

LESSON 1 – Weather Science

NAME:

DATE:



• Essential question: What causes the weather

Weather refers to clouds, winds, temperature and precipitation in a region at any given time

Weather is caused by the interaction of Earth, the atmosphere, water and the Sun.

Planet needs atmosphere to have weather



Atmosphere

- A layer of gases surrounding the planet
- Is sometimes referred to as air
- Is a mixture of gases (78% nitrogen, 21% oxygen, 1% argon, 0.04% carbon dioxide)
- Varying amounts of water vapor in atmosphere
 - on average 1%

Physical changes

Weather is **caused** by physical changes

A physical change alters the form of substance but not the identity



Examples of physical changes

Changes in

- Volume
- Temperature
- Shape
- Size
- Pressure

The **heating of the Earth** by the **Sun** causes these changes in the Earth's atmosphere



Phase changes of water between solid, liquid and gas play important role in weather

Meteorologists use weather maps to keep track of weather conditions and to predict weather

Conditions include: temperature, air pressure, precipitation (rain and snow), clouds, fronts and the jet stream