PROJECT Nº 2
Foam Plate Glider

SUPPLIES NEEDED
FOAM PLATE (9 INCH DIAMETER)
THESE INSTRUCTIONS
MARKERS
SCISSORS
PENNY
TAPE

AUTHORIZED AMA
STE(A)M PROGRAM
INFO FOR PARENTS:

Parents can guide their child through the project themselves, complete the project with the aid of live AMA instruction, or use both.

GOALS & OBJECTIVES

Question: What will children know and be able to do as a result of this project?

Answer: Follow written and spoken instructions.

ENGAGE WITH BOTH FINE & GROSS MOTOR SKILLS

Fine Motor Skills: Children will be able to refine their use of scissors and simple building methods through the construction of the FPG-9.

Gross Motor Skills: Children will be able to refine their object control skills through the act of flying the FPG-9 in a controlled and calculated manner.

EXHIBIT CREATIVITY THROUGH ARTISTIC EXPRESSION

Children will have the opportunity to decorate their FPG-9 through various media. Because of the material used for the FPG-9s (disposable foam plate) we recommend decorating the FPG-9 with a ballpoint pen or stickers.

DETERMINE CAUSE & EFFECT

Children will have the opportunity to better understand how each step of building the FPG-9 will determine its success as a flying object.

Children will have the opportunity to experiment with folding the ailerons (flaps) to determine how this affects the aircraft’s flight.

Question: What prior knowledge do children need to have to successfully complete this project?

Answer: It would be helpful, but not required, if the student:

1. Has some prior exposure to arts and crafts of some kind.
2. Has some prior knowledge of airplanes.
3. Has some prior understanding of flight.

A BRIEF HISTORY OF FPG-9S

The Foam Plate Glider 9 inch (FPG-9) is a simple glider made from a foam plate, with a penny in the nose for weight. It was originally designed in 2002 by Jack Reynolds, a volunteer at the National Model Aviation Museum.

At the time, the staff at the National Model Aviation Museum was growing increasingly frustrated by the scarcity of Styrofoam egg cartons (used to build Paul Billing’s Priceless Fun glider) when conducting outreach programming.

Mr. Reynolds, who overheard their complaints, returned to the museum the following day and asked, “What do you think about this?” as he launched a prototype of the FPG-9.

Museum staff was immediately intrigued As the airplane floated across the room,—even more so when Mr. Reynolds talked about how he and his grandchild experimented with various stuff from around the house to build an airplane.

Mr. Reynolds refined the design and eventually gifted what would come to be known as the FPG-9 to the AMA.

HOW TO BUILD & FLY THE FPG-9

1. Cut out the FPG-9 pieces. Note the notches indicated on the wings of the main piece (body) and the smaller piece (vertical stabilizer).
2. Write the pilot’s name on the larger of the two pieces using a marker.
3. Place a penny on the nose at the front of the body and fold the foam over, creating a little pocket. Use the tape to secure the penny.
4. Slide the vertical stabilizer (smaller piece) into the main piece via the two largest notches.
5. Using the tape to create an “L” shape,
FPG-9 TEMPLATE
Cut out this template to make more FPG-9s out of styrofoam plates at home!
WE ARE

... the AMA is world's largest model aviation association, representing a membership of more than 195,000 from every walk of life, income level and age group.

... a self-supporting, nonprofit organization whose purpose is to promote development of model aviation as a recognized sport and worthwhile recreation activity.

... open to anyone interested in model aviation.

... the official national body for model aviation in the United States. AMA sanctions more than 2,000 model competitions throughout the country each year, and certifies official model flying records on a national and international level.

... the organizer of the annual National Aeromodeling Championships, the world’s largest model airplane competition.

... the chartering organization for more than 2,500 model airplane clubs across the country. AMA offers its chartered clubs official contest sanction, insurance, and assistance in getting and keeping flying sites.

... the voice of its membership, providing liaison with the Federal Aviation Administration, the Federal Communications Commission, and other government agencies through our national headquarters in Muncie, Indiana. AMA also works with local governments, zoning boards, and parks departments to promote the interests of local chartered clubs.

... an associate member of the National Aeronautic Association. Through NAA, AMA is recognized by the Fédération Aéronautique Internationale (FAI), the world governing body of all aviation activity, as the only organization which may direct U.S. participation in international aeromodeling activities.

HISTORY OF THE ACADEMY OF MODEL AERONAUTICS AND THE NATIONAL MODEL AVIATION MUSEUM

The idea for the AMA began in 1935 (perhaps even before that) at the National Aeromodeling Championships in Detroit. Leaders and contestants were interested in a self-governing body of aeromodeling experts, the thought being that there should be expert guidance of, for, and by model builders. Modelers wanted a single voice to develop national rules for aeromodeling contests, as well as one voice to speak to the government.

First known as the American Academy for Model Aeronautics (AAMA), the organization dropped ‘American’ from its official title and changed “for” with “of” within a few years.