

Summer Assignment for 9th grade **Honors** General Science

PART 1: Pick a book from the approved list – read and answer questions.

Anthropologist: Scientist of the People by Mary Batten

The story follows anthropologist A. Magdalena Hurtado as she lives with and studies the Ache Indians of Paraguay for 15 years. The text intertwines information about these hunter-gatherers and the changes in their society with insight into the anthropologist's methods of observation, data collection and analysis.

Astro Turf – The Private Life of Rocket Science by M.G. Lord

Lord describes the 1997 Mars Pathfinder mission directed by a woman in a male dominated culture in the Jet Propulsion Laboratory.

A Briefer History of Time by Stephen Hawking and Leonard Mlodinow 🗣️

Dr. Hawking relates new data from particle physics and observational astronomy to enhance and update answers to basic questions about the universe: where it's going and how it began, and topics such as the mysterious dark matter, dark energy and string theory.

Einstein's Dreams by Alan Lightman 🗣️

The author focuses on three months of Einstein's life during the year in which he published three important papers in the field of physics and re-creates the dreams that allegedly culminated in the famous essay on the relativity of time.

The Genie in the Bottle: 67 All New Commentaries on the Fascinating Chemistry of Everyday Life by Dr. Joe Schwarcz

Giving the low down on chemical phenomena, this book reveals the fun and fascinating secrets collected by Dr. Schwarcz blending quirky chemistry and engaging tales from the history of science. Wondering how that ice cream got its color? Find out here!

Lost Mountain: A Year in the Vanishing Wilderness Radical Strip Mining and the Devastation of Appalachia by Eric Reece

A recounting of how a stretch of Appalachian wilderness has gone from being a verdant North American rain forest to a bleak and dismal lunar landscape due to destructive strip-mining processes.

Napoleon's Buttons: How 17 Molecules Changed History by Penny Le Conteur and Jay Burreson

A fascinating account of seventeen groups of molecules that have greatly influenced the course of history. These molecules provided the impetus for early exploration, and make possible the voyages of discovery that ensued.

The Planets by Dava Sobel

The author's lifelong fascination with our solar system is evident in these essays that blend the latest scientific knowledge with popular culture, mythology, astrology, literature, music, and more.

The Secret Life of Dust by Hannah Holmes 🗣️

And you thought that dust was something you just swept away! Examine this unusual topic and its importance from the most outer limits of space to the deserts of Africa to the kitchen counter and under the microscope as the author traverses biology, astronomy, climatology, pathology, and host of other fields to dig up some serious dirt.

Turn over →

GENERAL SCIENCE: BOOK READING QUESTIONS

- A. Compose the answers to the following questions after you complete the reading from the list of science books on the Summer Reading List (and on the RHAM homepage).
- B. Type your answers to the following questions using one-inch margins, double spaced lines, 11-12 point Times New Roman or Ariel font. Use complete sentences in all your answers. (Remember: do not start a sentence with “it” or “they” because these words do not convey specific information.)
- C. Put your name, your science teacher’s name and the date of the first day of school on **the top left margin of the first page** of your answer sheet. (activity continues on next page)

Answer these questions about the book you choose to read:

1. Give the name of the book you read, the author and the date of publication of the book.
2. Describe the main theme of the book that you read from the science list.
3. (a) Discuss the main science concept that was presented in this book by describing the concept and how it was important to the story.

(b) What is the significance of this concept to:

(1) you? (2) society as a whole?
4. How does/could the main topic of this book influence the way society thinks about this subject?
5. What message about science and the scientific process was the author conveying to the reader in this book?
6. Would you recommend this book to someone else to read? Explain your answer in at least 3 sentences.

PART 2: Research a topic on a current science issue that falls under the ninth grade curriculum. Narrow down a specific question to research under one of the following topics.

Energy Transformation: *What is the role of energy in our world?*

Chemical Structures and Properties: – *How does the structure of matter affect the properties and uses of materials?*

Global Interdependence: *How do materials cycle through the Earth’s systems?*

For a more detailed description of curriculum go to RHAM website, teacher, state frameworks.

Write a 3-4 page research paper following APA or MLA format. Address the following information: Explain topic, discuss pros and cons, and your opinion. Find a person in that field to interview via e-mail, web, in person. Include their opinion/research on that particular topic you chose in your paper. Include a work cited page. Make sure to include in text citations. This will be due the first day of school in August.

Grading:

Reading/ Questions completed 10 points

Research paper

Format: 3-4 pages, MLA, APA 5 pts

Explain Topic 10 pts

Pros/Cons 10 pts

Opinion 5 pts

Scientist Research 5 pts

Work cited page 5 pts