3rd Grade Science Study Guide

■ Unit 1: Weather Basics

- Weather – what the air is like outside at a certain time and place.
- Atmosphere – blanket of gases and dust that surrounds Earth.
- Temperature – how hot or cold something is.
- Precipitation – water falling from clouds (rain, snow, sleet, hail).
- Clouds – hold precipitation.
- Meteorologist – person who uses tools to study and predict weather.
- Broadcast meteorologist – reports the weather on TV or radio.
- Weather map – shows temperature, precipitation, and predictions.

■ If it gets hotter, temperature goes UP.

■ On forecasts, the symbol for precipitation is usually rain.

■ Unit 2: Climate & Seasons

- Climate – pattern of weather in a place over a long time.
- Weather – short-term conditions (day-to-day).
- Seasons – times of year with different weather patterns: Winter, Spring, Summer, Fall.
- Why seasons happen: Earth is tilted on its axis as it moves around the sun.
- Solar rays do NOT hit all places on Earth at the same angle.
- Factors that affect climate:

• Being near a body of water
• Mountains (wet on one side, dry on the other)
• Elevation (higher = cooler)
- Climatologist – scientist who studies climate.

■ Quarter 1 Focus Standard (3.13): Graphs & Weather Patterns

- Line Graphs → show change over time (temperature rising in spring).
- Bar Graphs → compare data (rainfall by month).
- Picture Graphs → use symbols (❄ = snow).
- Tables → show organized data (numbers, months, temperatures).

Practice Skills:

• Identify warmest/coldest months from a table.
• Make predictions using data.
• Recognize seasonal patterns (spring = warming, winter = cold).
• Decide which cities/states are most likely to have certain weather (blizzards in northern states, T-shirt weather in warm states).

■ Quick Review Questions

1. Who warns people about severe weather? _____

2. What is the difference between weather and climate? _____

3. What causes the seasons? _____

4. What tool shows temperature and precipitation predictions? _____

5. Which months are usually coldest in the U.S.? _____

6. Which factors affect climate besides seasons? _____