EARTH SCIENCE IA
Course Outline: 2351

I. Textbook Assignment:

A. *Wonders of Science: The Earth & Beyond* **(5.0 credits)**
- Read: Units 1-8.
- Complete: all unit exercises and "Unit Review" activities.
- Complete 3 of the Extension Activities listed below.

II. Extension Activity Options: (All writing assignments should meet Writing Rubric

1. Use the Internet to conduct research on one of the nine planets in the solar system. Write a one-paragraph summary about the planet, based upon your research. Include the following information:
    a. Name of planet
    b. Distance from the sun
    c. Physical features
    d. Whether or not it is a "solid" or "gas" planet.
2. Use a newspaper and/or the Internet (Bakersfield Californian or U.S. Weather Service website) to track the temperature in some world city for a 5-day period. Create a line graph to display the temperature patterns. This graph should include temperature and date for each of the 5 days, as well as a heading that includes the city's name.
3. Complete the following experiment: Place a piece of steel wool outside your house in a place where it will be exposed to the weather. Place another piece of steel wool inside of your home where it will not be disturbed. Examine each piece of steel wool every day for 2 weeks, recording your observations each day in a journal. Write a 1-paragraph summary explaining your findings. Include changes you observed; the differences, if any in the two pieces of steel wool; and an explanation for those differences.
4. Teacher generated activity, approved by the site administrator.

III. Evaluation

- See your teacher for a unit test.
- All Writing assignments must meet the proficient level of the rubric provided by the teacher.
- All textbook work must meet 70% accuracy level for a "C" grade.

EARTH SCIENCE IIA
Course Outline: 3301

I. Textbook Assignment Options:

A. *AGS Earth Science,* Part I **(5.0 credits)**
- Read: Chapters 1-6.
- Complete: all "Self-check" or "Lesson Review" questions.
- Complete: all "Chapter Review" exercises.
- Complete any one of the Extension Activities listed below.

B. Science Workshop Series- *Earth* Science, *Geology* **(2.5 credits)**
- Read: all sections.
- Complete: all section activities and exercises except "Reaching Out".
- Complete one of the Extension activities listed below.

C. Science Workshop Series- *Earth Science Oceans and Atmosphere* **(2.5 credits)**
- Read: all sections
- Complete: all section activities and exercises except "Reaching Out".
- Complete one of the Extension activities listed below.

D. *Concepts and Challenges in Earth Science,* Part I **(5.0 credits)**
- Read: Units 1-9.
- Complete: all "Lesson Summary" activities.
- Complete: Unit "Challenges" activities (**Omit:** "Reading Critically, "Critical Thinking" and "Finding Out More."
- Complete one of the Extension activities listed below.

II. Extension Activity Options: (All writing assignments should meet Writing Rubric S-II standards)

1. Use the Internet to conduct research on one of the most famous comets in the world. After clicking on "search" in the toolbar, type in: "*1upinfo Halley's comet and astronomy"* as your search guides. Write a 3-paragraph essay about Comet Halley based upon your research. Be sure to discuss when, how and by whom the comet was discovered.
2. Complete a 5-slide PowerPoint presentation on 5 planets of the solar system. Each slide should contain a photo and a 1-line description.
3. Use the Internet to research one of the following astronomers. Write a 3-paragraph essay based upon your research. Be sure to include the astronomer's major contribution to science.
   - Galileo
   - Copernicus
   - Thomas Hubble
4. *AGS Textbook* users only: Complete two investigation activities from chapters 1-6.
5. Teacher generated activity, approved by the site administrator.

III. Evaluation

- See your teacher for a unit test.
- All Writing assignments must meet the proficient level of the rubric provided by the teacher.
- All textbook work must meet 70% accuracy level for a “C” grade.

EARTH SCIENCE IIB
Course Outline: 3302

I. Textbook Assignment Options:

A. *AGS Earth Science,* Part II **(5.0 credits)**
- Read: Chapters 7-14.
- Complete: all "Self-check" or "Lesson Review" questions.
- Complete: all "Chapter Review" exercises.
- Complete one of the Extension Activities listed below.

B. *Concepts and Challenges in Earth Science,* Part II **(5.0 credits)**
- Read: Units 10 – 18.
- Complete: all "Lesson Summary" activities.
- Complete: Unit "Challenges" activities (**Omit:** "Reading Critically, "Critical Thinking" and "Finding Out More."
- Complete one of the Extension Activities listed below.

II. Extension Activity Options: (All writing assignments should meet Writing Rubric S-II standards)

1. Use the term "volcanoes USGS" (United States Geologic Survey) to conduct your research and review some of the USGS's websites on active volcanoes. Find a topic of interest about an active volcano and write a 3-paragraph essay based upon your research.
2. Prepare a 5-slide PowerPoint presentation on one of the following topics:
   - The water cycle
   - Erosion
   - Fossils
   - Clouds
3. Using the weather page from the Bakersfield Californian Newspaper, date and record the following information for a 5-day period: barometric pressure, humidity, temperature, and weather patterns (cloudy, sunny, rainy, etc.) Based upon your recordings, on one piece of paper, create a line graph for the barometric pressure and one for the humidity for each of the 5 days. Your graphs should be labeled to describe what each line graph represents, and the dates of each reading. After both line graphs have been completed, examine each day's recordings. Compare the trends in barometric pressure and humidity with the temperature and weather patterns over the 5-day period. How did a rise or fall affect the temperature and weather? Write a 1-paragraph summary of your findings.
4. *AGS Textbook* users only: Complete two of the 'Investigation" activities from Chapters 7- 14.
5. Teacher generated activity, approved by the site administrator.

III. Evaluation

- See your teacher for a unit test.
- All Writing assignments must meet the proficient level of the rubric provided by the teacher.
- All textbook work must meet 70% accuracy level for a “C” grade.

EARTH SCIENCE IIIA
Course Outline: 3351

I. Textbook Assignment Options:

A. *Globe Earth Science,* Part I **(5.0 credits)**
- Read: Units 1-5.
- Complete: all "Lesson Review" activities.
- Complete: "Unit Review" activities in Sections a, b, and c only.
- Complete two of the Extension activities listed below.

B. *Science Explorer: Earth Science,* Part I **(5.0 credits)**
- Read: Units 1-3.
- Complete: all "Section Review" questions.
  Complete: "Chapter Assessment" activities (**Omit**: "Thinking Critically" and "Applying Skills" sections).
- Complete one of the Extension activities listed below.

C. *Exploring Earth Science* (**5.0 credits**)
- Read: Chapters 1 –12
- Complete: all Section Reviews (omit Critical Thinking/Connection)
- Complete: all Chapter Reviews – Multiple Choice and True or False
- Complete one the following Extension Activities.

II. Extension Activity Options: (All writing assignments should meet Writing Rubric Exp. III standards)

1. Use at least 2 sources to conduct research on the rock cycle. These may include the Internet, a library book, or another media resource. If using the Internet, the search term: "rock cycle earth science" will give you a number of websites that discuss the rock cycle and the 3 types of rock formations. Either write a 4-paragraph essay or prepare an 8-slide PowerPoint presentation based upon your research.
2. Complete a PowerPoint presentation on the structure of the Earth. This presentation must include Earth's layers and descriptions of plate tectonics. The presentation should include at least 8 slides with graphics and descriptive text.
3. Use any Website on the Internet or use the United States Geologic Survey's Website to research the topic of volcanoes (hint: use the search term "volcanoes USGS"). Write a 4-paragraph essay based upon your research.
4. Using the Internet, your textbook, or any resources of your choice, research the ozone layer. Write three paragraphs explaining what the ozone layer is and how it affects the Earth.
5. Using the Internet, your textbook, or any resources of your choice, research why and how earthquakes occur. You will need to include information on the scales used to measure earthquake intensity and magnitude. The report needs to be at least three paragraphs in length.
6. Teacher generated activity, approved by the site administrator.

III. Evaluation

- See your teacher for a unit test.
- All Writing assignments must meet the proficient level of the rubric provided by the teacher.
- All textbook work must meet 70% accuracy level for a “C” grade.

EARTH SCIENCE IIIB
Course Outline: 3352

I. Textbook Assignment Options:

A. *Globe Earth Science,* Part II **(5.0 credits)**
- Read: Units 6-10
- Complete: all "Lesson Review" activities.
- Complete: all "Unit Review" activities in Sections a, b, and c.
- Complete two of the Extension Activities listed below.

B. *Science Explorer: Earth Science, Part* II **(5.0 credits)**
- Read: Units 4-6.
- Complete: all "Section review questions.
- Complete: all Chapter Assessments (**Omit:** "Thinking Critically" and "Applying Skills."
- Complete any one of the Extension activities listed below.

C. *Science Explorer Series: Earth Science* **(2.5 credits: each book)** *Astronomy*
Inside Earth
Earth's Waters
- Read: all chapters.
- Complete: all "Section Review" questions.
- Complete: "Chapter Assessment" exercises (**Omit:** "Thinking Critically" and "Applying Skills".
- Complete one of the Extension Activities listed below for **each** book **assigned**.

D. *Holt Science and Technology: Earth Science* (**1.0-5.0 credits**: direct instruction or course contract).

E. *Exploring Earth Science* (**5.0 credits**)
- Read: Chapters 13 –24
- Complete: all Section Reviews (**omit** Critical Thinking/Connection)
- Complete: all Chapter Reviews – Multiple Choice and True or False
- Complete one the following Extension Activities.

II. Extension Activity Options: (All writing assignments should meet Writing Rubric Exp. III standards).

1. Use at least 2 sources to conduct research on the Solar System. These may include the Internet, a library book, or another media resource. If using the Internet, the search term: "solar system exploration NASA" will give you some information. Write a four-paragraph essay, or prepare an 8-slide PowerPoint presentation based upon your research. Your project should include information about each of the major planets in our solar system, and if completing the PowerPoint, each slide should contain a photo and at least a 1-line description.

2. Complete a PowerPoint presentation on Weather and Climate that includes at least 8 slides. This presentation should include information from at least 2 sources covering most of the following information:
   * How water enters and leaves the atmosphere
   * A description of humidity
   * Air Masses
   * Weather Fronts and Storms
   * Cloud Formations

3. Use the Internet to research violent weather. You may select one of the following topics:
   - Thunder storms
   - Tornadoes
   - Hurricanes

   Write a 4-paragraph essay, or create an 8-slide PowerPoint presentation based upon your research. Be sure to include information related to the instruments and methods used to gather data for forecasting purposes. You may find the following search terms useful:

   "National Weather Service – Twister Project"
   " NASA Hurricane Education"
   "Education World Weather"
   "CNN or USA Today Weather"

4. Using the Internet, your textbook, or any resources of your choice, research pollution in the San Joaquin Valley. Write three paragraphs explaining what is causing the pollution and how it affects Bakersfield.
5. Teacher generated activity, approved by the site administrator.

III. Evaluation

- See your teacher for a unit test.
- All Writing assignments must meet the proficient level of the rubric provided by the teacher.
- All textbook work must meet 70% accuracy level for a "C" grade.