



WEATHER

Requirement 1

Define Meteorology: _____

Explain what weather is: _____

Explain what climate is: _____

Describe how weather affects farmers: _____

Describe how weather affects sailors: _____

Describe how weather affects aviators: _____

Describe how weather affects the outdoor construction industry: _____

Tell why weather forecasts are important to farmers: _____

Tell why weather forecasts are important to sailors: _____

Tell why weather forecasts are important to aviators: _____

Tell why weather forecasts are important to the outdoor construction industry: _____

Requirement 2

Name five dangerous weather-related conditions. Give the safety rules for each when outdoors.

Condition: _____ Outdoor Safety Rules: _____

Condition: _____ Outdoor Safety Rules: _____

Condition: _____ Outdoor Safety Rules: _____

Condition: _____ Outdoor Safety Rules: _____

Condition: _____ Outdoor Safety Rules: _____

Explain the difference between a severe weather watch and a warning: _____

- Discuss the safety rules with your family.

Requirement 3

Explain the difference between high and low pressure systems in the atmosphere. Tell which is related to good and poor weather:

On a separate paper, draw cross sections of a cold front and a warm front, showing:

- Location and movements of cold air
- Location and movements of warm air
- Frontal slope
- Location and types of clouds associated with each type of front
- Location of precipitation

Requirement 4

Tell what causes rain: _____

Tell why it rains: _____

Tell how lightning is formed: _____

Tell how hail is formed: _____

Requirement 5

Identify and describe clouds in low levels of the atmosphere. Tell specific types of weather to which each kind of cloud is related:

Identify and describe clouds in middle levels of the atmosphere. Tell specific types of weather to which each kind of cloud is related:

Identify and describe clouds in upper levels of the atmosphere. Tell specific types of weather to which each kind of cloud is related:

Requirement 6

On a separate paper, draw a diagram of the water cycle and label its major processes.

Explain the water cycle: _____

Requirement 7

Define acid rain: _____

Identify which human activities that pollute the atmosphere and the effects such pollution can have on people:

Human activity: _____
 Pollution it causes: _____

Effects of pollution on people: _____

Human activity: _____
 Pollution it causes: _____

Effects of pollution on people: _____

Human activity: _____
 Pollution it causes: _____

Effects of pollution on people: _____

Human activity: _____
 Pollution it causes: _____

Effects of pollution on people: _____

Requirement 8

Select and complete **ONE** of the following two options.

OPTION A:

- Make one of the following instruments: wind vane, anemometer, rain gauge, or hygrometer.
- Keep a daily weather log for one week using this instrument and other sources such as radio and television stations, NOAA, and Internet sources.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Time:							
Wind direction							
Wind speed							
Temperature							
Precipitation							
Cloud types							
Morning dew							
Frost							
Radio forecast							
TV forecast							
Forecast Accuracy							

OPTION B:

- Visit a National Weather Service office or talk with a local radio or television weathercaster, private meteorologist, local agricultural extension service officer, or university meteorology instructor.

Find out what type of weather is most dangerous or damaging to your community: _____

Determine how severe weather and flood warnings reach the homes in your community: _____

Requirement 9

Select and complete **ONE** of the following two options.

OPTION A:

- Give a talk of at least five minutes to a group explaining the outdoor safety rules in the event of lightning, flash floods, and tornadoes.
- Before your talk, share your outline with your counselor for approval.

OPTION B:

- Read several articles about acid rain and give a prepared talk of at least five minutes to a group about the articles.
- Before your talk, share your outline with your counselor for approval.

Requirement 10

Identify a weather-related career opportunity that interests you: _____

Explain what training and education are required for this position: _____

Explain the responsibilities of this position: _____
