

science today class 4 answers Textbook

science today class 4 answers are an essential resource for students preparing for their science examinations and seeking to understand the fundamental concepts covered in their syllabus. This article provides comprehensive and detailed answers to the key questions and topics typically included in the Class 4 science curriculum. Whether you are a student, parent, or teacher, this guide aims to clarify important scientific ideas, promote better understanding, and improve exam performance.

Introduction to Science for Class 4

Science at the Class 4 level introduces students to the basic principles of the natural world. It encourages curiosity about how things work and helps develop a scientific attitude. The syllabus generally covers topics like plants and animals, human body, matter and materials, environment, and natural phenomena.

Understanding these topics through detailed answers helps students grasp concepts effectively and build a solid foundation for future learning.

Important Topics and Their Class 4 Science Answers

1. Plants and Their Parts

Q: What are the main parts of a plant?

Plants have several important parts that help them survive and grow. The main parts of a plant are:

- **Root:** Anchors the plant in the soil and absorbs water and minerals.
- **Stem:** Supports the plant and transports nutrients and water from roots to leaves.
- **Leaves:** The food-making factory of the plant through photosynthesis.
- **Flowers:** Reproductive part of the plant that develops into fruits and seeds.
- **Fruits and Seeds:** Help in reproduction and growing new plants.

Q: Why are leaves green?

Leaves are green because they contain a pigment called chlorophyll. Chlorophyll absorbs sunlight and helps in the process of photosynthesis, which is how plants make their food. The green color is a result of chlorophyll reflecting green light.

2. Animals and Their Habitats

Q: Name some animals and their habitats.

Animals live in different habitats depending on their needs. Here are some examples:

- **Land animals:** Lions, elephants, tigers, dogs
- **Water animals:** Fish, whales, turtles
- **Aerial animals:** Birds like sparrows, eagles, bats

Q: How do animals adapt to their environment?

Animals adapt to their environment in various ways to survive. For example:

- Camouflage to hide from predators (e.g., chameleon)
- Special body parts (e.g., webbed feet of ducks for swimming)
- Behavioral changes (hibernation during winter)

3. Human Body and Health

Q: What are the main parts of the human body?

The human body has several vital parts, including:

- **Head:** Contains the brain, eyes, ears, nose, and mouth.
- **Trunk:** Houses the chest and abdomen, containing vital organs like the heart, lungs, stomach, and liver.
- **Limbs:** Arms and legs that help in movement and handling objects.

Q: Why is it important to eat healthy food?

Eating healthy food provides the energy and nutrients needed for growth, development, and keeping the body healthy. Healthy foods like fruits, vegetables, grains, milk, and protein-rich foods help build strong bones, muscles, and a good immune system.

4. Matter and Materials

Q: What are solids, liquids, and gases?

These are the three states of matter:

- **Solids:** Have a fixed shape and volume. Example: rock, wood, ice
- **Liquids:** Have a fixed volume but take the shape of their container. Example: water, milk
- **Gases:** Do not have a fixed shape or volume. They expand to fill their container. Example: air, steam

Q: How do solids change into liquids and gases?

Solids change into liquids when heated, a process called melting (e.g., ice melting into water). Liquids turn into gases through evaporation or boiling (e.g., water boiling into steam). Gases can also turn back into liquids through condensation.

5. Natural Phenomena

Q: What causes rain?

Rain occurs because of the water cycle. When the Sun heats water from rivers, lakes, or oceans, it turns into vapor and rises into the air. As the vapor cools, it condenses into clouds. When the clouds become heavy, the water falls back to the earth as rain.

Q: Why do we see lightning during a thunderstorm?

Lightning is a flash of electricity that occurs in a thunderstorm. It happens when there is a buildup of static electricity in the clouds, and the electrical discharge creates a bright flash of light. The sound of thunder is caused by the rapid expansion of air around the lightning bolt.

Tips for Students Preparing for Science Exams

- Read the questions carefully before answering.
- Review all chapters and understand the key concepts.
- Practice writing answers in your own words to improve clarity.
- Use diagrams wherever necessary to explain topics better.
- Revise regularly to retain important facts and definitions.

Conclusion

Understanding and mastering the answers to the science questions in Class 4 is crucial for academic success. These answers not only help in exam preparations but also foster a deeper

interest in the natural world. Remember to study regularly, practice writing clear and concise answers, and stay curious about science. With dedicated effort and the right resources, you can excel in your science studies and build a strong foundation for future scientific learning.

Additional Resources

- Class 4 Science Textbooks
- Online Educational Platforms and Practice Tests
- Science Fair Projects and Experiments
- Visual Aids and Educational Videos

By following this guide and practicing the questions and answers provided, students can confidently approach their science exams and develop a lifelong interest in understanding the world around them.

Science today class 4 answers: A comprehensive guide for young learners and educators

In the rapidly evolving world of science education, understanding the core concepts taught in Class 4 is crucial for building a strong foundation in scientific knowledge. Among the many resources available to students and teachers, "Science Today Class 4 Answers" has emerged as a vital tool that offers clarity, accuracy, and confidence in learning. This article explores the significance of these answers, breaking down the key topics covered in the curriculum, their practical applications, and how they support young learners in grasping fundamental scientific principles.

The Importance of Science Education for Class 4 Students

Science education at the elementary level aims to cultivate curiosity, promote critical thinking, and foster a sense of wonder about the natural world. At this stage, students are introduced to basic scientific concepts related to plants, animals, humans, matter, and the environment. Providing correct answers and explanations helps clarify doubts and reinforces learning.

Why Accurate Answers Matter

- Building Confidence: Correct answers empower students to approach science with enthusiasm.
- Foundation for Future Learning: Early understanding paves the way for more complex topics in higher classes.
- Assessment Preparation: Well-structured answers assist students in performing well in exams and quizzes.
- Encouraging Curiosity: Clear explanations stimulate further questions and exploration.

Core Topics Covered in Science Today Class 4

The curriculum encompasses a broad spectrum of topics, each integral to understanding the natural world. Let's examine these areas in detail.

- Plants and Their Parts

Understanding Plant Anatomy and Functions

Students learn about the different parts of a plant—roots, stem, leaves, flowers, and fruits—and their roles.

- Roots: Anchor the plant and absorb water and nutrients from the soil.
- Stem: Supports the plant and transports water and nutrients.
- Leaves: Responsible for photosynthesis, the process of making food.
- Flowers: Reproductive part of the plant.
- Fruits: Protect seeds and aid in dispersal.

Sample Question & Answer:

Q: What is the main function of leaves in a plant?

A: The main function of leaves is to carry out photosynthesis, which helps the plant make food using sunlight, carbon dioxide, and water.

- Animals and Their Habitats

Diverse Animal Life

Students explore different animals, their habitats, and their characteristics.

- Animals in Water: Fish, whales, and dolphins.
- Animals on Land: Lions, elephants, and rabbits.
- Animals in the Air: Birds like eagles, parrots, and sparrows.

Adaptations and Survival

- How animals adapt to their environments.
- The importance of camouflage, hibernation, and migration.

Sample Question & Answer:

Q: Why do some animals migrate during winter?

A: Some animals migrate during winter to find warmer places with enough food and to survive harsh weather conditions.

- Human Body and Senses

Understanding Our Body

The curriculum introduces students to the major organs and their functions.

- Skeleton: Provides support and helps in movement.
- Muscles: Work with bones to enable movement.
- Internal Organs: Heart (pumps blood), lungs (breathe air), stomach (digests food).

Senses and Their Functions

Humans have five senses:

- Sight
- Hearing
- Touch
- Taste
- Smell

Sample Question & Answer:

Q: Which organ is responsible for pumping blood in the human body?

A: The heart is responsible for pumping blood throughout the human body.

- Matter and Its Properties

States of Matter

Students learn about solids, liquids, and gases, and their characteristics.

- Solids: Have a fixed shape and volume.
- Liquids: Take the shape of the container, have a fixed volume.
- Gases: Fill the entire space available, no fixed shape or volume.

Changes in State

Understanding melting, freezing, evaporation, and condensation.

Sample Question & Answer:

Q: What happens when ice melts?

A: When ice melts, it changes from a solid to a liquid (water).

- Environmental Awareness and Conservation

Protecting Nature

Students are taught about pollution, waste management, and conservation of resources.

- Reduce, reuse, recycle
- The importance of trees and clean water
- Saving energy and reducing pollution

Sample Question & Answer:

Q: Why should we plant more trees?

A: Planting more trees helps clean the air, provide oxygen, and maintain ecological balance.

How "Science Today Class 4 Answers" Supports Learning

Clarity and Simplicity

Answers are designed to be straightforward and age-appropriate, making complex concepts accessible to young learners. Clear language ensures students understand the 'why' and 'how' behind scientific facts.

Reinforcement Through Practice

Having access to well-structured answers enables students to practice effectively, whether through homework, classwork, or revision. It helps in identifying gaps in knowledge and reinforcing correct concepts.

Preparing for Assessments

Accurate solutions serve as excellent revision tools before exams. They help students internalize key points, memorize important facts, and develop a confident approach to answering questions.

Encouraging Inquiry and Curiosity

Good answers often include explanations that stimulate further questions, encouraging students to explore science beyond textbooks.

Using "Science Today Class 4 Answers" Effectively

For Students

- Review Regularly: Use answers to revise topics after classes.
- Practice Writing: Attempt to answer questions on your own before checking solutions.
- Ask Questions: Clarify doubts by comparing your answers with the provided ones.

For Teachers and Parents

- Guided Learning: Use answers to explain concepts during revision sessions.
- Identify Difficult Areas: Focus on topics where students struggle.
- Encourage Curiosity: Promote inquiry-based learning by asking open-ended questions.

The Future of Science Education for Class 4 Students

As science continues to advance, the curriculum and support resources like "Science Today Class 4 Answers" will evolve to include digital tools, interactive content, and real-world applications. This integration aims to make science more engaging, experiential, and relevant to young learners'

everyday lives.

Emerging Trends

- Interactive Quizzes and Games: Reinforce learning through fun activities.
- Virtual Labs: Simulate experiments for hands-on experience.
- Environmental Projects: Encourage practical involvement in conservation efforts.

Conclusion

"Science Today Class 4 Answers" serve as an essential resource that bridges the gap between complex scientific concepts and young learners' understanding. Accurate, clear, and well-explained answers foster confidence, promote curiosity, and lay the groundwork for lifelong scientific learning. As students navigate the fascinating world of science, these answers act as guiding tools, helping them explore, understand, and appreciate the wonders of nature and the universe around them.

By nurturing curiosity and providing reliable information, educators and parents can inspire a new generation of scientists, environmentalists, and innovators ready to tackle the challenges of tomorrow with knowledge and confidence.

QuestionAnswer What is the main focus of Science Today for Class 4 students? Science Today for Class 4 focuses on helping students understand basic scientific concepts related to nature, animals, plants, the human body, and the environment. How can I improve my science answers for Class 4? To improve your science answers, read the chapter thoroughly, understand key points, and practice writing clear and concise explanations with examples. What are some important topics covered in Science Today Class 4? Important topics include plants and animals, human body, states of matter, weather and climate, and environmental conservation. Where can I find reliable answers for Science Today Class 4 questions? Reliable answers can be found in your textbooks, school notes, educational websites, and through guidance from teachers and parents. How do I answer science questions about animals for Class 4? Answer animal questions by describing their habitat, diet, features, and how they help in the ecosystem, using simple and clear language. What is the importance of studying science in Class 4? Studying science helps students understand how the world works, develop curiosity, and learn about protecting the environment and living beings. How can I prepare for science exams in Class 4? Prepare by revising chapters regularly, practicing questions, taking notes, and doing simple experiments or activities related to the topics. What are some fun ways to learn science topics for Class 4? Engage in experiments, watch educational videos, do science projects, and participate in quizzes to make learning fun and interactive. Why is it important to conserve plants and animals, as covered in Science Today? Conserving plants and animals helps maintain ecological balance, preserves biodiversity, and ensures a healthy environment for everyone. How can I use my science answers to help others understand better?

Use simple language, include examples and diagrams if possible, and explain concepts clearly to make your answers helpful and easy to understand.

Related keywords: science today class 4 answers, class 4 science solutions, science chapter answers, NCERT science class 4, science questions and answers, class 4 science notes, science textbook solutions, CBSE class 4 science answers, science practice questions, class 4 science worksheets

Isaac Asimov Great Science Writers

Isaac Asimov Great Science Writers: A Legacy of Scientific Literacy and Imagination

Isaac Asimov is widely recognized as one of the most influential and prolific science writers of the 20th century. His contributions to popular science, science fiction, and education have left an indelible mark on both the scientific community and the general public. As a towering figure among great science writers, Asimov's ability to communicate complex scientific ideas with clarity, enthusiasm, and wit has inspired countless readers and shaped public understanding of science. This article explores the life, works, and enduring legacy of Isaac Asimov as a great science writer, highlighting his influence on science communication and his contributions to science literature.

Early Life and Background

Born on January 2, 1920, in Petrovichi, Russia, Isaac Asimov emigrated with his family to the United States at a young age. Settling in Brooklyn, New York, Asimov developed an early fascination with reading and learning. His passion for science and literature grew rapidly, leading him to pursue biochemistry at Columbia University, where he earned his Ph.D. in 1948. This scientific background provided the foundation for his later writings, allowing him to interpret and communicate scientific principles with authority and insight.

Isaac Asimov as a Great Science Writer

Bridging Science and the Public

One of Asimov's greatest strengths was his ability to bridge the gap between complex scientific research and everyday understanding. He believed that science should be accessible and enjoyable, and he dedicated much of his career to making science comprehensible to the general public. His writing style combined clarity with enthusiasm, often infusing humor and storytelling to captivate readers.

Prolific Output and Range of Topics

Isaac Asimov authored over 500 books and numerous essays, covering a vast array of subjects beyond science, including history, religion, literature, and philosophy. His extensive bibliography demonstrates his versatility and commitment to education. Among his most notable works are science books such as *The Intelligent Man's Guide to Science*, *Asimov's New Guide to Science*, and *Understanding Physics*.

Key Qualities of Asimov's Science Writing

- **Clarity:** Simplifying complex ideas without losing essential details.
- **Engagement:** Using storytelling, anecdotes, and humor to draw readers in.
- **Accuracy:** Maintaining scientific integrity and rigor in explanations.
- **Inspiration:** Encouraging curiosity and critical thinking about science.

Major Works and Contributions

Popular Science Books

Isaac Asimov's popular science books are considered classics in science communication. Some of his most influential titles include:

- **The Intelligent Man's Guide to Science (1960):** An extensive overview of scientific principles and discoveries, designed for the layperson.
- **Asimov's New Guide to Science (1984):** An updated, comprehensive survey of scientific knowledge spanning physics, chemistry, biology, and astronomy.
- **Understanding Physics (1966):** An accessible introduction to the fundamental principles of physics, written in a clear and engaging style.
- **Understanding Chemistry (1977):** Simplifies complex chemical concepts for general readers.

Science Fiction and Its Role in Science Communication

While best known for his science fiction, Asimov's stories often reflected his scientific knowledge and curiosity. His *Foundation* series and *Robot* series not only entertained but also explored themes like robotics, artificial intelligence, and societal evolution?topics that continue to be relevant today. His fiction served as a vehicle to stimulate interest in science and technology among readers worldwide.

Educational and Reference Works

In addition to books for general audiences, Asimov authored textbooks and reference materials used in academic settings. His clear explanations and systematic approach have made his works valuable educational resources.

Impact and Legacy

Influence on Science Communication

Isaac Asimov revolutionized the way science is communicated. His ability to translate scientific jargon into engaging narratives inspired future generations of science writers, educators, and communicators. His works helped foster scientific literacy and skepticism, encouraging society to value evidence-based reasoning.

Inspiration for Future Writers

Many contemporary science writers cite Asimov as a primary influence. His success demonstrated that scientific topics could be made accessible and fascinating, paving the way for authors like Carl Sagan, Stephen Jay Gould, and Bill Bryson.

Recognition and Honors

Throughout his life, Asimov received numerous awards, including the Hugo, Nebula, and Bram Stoker Awards, as well as the Presidential Award for Science Writing. His prolific output and dedication to education have cemented his reputation as a great science writer.

Why Isaac Asimov Remains a Model for Science Writers Today

- **Passion for Science:** His genuine curiosity and enthusiasm are contagious.
- **Clarity of Explanation:** His ability to break down complex ideas remains a benchmark.
- **Versatility:** His writings span many disciplines, demonstrating the interconnectedness of knowledge.
- **Humor and Storytelling:** Making learning enjoyable and memorable.

Conclusion

Isaac Asimov's legacy as a great science writer endures because of his exceptional talent for communicating science in a way that is accessible, engaging, and inspiring. His works continue to educate and entertain, fostering curiosity and understanding about the universe we live in. As we look to the future of science communication, Asimov's example serves as a reminder that effective storytelling, clarity, and passion are essential tools for making science accessible to all. His

contributions have not only shaped scientific literacy but also ignited the imaginations of countless readers, ensuring his place among the greatest science writers of all time.

Isaac Asimov: Great Science Writers and the Legacy of a Scientific Luminary

When contemplating the pantheon of science writers who have profoundly influenced both scientific literacy and popular understanding of complex concepts, Isaac Asimov stands out as a towering figure. His prolific output, clarity of explanation, and ability to intertwine scientific rigor with engaging storytelling cement his place among the greatest science writers of all time. Asimov's work not only demystified the intricacies of science but also inspired countless individuals to pursue scientific inquiry, making him an enduring figure in both literature and science communication.

Early Life and Intellectual Foundations

Understanding Asimov's contributions begins with an appreciation of his background. Born in 1920 in Russia and emigrating to the United States as a child, Asimov grew up in Brooklyn, New York. His early fascination with science and reading, fostered by a childhood immersed in science fiction magazines and books, laid the groundwork for his later pursuits. Self-educated through voracious reading, he developed a broad knowledge base that would underpin his extensive writing career.

His academic pursuits culminated in a Ph.D. in biochemistry from Columbia University. This scientific training provided him with a solid foundation in the scientific method, critical thinking, and the ability to communicate complex ideas with precision and clarity—traits that defined his writing style.

Asimov's Approach to Science Communication

Clarity and Accessibility

One of Asimov's defining characteristics as a science writer was his unparalleled ability to explain complex scientific concepts in simple, accessible language. Unlike technical journals or dense textbooks, his writings aimed to reach the general reader without sacrificing accuracy. This approach made science appealing and comprehensible, fostering curiosity among a broad audience.

He believed that science literacy was crucial for an informed society and dedicated much of his career to this cause. His explanations often employed analogies, step-by-step logical progression, and engaging narratives that bridged the gap between specialists and laypeople.

Scientific Accuracy and Rigor

While striving for accessibility, Asimov maintained rigorous scientific accuracy. His background in biochemistry and extensive research ensured that his writings reflected the current state of scientific knowledge. He was meticulous in citing sources and grounding his explanations in established science, which earned him respect from both scientists and readers.

Engagement Through Storytelling

Asimov's talent extended beyond mere explanation; he was a master storyteller. His use of anecdotes, historical context, and hypothetical scenarios made his science writing lively and memorable. This narrative style not only clarified concepts but also kept readers engaged, turning abstract ideas into compelling stories.

Major Works and Contributions

Popular Science Books

Asimov authored numerous books aimed at general audiences, making science approachable and enjoyable. Some of his most notable titles include:

- "The Intelligent Man's Guide to Science" (1960): A comprehensive overview of scientific principles, history, and developments, serving as a foundational text for general science enthusiasts.
- "Asimov's New Guide to Science" (1984): An updated and expanded version that covers advancements in physics, biology, astronomy, and more.
- "The Universe: From Flat Earth to Quasar" (1966): An accessible exploration of astronomy and cosmology, illustrating the evolution of our understanding of the universe.

These works exemplify his ability to synthesize vast amounts of scientific knowledge into coherent narratives that educate and inspire.

Science Fiction and Its Influence

While primarily celebrated as a science communicator, Asimov's science fiction writing also contributed heavily to his status as a great science writer. His stories, especially the "Foundation" series and "Robot" series, explored themes of robotics, artificial intelligence, and societal evolution. These narratives not only entertained but also prompted philosophical and scientific debates about the future of technology.

His fiction often incorporated scientific principles, making complex ideas about robotics, ethics, and space exploration accessible and thought-provoking. This blending of storytelling with scientific speculation enhanced public interest in science and technology.

Histories and Essays

Asimov's essays and historical writings further showcase his depth as a science communicator. His series of essays covered topics like the history of science, mathematics, and medicine, highlighting the human stories behind scientific discoveries. His historical analyses, such as "The Human Brain," provided insights into how scientific understanding has evolved over centuries.

Impact and Legacy in Science Communication

Influence on Public Understanding of Science

Asimov's writings significantly contributed to the democratization of scientific knowledge. His ability to translate complex ideas into engaging narratives helped demystify science for millions. Many readers credit him with sparking their interest in science, leading some to pursue careers in the field.

His books have remained in print for decades, testament to their enduring relevance and popularity. Educational institutions often cite his works as supplementary materials for teaching science concepts.

Mentorship and Inspiration

Beyond his writings, Asimov served as a mentor and role model for aspiring science writers. His prolific output demonstrated that scientific communication could be both intellectually rigorous and widely accessible. He set a standard for clarity, enthusiasm, and integrity in science writing.

Recognition and Honors

Throughout his career, Asimov received numerous awards, including the Hugo, Nebula, and Bram Stoker Awards for his fiction, as well as accolades recognizing his contributions to science education and literature. His influence extends beyond the literary realm into science policy and education.

Critical Evaluation of Asimov's Style and Methodology

Strengths

- Clarity and Simplicity: His straightforward language made science understandable.
- Breadth of Knowledge: His multidisciplinary background allowed him to cover diverse scientific fields.
- Engagement: His storytelling kept readers invested in scientific concepts.
- Humility and Honesty: He acknowledged the limits of current knowledge and avoided

sensationalism.

Limitations and Criticisms

- Some critics argue that Asimov's explanations, while clear, occasionally oversimplified nuanced scientific debates.
- His focus on established science sometimes limited his exploration of speculative or controversial ideas.
- Asimov's style, while accessible, was sometimes viewed as dry or lacking in emotional depth compared to other writers.

Despite these criticisms, his overall contribution remains monumental, and his impact on science communication is undeniable.

Conclusion: The Enduring Legacy of Isaac Asimov as a Great Science Writer

Isaac Asimov's towering legacy as a great science writer stems from his unparalleled ability to communicate scientific ideas with clarity, enthusiasm, and integrity. His writings have educated generations, inspired scientific curiosity, and bridged the gap between the scientific community and the public. Asimov demonstrated that science is not solely the domain of specialists but a vital part of human culture and understanding.

In an era where misinformation can spread rapidly, Asimov's model of clear, honest, and engaging science communication remains a guiding light. His work not only enriched our knowledge of the universe but also exemplified the importance of science literacy in building a better, more informed society. As science continues to advance at an unprecedented pace, the influence of Isaac Asimov as a pioneer of science writing endures, inspiring new generations to explore, question, and understand the world through the lens of science.

QuestionAnswer Who was Isaac Asimov and why is he considered a great science writer? Isaac Asimov was a prolific American science fiction writer and biochemist known for his clear, engaging writing style and influential works that popularized science concepts. His ability to explain complex ideas to the general public has cemented his reputation as a great science communicator. What are some of Isaac Asimov's most famous science books? Some of Isaac Asimov's most famous science books include 'The Intelligent Man's Guide to Science,' 'Asimov's New Guide to Science,' and his numerous essays and popular science articles that cover a wide range of scientific topics. How did Isaac Asimov influence science education and popular science writing? Isaac Asimov revolutionized science education by making complex scientific ideas accessible and engaging to a broad audience through his clear explanations, humor, and storytelling, inspiring countless readers and aspiring

scientists. What distinguishes Isaac Asimov's science writing from other science writers? Asimov's writing is distinguished by its clarity, logical structure, and ability to simplify complex topics without sacrificing accuracy, making science approachable and enjoyable for readers of all backgrounds. In what ways did Isaac Asimov contribute to science fiction and science fact? While renowned for his science fiction, Asimov also contributed significantly to science fact through his essays, books, and articles that explained real scientific principles, bridging the gap between science fiction imagination and scientific reality. What awards and recognitions did Isaac Asimov receive for his science writing? Isaac Asimov received numerous awards including the Hugo, Nebula, and Bram Stoker Awards, as well as the Presidential Award for Excellence in Science and Engineering Communication, recognizing his outstanding contributions to science literature. Why is Isaac Asimov still relevant in the field of science writing today? Asimov's ability to communicate science clearly and engagingly remains influential, inspiring modern science writers and educators, and his works continue to serve as foundational texts for science enthusiasts and students worldwide.

Related keywords: Isaac Asimov, science fiction, science writer, futurism, robotics, astrophysics, popular science, science literature, science essays, visionary authors

Read the full article online: [Isaac asimov great science writers](#)