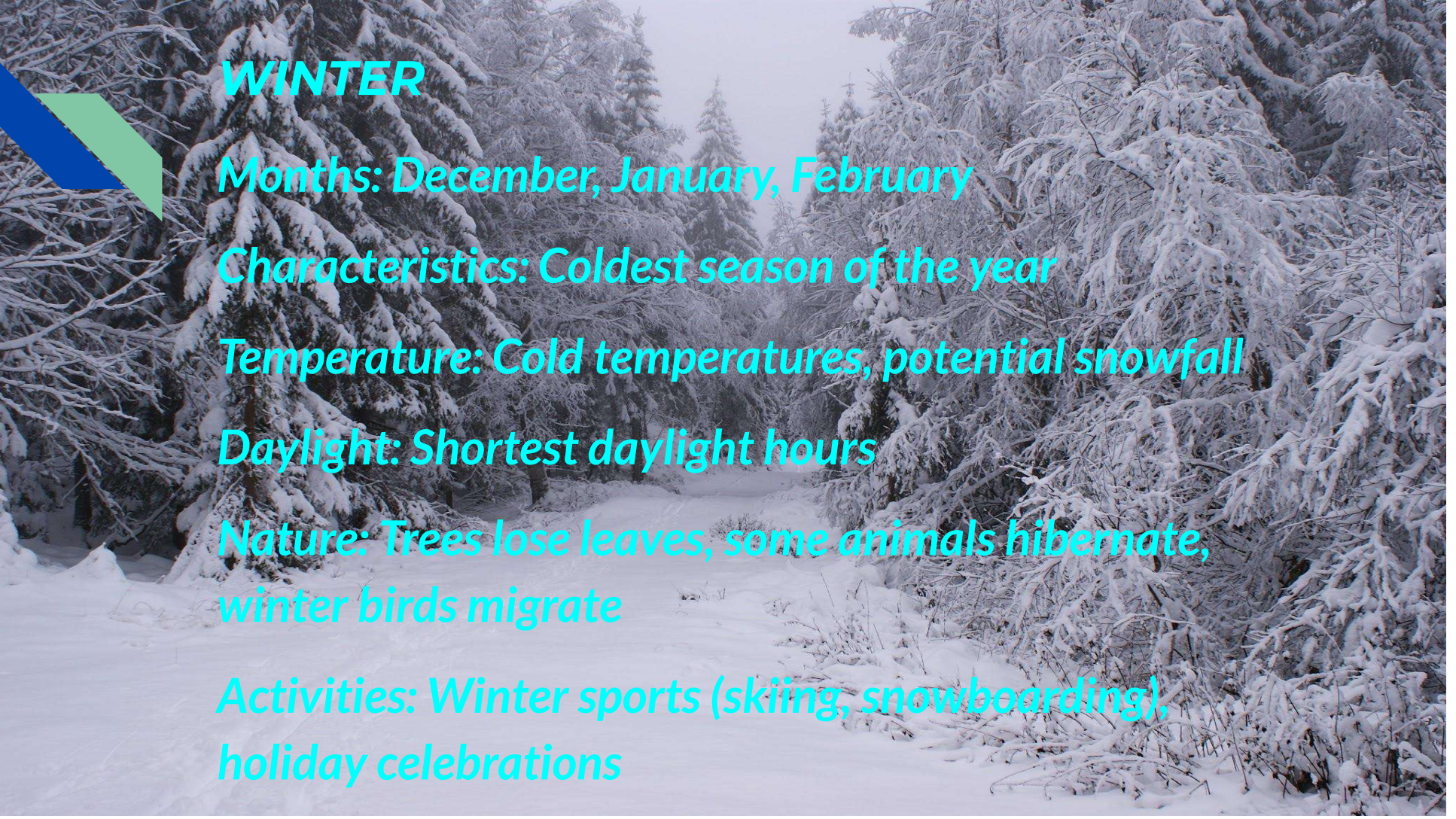
Temperature: High temperatures, hot weather

Daylight: Longest daylight hours

Nature: Abundant growth, lush vegetation, animal activity

Activities: Vacation, swimming, picnics, outdoor festivals


AUTUMN(Fall)
Months: September, October, November
Characteristics: Transition from summer to cooler weather
Temperature: Cooling temperatures, leaves change color
Daylight: Decreasing daylight hours
Nature: Leaves fall from trees, animals prepare for winter
Activities: Harvest festivals, apple picking, outdoor hike


WINTER
Months: December, January, February
Characteristics: Coldest season of the year
Temperature: Cold temperatures, potential snowfall
Daylight: Shortest daylight hours
Nature: Trees lose leaves, some animals hibernate, winter birds migrate
Activities: Winter sports (skiing, snowboarding), holiday celebrations

IMPACT ON NATURE

Adaptations of Animals:

Migration: Birds travel long distances for better conditions.

Hibernation: Some mammals conserve energy during winter.

Breeding Cycles: Spring triggers mating and reproduction.

Blossoming: Spring brings vibrant blooms and pollination.

Dormancy: Trees shed leaves in autumn to conserve energy.

Fruiting: Plants bear fruit in summer for reproduction.

Ecosystem Dynamics:

Food Chains: Seasons affect prey-predator interactions.

Survival Strategies: Camouflage and behaviors adapt.

Population Changes: Seasons influence species numbers.

Cultural Significance:

Festivals: Harvest and renewal celebrations.Seasons symbolize life cycles.

CULTURAL AND FESTIVE SIGNIFICANCE

Blossoming: Spring brings vibrant blooms and pollination.

Dormancy: Trees shed leaves in autumn to conserve energy.

Fruiting: Plants bear fruit in summer for reproduction.

Ecosystem Dynamics:

Food Chains: Seasons affect prey-predator interactions.

Survival Strategies: Camouflage and behaviors adapt.

Population Changes: Seasons influence species numbers.

Cultural Significance:

Festivals: Harvest and renewal celebrations.

Traditions: Spring signifies transformation.

Mythology: Seasons symbolize life cycles.

Research and Conservation:

FACTORS INFLUENCING SEASONS

*Axial Tilt:**

- Earth tilts about 23.5 degrees on its axis.

- Causes varying sunlight angles throughout the year.

*Orbital Distance:**

- Earth's elliptical orbit affects the intensity of seasons.

- Closer to the sun (perihelion) in winter, farther (aphelion) in summer.

*- *Equinoxes and Solstices:**

- Equinoxes (spring and autumn): Equal day and night.

- Solstices (summer and winter): Longest and shortest days.

*- *Global Impact:**

- Seasonal changes influence climate, weather, and ecosystems.

- Earth's axial tilt creates the beauty of diverse seasons.

CONCLUSION

Diversity in Nature:

- Seasons bring a stunning variety of landscapes and life cycles.

- Each season has its own unique charm and significance.

- *Influence on Culture:*

- Seasons shape festivals, traditions, and culinary delights.

- Cultural practices reflect the rhythms of nature.

*Scientific Marvel:**

- *Earth's axial tilt and orbit create this intricate dance.*

- *Understanding seasonal changes deepens our appreciation.*

- **Continuous Cycle:**

- *Seasons remind us of the Earth's dynamic nature.*

- *Embrace the ebb and flow of life through the changing seasons*

REFERENCES

- *Books:*

  - "The Four Seasons: A Guide to Nature's Best"

  - "Braiding Sweetgrass"

Websites:

  - National Geographic: www.nationalgeographic.com

  - The Old Farmer's Almanac: www.almanac.com

Journals:*

  - "Nature" - www.nature.com

  - "Climate Dynamics" - www.springer.com/journal/382

THANK YOU