

Educational Product

Educators & Students

Grades 5-12

ET-2004-10-116-ARC

Educational Topic

Mathematician

Related Job Titles:

Computer Scientist, Computer Programmer

Job Description:

There are two types of Mathematicians: theoretical and applied. Theoretical Mathematicians come up with new mathematical rules and processes using the latest technology. Applied Mathematicians use math rules and processes to solve scientific, engineering and business problems. These problems might include studying and designing computer models that help to create faster and higher aerospace vehicles and systems. Mathematicians usually work in an office and spend a lot of time on the computer.

Interests / Abilities:

- Do you enjoy working with math and technology?
- Are you good at math?
- · Are you good at reasoning and logic?
- Do you like to solve problems?
- · Do you work well with a team?
- Do you keep working at a problem until you find a solution?

Suggested School Subjects / Courses:

- Math (algebra, geometry, statistics, calculus)
- Computer science (programming)
- · Engineering
- · Science

Education / Training Needed:

The minimum education required for this position is a bachelor's degree in Mathematics from an accredited college or university. To do research, a Ph.D. is highly desired for this position.

Areas of expertise:

- Modeling: make simulations to study and improve aerospace craft and systems
- Data analysis: study aerospace problems and come up with the quickest, easiest method of modeling and solving them
- Statistician: design experiments, gather data, decide what the data means, and make predictions

Additional Resources:

- American Mathematical Society http://www.ams.org
- Careers in Aviation/Aerodynamics http://wings.ucdavis.edu/Careers/index.html
- Earth to Orbit: Engineering Design Challenges http://eto.nasa.gov/
- Graduate Student Researchers Program http://spacelink.nasa.gov/Instructional.Materials/NASA.Educa tional.Products/Graduate.Student.Researchers.Program.Brochur e/.index.htmlt
- MATHCOUNTS Competition http://mathcounts.org/
- Mathematical Association of America 1529 18th St. NW, Washington D.C. 20036
- Minority University Research and Education Programs http://mured.nasaprs.com/
- NASA Cooperative Education Program for college students http://spacelink.nasa.gov/Educational.Services/

http://spacelink.nasa.gov/Educational.Services/ NASA.Education.Programs/Student.Support/NASA.Cooperative .Education.Program/.index.html

- NASA Jobs http://nasajobs.nasa.gov/
- NASA SHARP Internship Program for highschoolers http://www.mtsibase.com/sharp/
- NASA Student Employment http://nasajobs.nasa.gov/stud_opps/employment/index.htm
- NASA Student Involvement Program student contests http://www.nsip.net/index.cfm

What can I do right now?

- · Join a math or computer club.
- · Take as many math and computer classes as you can.
- Call the American Association of Science and Technology Centers for information on science museums in your area that you might visit. (202) 783-7200
- · Participate in science fair projects.

 Order NASA career videos such as "Journey into Cyberspace," "Winning: Aerospace the Next Decade" or "Where Dreams Come True" from NASA CORE

http://core.nasa.gov

- Revolutionary Vehicle Concepts and Systems student competition http://avst.larc.nasa.gov/competitions.html
- Society for Industrial and Applied Mathematics,
 3600 University City Science Center,
 Philadelphia, PA 19104-2688
- Tech-Interns.com http://www.tech-interns.com/

- Please take a moment to evaluate this product at:
- http://ehb2.gsfc.nasa.gov/edcats/educational topic
- Your evaluation and suggestions are vital to continually improving NASA educational materials.
- Thank you.



http://quest.nasa.gov/people/index.html

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