

August 2011 – May 2012  
1:00 – 2:30pm

Kingdom Builders Homeschool Cooperative  
www.kingdombuilderscoop.com

## Atmospheric Science (with Weather Lab)

Students need to complete **all** the reading assignments, work **all** the assigned problems, answer **all** the assigned questions, and take **all** the quizzes and tests at home or in class **as noted on syllabus**. Weekly lab time will be spent learning Weather Observing and completing weather-related experiments. I will collect and grade quizzes/tests. I will periodically grade lab manuals and ensure chapter questions and problems have been completed. Lab paperwork will be handed out at the beginning of each lab class.

Additional information:

- We will review Chapter questions/problems in class.
- Quizzes will follow each chapter.
- Extra Credit Assignments are optional but encouraged.
- Chapter tests are taken at home or in class - Teacher graded
- Written Assignment is mandatory.

Fridays are primarily review, quiz, and lab days. Homework is usually chapter readings, chapter questions/problems, take home tests, and assignments. You are strongly encouraged to adhere to the attached schedule so that you will be thoroughly prepared. Homework questions will be checked.

<b>Grading Scale</b>	Tests	40%
	Quizzes	10%
	Classroom Participation	10%
	Homework Notebook	15%
	Lab Notebook + Participation	20%
	Written Assignment	5%

Note: Extra credit assignments are worth 2 points each to be added to grade point average (GPA) at the end of the year

- The Atmosphere, 9th edition, ISBN 0-13-101567-2
- Lab Notebook – Minimum 2" 3-Ring Binder (Co-op will provide Tabs)
- 2 Sharpened Pencils
- Student's answers to questions, problems, and tests
- Clipboard, flat (optional but encouraged for outdoor labs)
- Notebook paper

**BRING ALL OF THE ABOVE TO CLASS EACH FRIDAY**

### Teacher Contact:

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### Course Objectives

- To conduct weather experiments illustrating atmospheric properties
- To learn how to build a weather station and observe the weather
- To master a general understanding of the atmosphere and an introduction to meteorology

### Course Prerequisites

- None

## **The Atmosphere: 9<sup>th</sup> Edition**

Please note that we are meeting on Fridays. The expectation is that the student will have read and completed assignments prior to coming to class. **This includes the first week of class.**

### **Week 1 (Class date August 26, 2011) Read Chapter 1, Introduction to the Atmosphere**

**Mon** pgs.4-8, Review Questions 1-3  
**Tue** pgs.8-13, Review Questions 4-7  
**Wed** pgs.13-17, Review Questions 8-11  
**Thu** pgs.17-18, Review Questions 12  
**Fri (Aug 2)** Review and Lab 1

### **Week 2 (Class date September 2, 2011) Read Chapter 1, Introduction to the Atmosphere**

**Mon** pgs.18-21, Review Questions 13-14  
**Tue** pgs.21-25, Review Questions 15-17  
**Wed** pgs.25-27, Review Questions 18-19  
**Thu** Answer any 3 from *Problems* found on pgs 30-31  
**Fri (Sep 2)** Chapter 1 Quiz, Lab 2, and *Hand out 1<sup>st</sup> Extra Credit Assignment (Due Oct 14)*

### **Week 3 (Class date September 9, 2011) Read Chapter 2, Heating Earth's Surface and Atmosphere**

**Mon** pgs.34-37  
**Tue** pgs.37-42  
**Wed** pgs.42-43  
**Thu** Review Questions 1-4  
**Fri (Sep 9)** Review and Lab 3

### **Week 4 (Class date September 16, 2011) Read Chapter 2, Heating Earth's Surface and Atmosphere**

**Mon** pgs.43-44, Review Questions 5-6  
**Tue** pgs.44-48, Review Questions 7-9  
**Wed** pgs.48-51, Review Questions 10-12  
**Thu** pgs.51-58, Review Questions 13-18, Answer any 1 problem from *Problems* found on pg. 61)  
**Fri (Sep 16)** Chapter 2 Quiz, Review for Chapter 1 & 2 Test, Receive Take Home Test Chaps 1 & 2

**September 23rd Fall Break** – Take Home Test Chapters 1 & 2, (This is a closed book test that will be proctored and signed by your parent – Due September 30)

### **Week 5 (Class date September 30, 2011) Read Chapter 3, Temperature**

**Mon** pgs.64-67, Review Questions 1-2  
**Tue** pgs.67-70, Review Questions 3-4  
**Wed** pgs.70-74, Review Questions 5-8  
**Thu** pgs.75-77, Review Questions 9-10  
**Fri (Sep 30)** Turn in Test, Review and Lab 4

### **Week 6 (Class date October 7, 2011) Read Chapter 3, Temperature**

**Mon** pgs.77-80, Review Questions 11-14  
**Tue** pgs.80-84, Review Questions 15-17  
**Wed** pgs.84-85, Review Questions 18-19  
**Thu** pgs.85-88, Review Questions 20-21, Answer any 2 from *Problems* found on pgs. 90-91  
**Fri (Oct 7)** Chapter 3 Quiz, Review and Lab 5

**Week 7 (Class date October 14, 2011) Read Chapter 4, Moisture and Atmospheric Stability**

**Mon** pgs.94-95

**Tue** pgs.95-99

**Wed** pgs.99-101

**Thu** Review Questions 1-5

**Fri (Oct 14)** Visit Hunter Army Airfield Weather Station; 1st Extra Credit Due Today

**Week 8 (Class date October 21, 2011) Read Chapter 4, Moisture and Atmospheric Stability**

**Mon** pgs.102-105, Review Questions 6-7

**Tue** pgs.106-109, Review Questions 8-10

**Wed** pgs.109-110, Review Questions 11-13

**Thu** Review Questions 14-16

**Fri (Oct 21)** Review and Lab 6

**Week 9 (Class date October 28, 2011) Read Chapter 4, Moisture and Atmospheric Stability**

**Mon** pgs.110-115, Review Questions 17-19

**Tue** pgs.115-117, Review Questions 20-21

**Wed** pgs.118-120, Review Questions 22-23

**Thu** Review Questions 24-26; Answer any 2 from *Problems* found on pgs. 122-123

**Fri (Oct 28)** Chapter 4 Quiz; Review and Lab 7

**Week 10 (Class date November 4, 2011) Prepare for Chapter 3 & 4 Test**

**Mon** Study for Chapter 3 & 4 Test

**Tue** Re-read Chapter 3 & 4

**Wed** Review Chapter 3 & 4 questions

**Thu** Review each chapter's summary and Vocabulary

**Fri (Nov 4)** Chapter 3 & 4 Test (Closed book; in class); 2<sup>nd</sup> Extra Credit Assignment (Due Dec. 9)

**Week 11 (Class Date November 11, 2011) Read Chapter 5, Forms of Condensation and Precipitation**

**Mon** pgs.126-127

**Tue** pgs.127-130

**Wed** pgs.130-137

**Thu** Review Questions 1-10

**Fri (Nov 11)** Review and Lab 8

**Week 12 (Class Date November 18, 2011) Read Chapter 5, Forms of Condensation and Precipitation**

**Mon** pgs.137-143, Review Questions 11-12

**Tue** pgs.143-148, Review Questions 13-15

**Wed** pgs.148-151, Review Questions 16-18

**Thu** pgs.151-155, Review Questions 19-23

**Fri (Nov 18)** Chapter 5 Quiz; Review and Lab 9

**November 25<sup>th</sup> Thanksgiving Break**

**Week 13 (Class Date December 2, 2011) Read Chapter 6, Air Pressure and Winds**

**Mon** pgs.162-166, Review Questions 1-2

**Tue** pgs.166-169, Review Questions 3-4

**Wed** pgs.169-173, Review Questions 5-9

**Thu** pgs.173-175, Review Questions 10-11

**Fri (Dec 2)** Review and Lab 10

**Week 14 (Class Date December 9, 2011) Read Chapter 6, Air Pressure and Winds**

**Mon** pgs.175-178, Review Questions 12

**Tue** pgs.78-180

**Wed** pgs.180-183, Review Questions 13-17

**Thu** pgs.183-186, Review Questions 18-19

**Fri (Dec 9)** Chapter 6 Quiz; 2<sup>nd</sup> Extra Credit Due Today; Review and Lab 11; Hand out Chapter 5 & 6 Test and Written Assignment Due Jan 13, 2012

**Christmas Break:** Complete Chapter Test 5 & 6 (Closed book, proctored and signed by parent) Due Jan 13, 2012); and Written Assignment Due Jan 13, 2012

**Week 15 (Class Date January 13, 2012) Read Chapter 7, Circulation of the Atmosphere**

**Mon** pgs.192-194, Review Questions 1-2

**Tue** pgs.194-199, Review Questions 3-9

**Wed** pgs.199-206, Review Questions 10-13

**Thu** pgs.206-210, Review Questions 14-16

**Fri (Jan 13)** Turn in Chapter 5 & 6 Test and Written Assignment; Review and Lab 12

**Week 16 (Class Date January 20, 2012) Read Chapter 7, Circulation of the Atmosphere**

**Mon** pgs.210-213, Review Questions 17-18

**Tue** pgs.214-216, Review Questions 19-20

**Wed** pgs.216-220, Review Questions 21

**Thu** pgs.220-222, Review Questions

**Fri (Jan 20)** Chapter 7 Quiz; Lab 13

**Week 17 (Class Date January 27, 2012) Read Chapter 8, Air Masses**

**Mon** pgs.228-231, Review Questions 1-5

**Tue** pgs.231-233, Review Questions 6-9

**Wed** pgs.233-238, Review Questions 10-13

**Thu** pgs.238-240, Review Questions 14-15, Complete any 1 from page 242 *Problems*

**Fri (Jan 27)** Chapter 8 Quiz, Review and Lab 14

**Week 18 (Class Date February 3, 2012) Prepare for Chapter 7 & 8 Test**

**Mon** Study for Chapter 7 & 8 Test

**Tue** Re-read Chapter 7 & 8

**Wed** Review Chapter Questions

**Thu** Read Chapter Summaries and Vocabulary

**Fri (Feb 3)** Chapter 7 & 8 Test in class, closed book

**Week 19 (Class Date February 10, 2012) Read Chapter 9, Weather Patterns**

**Mon** pgs.246-249, Review Question 1

**Tue** pgs.249-254, Review Questions 2-4

**Wed** pgs.254-256, Review Questions 5-7

**Thu** pgs.256-259, Review Questions 8-9

**Fri (Feb 10)** Visit Local Television Station (Weather Office); Handout 3<sup>rd</sup> Extra Credit Due Mar 23

**February 17<sup>th</sup> Teen Pact Break**

**Week 20 (Class Date February 24, 2012) Read Chapter 9, Weather Patterns**

**Mon** pgs.259-264, Review Questions 10-15

**Tue** (and Wed) pgs.264-273

**Wed** pgs.264-273

**Thu** pgs.273-274, Review Questions 16-18

**Fri (Feb 24)** Chapter 9 Quiz, Review and Lab 15

**Week 21 (Class Date March 2, 2012) Read Chapter 10, Thunderstorms and Tornadoes**

**Mon** pgs.280-282, Review Questions 1-2  
**Tue** pgs.282-284, Review Questions 3-6  
**Wed** pgs.284-290, Review Questions 7-9  
**Thu** pgs.290-295, Review Questions 10-12  
**Fri (Mar 2)** Review and Lab 16

**Week 22 (Class Date March 9, 2012) Read Chapter 10, Thunderstorms and Tornadoes**

**Mon** pgs.295-297, Review Questions 13  
**Tue** pgs.297-300, Review Questions 14-15  
**Wed** pgs.300-304, Review Questions 16-17  
**Thu** pgs.305-308, Review Questions 18-19  
**Fri (Mar 9)** Chapter 10 Quiz, Review and Lab 17

**Week 23 (Class Date March 16, 2012) Prepare for Chapter 9 & 10 Test**

**Mon** Study for Chapter 9 & 10 Test  
**Tue** Re-read Chapter 9 & 10  
**Wed** Review Chapter Questions and problems  
**Thu** Read Chapter summaries and vocabulary  
**Fri (Mar 16)** Take Chapter 9 & 10 Test in class; closed book

**Week 24 (Class Date March 23, 2012) Read Chapter 11, Hurricanes**

**Mon** pgs.314-318, Review Questions 1-3  
**Tue** pgs.318-320, Review Questions 4-9  
**Wed** pgs.320-325, Review Questions 10-13  
**Thu** pgs.325-331, Review Questions 14-19  
**Fri (Mar 23)** Chapter 11 Quiz, 3<sup>rd</sup> Extra Credit Due, Review and Lab 18, Handout Take Home Chapter 11 Test (closed book; proctored and signed by parent Due Mar 30)

**Week 25 (Class Date March 30, 2012) Read Chapter 12, Weather Analysis and Forecasting**

**Mon** pgs.338-343, Review Questions 1-5  
**Tue** pgs.343-348, Review Questions 6-13  
**Wed** pgs.348-352, Review Questions 14-15  
**Thu** pgs.352-360, Review Questions 16-18  
**Fri (Mar 30)** Turn in Chapter 11 Take Home Test, Chapter 12 Quiz, Handout 4<sup>th</sup> Extra Credit Assignment Due April 27, Review and Lab 19

**April 6<sup>th</sup> Easter Break**

**Week 26 (Class Date April 13, 2012) Read Chapter 15, World Climates**

**Mon** pgs.416-418, Review Questions 1-3  
**Tue** pgs.418-422, Review Questions 4-5  
**Wed** pgs.422-427, Review Questions 6-7  
**Thu** pgs.427-430, Review Questions 8-12  
**Fri (Apr 13)** Review and Lab 20

**Week 27 (Class Date April 20, 2012) Read Chapter 15 World Climates**

**Mon** pgs.430-436, Review Questions 13-21  
**Tue** pgs.437-441, Review Questions 22-26  
**Wed** pgs.441-447, Review Questions 27-31  
**Thu** pgs.447-451, Review Questions 32-42  
**Fri (Apr 20)** Chapter 15 Quiz and Review

**Week 28 (Class Date April 27, 2012) Prepare for Chapters 12 & 15 Test**

**Mon** Read Chapter summaries

**Tue** Review chapter questions

**Wed** Review chapter vocabulary

**Thu** Study for Test

**Fri (Apr 27)** Take Chapter 12 & 15 Test (in class, closed book), Turn in 4th Extra Credit Assignment

**May 4, 2012 Class Break**

**Week 29 (Class Date May 11, 2012) No homework**

**Mon**

**Tue**

**Wed**

**Thu**

**Fri (May 11)** Take Lab Test (Open Book)

**Week 30 (Class Date May 18, 2012) No homework**

**Mon**

**Tue**

**Wed**

**Thu**

**Fri (May 18)** Class Party

**Friday May 18, 2012 Last Day of Class, Class Party!!! End of Session**