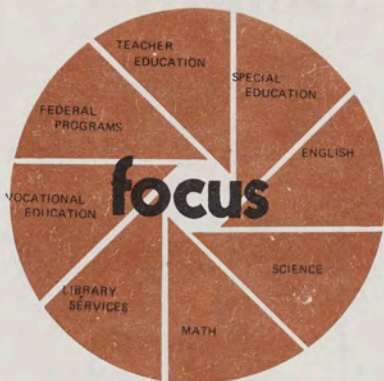


TRUST TERRITORY
of
the PACIFIC ISLANDS

R. BURL YARBERRY
DIRECTOR OF EDUCATION
Saipan, Mariana Islands 96950



Department of Education

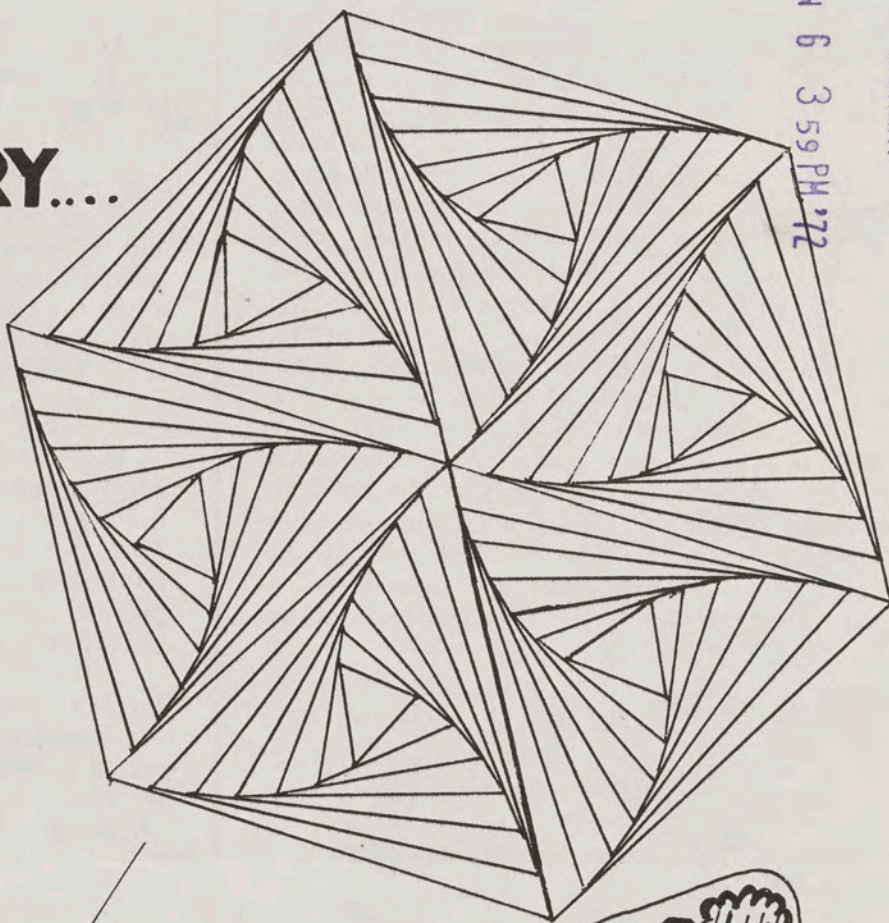
newsletter

Vol. II

No. 5

Date: JANUARY 1972

DON'T WORRY...

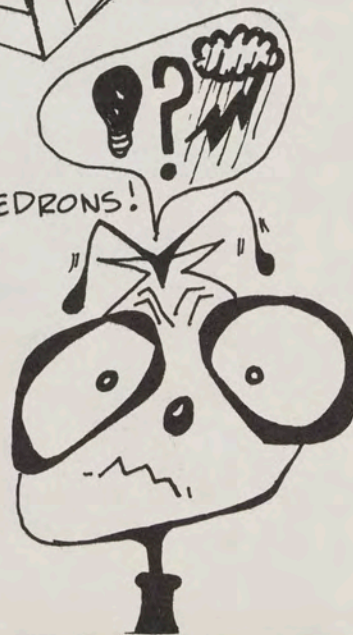


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LIBRARY



..... IF YOU HAVE TROUBLE
WITH TRUNCATED TETRAHEDRONS!
FOR THIS YOU JUST
NEED A PENCIL AND
A RULER.



Periodicat

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T7A14

Micronesian Mathematics at CCM

Micronesian Mathematics is a program being implemented in the elementary schools throughout the Trust Territory. At present, most districts are just embarking on the transition from the more traditional approaches to the recommended ones, and this is beginning in Grades I and II.

Many observers seem to think that mathematics itself has changed due to the content and methodology being used. It must be stressed that math has not changed, but rather it is the method of presentation that differs. Common sense tells us that children learn best when they enjoy what they are doing. Therefore, as educators, it is our job to ensure that this happens. We must see the children as active participants in each lesson, rather than just passive listeners. In the lower grades "games" are played, from which the child learns many important mathematical concepts, most times without even knowing. However at a later stage, these experiences are drawn on by the teacher when the child is a little older and can comprehend fully the significance of his earlier activities. Unfortunately, mathematics in our schools has only meant arithmetic, the main objective being for the child to be able to manipulate symbols called numerals. He has little, if any idea what mathematics is all about. What Micronesian Mathematics sets out to do is to give the child an understanding of the structure of math and make him mathematically literate. The children should be encouraged to discuss freely what they do in the group situation, but not in adult terms. Their explanations can



Abstract thinking becomes more meaningful when the student is able to solve the problem manually.

be halting, poorly expressed and apparently unconvincing, but so long as we are satisfied that they understand and can use the concept involved, this is sufficient for our needs. In addition to enjoyable group activity methods, probably the most important and significant part of the program is the use of "concrete" or structured aids that assist the child in abstracting concepts. Although children can be "taught" without these math aids, what they are told in the abstract is usually devoid of any understanding.

At the Community College of Micronesia, each of our 120 students receive 3 full quarters of Micronesian Mathematics. However, it will take a good 5 years at least before even a partial effect can be felt.

Obviously such an undertaking demands expertise, and this need is being met not only at CCM but in the district teacher education centers, through CCM extension and workshops. In April 1972, one representative from each district will be sent to CCM to study Micronesian Mathematics in depth.

Much time and effort has, and still is being spent on adapting the program for Micronesia, by gearing it to fit the needs of the future. We believe that the kind of math that Micronesian children are to receive, and the resulting skills they will acquire, will prepare them to play an active and intelligent role in helping to shape the future of these islands, whatever that might be.

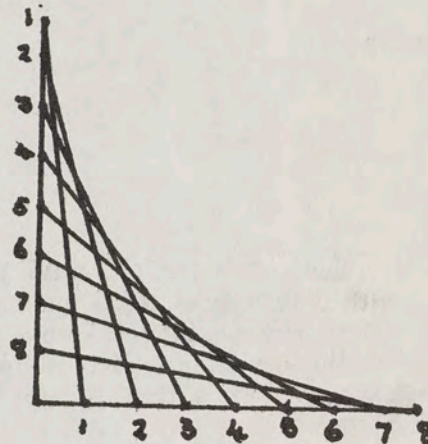
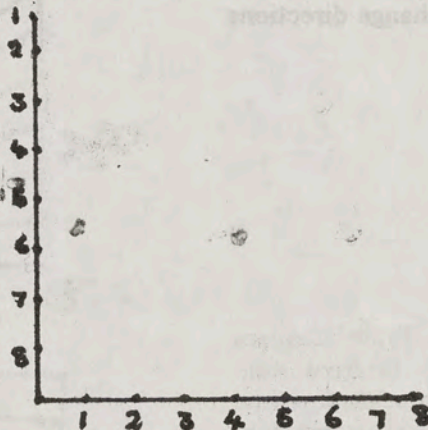
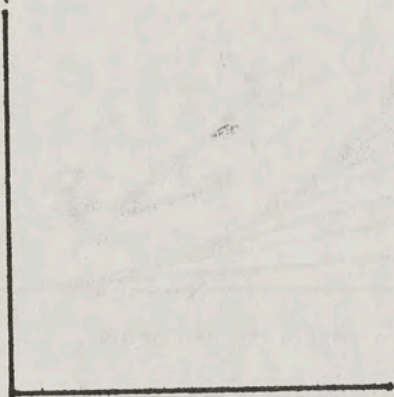
Mr. Joe Tyney was brought to the Community College of Micronesia from the Cowandilla Demonstration School in South Australia. His job is that of specifically teaching prospective teachers in Micronesia the use and philosophy of Micronesian Mathematics.



Mr. Joe Tyney, instructor of mathematics at the Community College of Micronesia, conducts an outdoor class in Micronesian Mathematics with second year CCM students.

Classroom Ideas

The following are some ideas that you might like to try out in the classroom. These are beginning ideas, and once the children have received initial instruction they should be allowed to try out their own ideas.

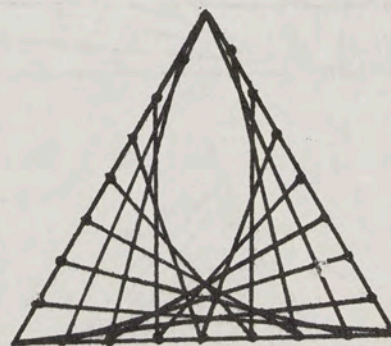
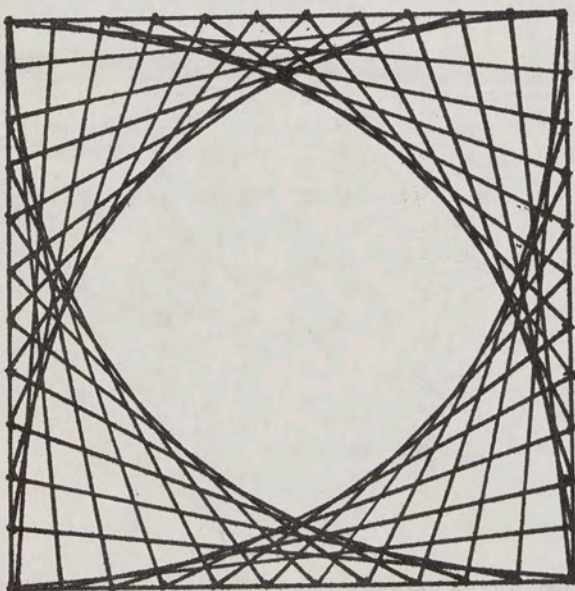


Envelope Curves

Draw the line segments as shown. Make each line 2 inches long.
Mark off each $\frac{1}{4}$ inch and number as shown.

Join, with straight lines, from 1 to 1, 2 to 2, 3 to 3, 4 to 4, etc., to complete the figure.

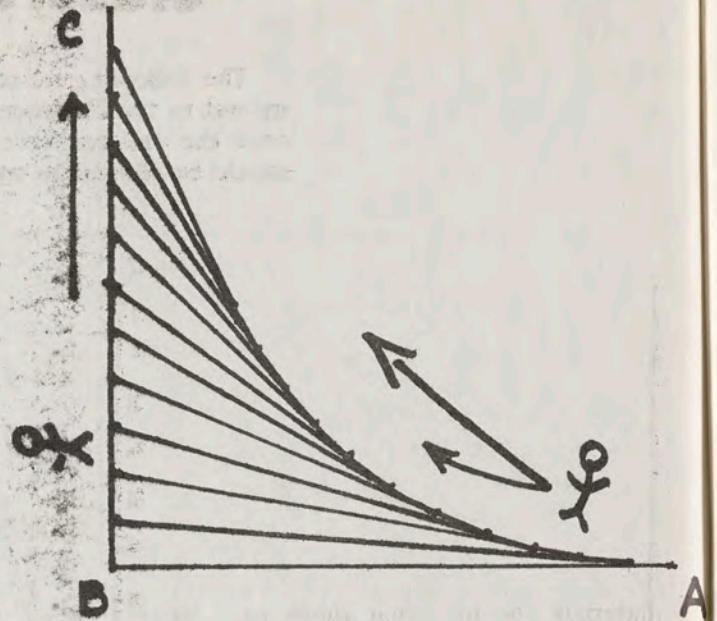
From this basic idea the possibilities are endless. Variations using the square and triangle are shown below.



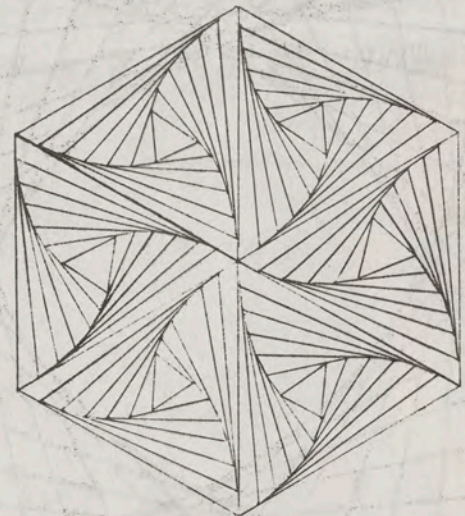
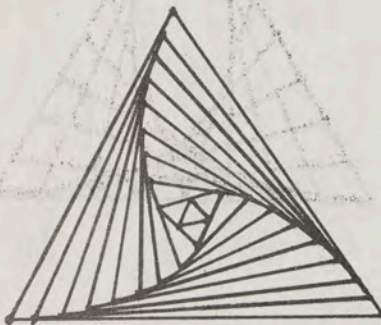
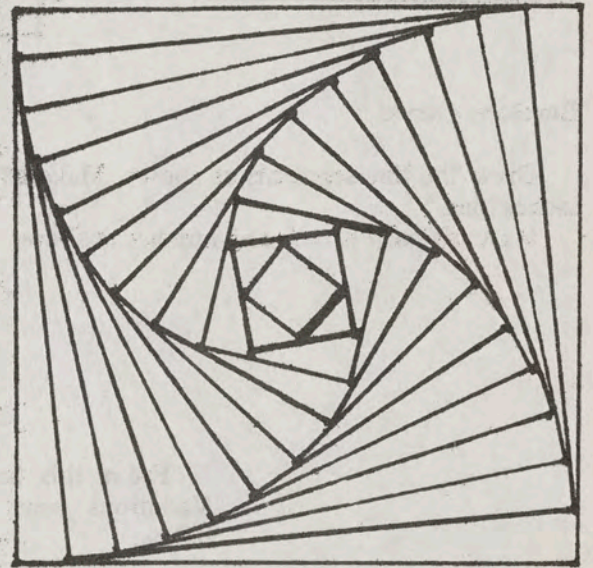
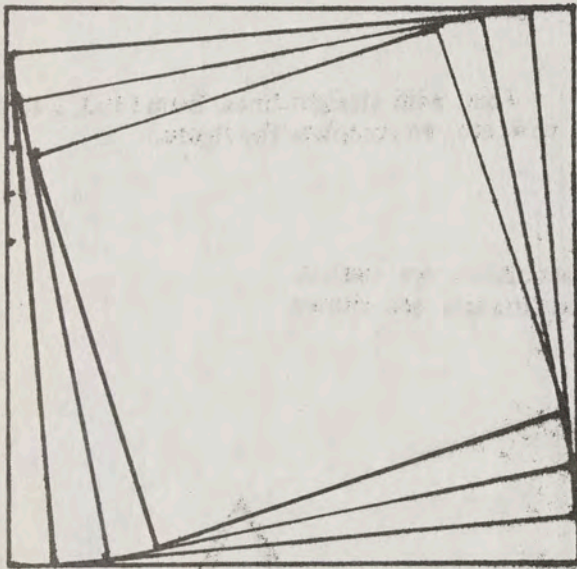
Curves of Pursuit

Some interesting designs can be made using the idea of "Curves of Pursuit."

Imagine two boys, one standing at A, the other at B. The boy at B begins to run toward C. The boy at A begins to chase the other boy. As the first boy moves between B & C the second boy must change directions as shown in the diagram.



Let's try this idea with a square. Draw a square with 3-inch sides. Mark points $\frac{1}{4}$ inch in from each corner and join them to form a new square. Mark points on the new square $\frac{1}{4}$ inch from each corner and join them to form a third square. Continue to do this, as shown.



If we use a triangle we have this effect.

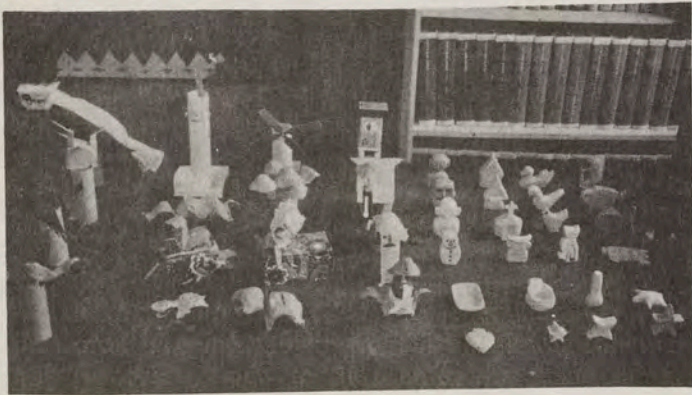
The cover design was created by dividing a regular hexagon into six triangles and drawing the "Curve of Pursuit" for each triangle.

Creative Art

The Art Course at the Palau Teacher Training Center in Koror is being taught by Miss Mahensia Tabelual. Miss Tabelual is new to the Center this year. She has brought with her a conscientiousness and wide range of abilities that have made her a most valuable addition to the staff. She has an A.B. degree from the University of Guam and has had three years of elementary teaching experience.

The major objective of the Art Course is to provide the thirty trainees at the Center with a first hand experience in arts and crafts projects utilizing materials that, for the most part, are furnished by the District Education Office or can be found in the villages. These materials include such items as construction paper, match boxes, tissue paper rolls, empty cigarette packages, soap, small boxes of all sizes, worn bits of glass, gravel-size colored rocks, bamboo, grass, etc.

Projects already completed this year include soap sculpture, box sculpture, block prints, linoleum prints, mosaics, vegetable prints, collages, weaving (using construction paper), mobiles, cutting and pasting, and wet paper finger painting. Some of the projects to be carried out during the remainder of the school year are crayon resist, ceramics, crayon engraving, puppets, coconut craft, and many others.



Box and soap sculptures, made by trainees in Miss Tabelual's class, are shown on display.

The course is basically activity-oriented. The projects mentioned above are carried out by each trainee and then put on exhibit in the Art classroom. At least one of the block prints was used to make Christmas cards, many of which were sent to widely scattered places in the world by the U.S. staff members at P.T.T.C.

Palau has long ranked high in the Micronesian Arts and Crafts Fairs. The preservation of older traditional art forms as well as the introduction of new techniques with elementary age children dominates the philosophy and thinking in Miss Tabelual's course.



Miss Mahensia Tabelual, second from right, assists trainees in the techniques of wet paper finger painting using dry powder tempera. In the foreground are Mrs. Augusta Bultedaob, left, and Miss Cecilia Tabelual, right.

The trainees at P.T.T.C. have had varied amounts of teaching experience, ranging from those with one year to one with twenty years. There is thus a nice blend of backgrounds among the trainees. The Art Class is one of the favorites with the trainees, since it will enable them to return to their own classrooms next fall with many new and practical arts and crafts activities for all grade levels.

Hopefully, the trainees will conduct Art training sessions with the other teachers in their schools. This would enable many more teachers to benefit from the new ideas in this teaching area.

Miss Tabelual also teaches a course in Children's Literature at the Center. One of the big projects in this course is the writing and illustrating of original stories by the trainees. This is done in the Palauan language. The course also involves a comprehensive survey of useable children's literature in the classroom.

Saladak's Agriculture Program includes both the boys and the girls of the 7th and 8th grades. The students worked hard to clear this area (50' X 50') of dense undergrowth and some rather large trees.



This is the site where the field work of Ohmine School's Agriculture Program will be done. The area enclosed by the fence is 60' X 34' and will be used to plant vegetables. Rows will be made perpendicular to the path which extends the length of the area. The area outside of the fence will be used for setting up a greenhouse and planting bananas, papaya, and pepper. Over 50 boys in the 7th and 8th grades are involved in this program.



These pictures of the Ohmine School Agriculture Program were taken in January and show what can be done at a school. The class is now marketing the produce and expanding their knowledge beyond just the planting of crops.

Saladak's Elementary Program three months after it was begun.



Sekere School students stand in the middle while three of this group indicate where the corners of their vegetable garden will be.

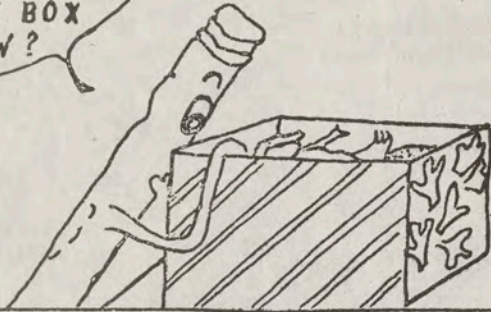
Ponape
Agriculture
Program

COLLAGE

ART IDEAS

by Mrs F. Baker

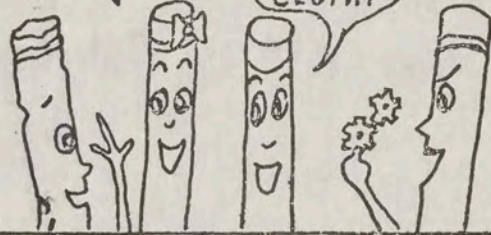
WHAT'S IN THE BOX NOW?



OH, THERE'S YOUR FEATHERS, AND SOME SANDPAPER MY DAD GAVE ME, AND RIBBONS—

AND SOME CLEAR PLASTIC, AND YARN AND STRING AND SOME FUZZY CLOTH!

I BROUGHT THE WHEELS FROM INSIDE AN OLD ALARM CLOCK!



MY GOODNESS, I WOULD NEVER HAVE THOUGHT OF THAT!

WELL, I BROUGHT SOME WIRE SCREEN, AND SOME COPPER WIRE FROM A FAN MOTOR, TOO!



CHILDREN, YOU HAVE DONE VERY WELL! YOU KNOW, A COLLAGE IS SUPPOSED TO HAVE MANY THINGS THAT ARE INTERESTING TO FEEL—



AND WE DO HAVE MANY DIFFERENT TEXTURES—ROUGH SANDPAPER AND SCREEN, SOFT FEATHERS, WARM FUZZY CLOTH, SMOOTH SHINY PAPER, HARD, COLD COG WHEELS WITH SHARP EDGES, BOUNCY RUBBER BANDS, AND ALL KINDS OF OTHER THINGS!

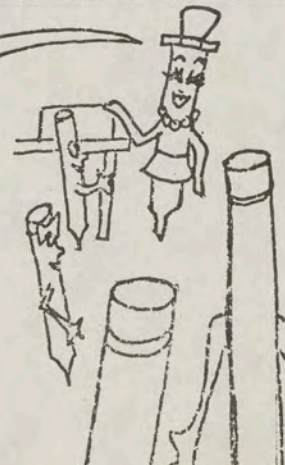


WHAT ARE WE GOING TO MAKE THE COLLAGE ABOUT, MISS MARKER?



PERHAPS WE SHOULD TALK ABOUT THAT FOR A WHILE. WE COULD MAKE IT ABOUT SOMETHING WE HAVE DONE LATELY, LIKE THE FIELD TRIP WE HAD, OR WE COULD MAKE IT ABOUT SOMETHING WE ARE STUDYING. OR MAYBE IT WOULD BE NICE JUST TO MAKE A DESIGN, OR A FREE-FORM PICTURE!

WHAT DO YOU THINK? HOW SHALL WE DO IT?



LET'S PUT SEVERAL IDEAS ON THE BOARD AND VOTE ON IT!

PAPER COLLAGE (LESSON ONE)

Materials: Glue
 Scissors
 12" x 18" paper for base of collage
 As many kinds of paper as you can get; newspapers, colored comics, magazines of slick paper, corrugated cardboard, egg cartons, construction paper, sandpaper, tissue paper, gift wrap, foil.

A collage is a composition of many different textures, put together in an interesting way so that it is fun to look at, even if it is not a picture of anything. In this lesson you are trying to let the children see and feel the textures, so do not make a picture. You can do that later.

Cut or tear (or both) shapes from the various kinds of paper you have. Paste the shapes on the 12" x 18" paper until it is covered. Watch the contrast and composition of your colors and textures as you place the papers. You can overlap some of them, or put thin ones over other colors, so that you will get an almost three-dimensional look in your composition.



This is called an Abstract design. It is meant to call your attention to the color and texture, and you should enjoy it for that. Is it interesting to look at? Do all the different kinds of paper look as if they belong together to make one composition? How is this different from a mosaic? Can you think of places to use this kind of decoration?

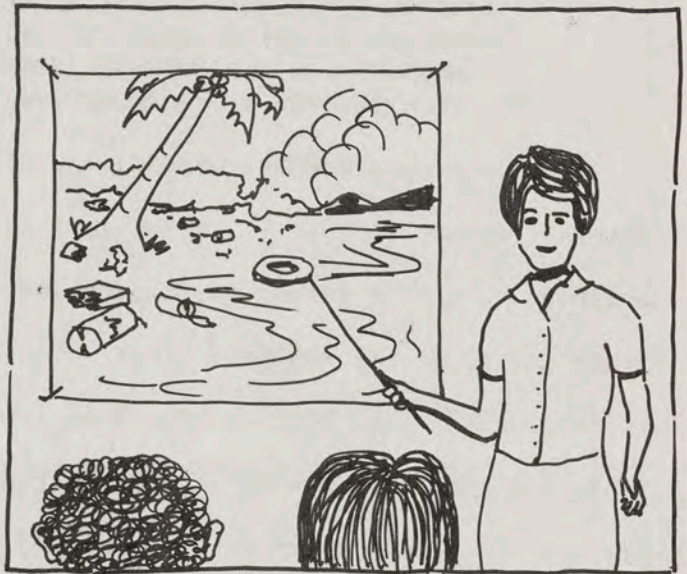
HANNAH SUGAR SOLVES A PROBLEM

Hanna Sugar teaches a fourth grade class in the Marshalls. She has an idea to improve her classes in science and social studies. She has noticed that the beautiful beaches of the Marshall Islands are being destroyed by litter (garbage) that has been left by careless visitors. She knows that Marshallese children go barefoot when swimming or playing at the beach. Those pop cans and bottles could be harmful to feet, and they also attract mosquitos and flies. Hanna knows that common containers used by Micronesians a generation ago were leaves, which decayed when they were thrown away and therefore did not destroy the natural beauty of the beaches. Plastic, glass and metal containers are different, though, because when they are thrown on the beach they remain there practically forever, unless they are picked up and put in proper containers.



TODAY'S BEACHES..

Hanna feels that a lesson in the ways of solving this problem will add much to her science and social studies classes. She discusses the situation with her students. She brings examples of containers that have been on the beach for years.



“WHAT CAN WE DO ABOUT THIS?”

The students themselves think of possible ways to solve the problem. They decide to place red oil drums on the beach near the school. These can be used as containers for garbage disposal and collection. They also make signs that read, “Save our beach. Leave it cleaner than when you came.”



SAVE OUR BEACHES, LEAVE THEM CLEANER THAN WHEN YOU CAME....

News

Briefs

Hanna knows that this is not just a Marshallese problem. She knows that it is Micronesia-wide, since she has seen the same conditions on the beaches in other districts. She thinks that teachers in other districts may find her experience interesting and helpful. Because of this she asks her local Curriculum Council to discuss it at the next meeting of the Micronesian Curriculum Council. In this way, perhaps it could be included as teaching units in science and social studies in other schools, as well as in Hanna's.

Do you have any ideas like Hanna's? If you do, share them with all of Micronesia. Communicate your ideas to a member of your local Curriculum Council. It's your responsibility!



ACKNOWLEDGEMENTS

"focus" wishes to acknowledge the following contributors:

- mrs. frances baker - art ideas*
- mr. joe tyney - mathematics article*
- mr. leigh marsland - classroom ideas*
- mr. milford lundgren - feature story*
- mr. terry edvalson - hannah sugar*
- mr. john layman*

- mr. doug rankin - illustrations*

Takemura Erungel, instructor of electricity and electrical appliance repair at the Micronesian Occupational Center, Palau, attended a Convention and Conference of the American Vocational Association in Portland, Oregon, in December... Mimeographed trial-version copies of **SUBSYSTEMS AND VARIABLES**, Micronesia-adapted SCIS unit, were distributed to the six District Teacher Education Centers and to the Community College of Micronesia in Ponape..... All districts now have Adult Basic Education Programs..... Completed applications were forwarded to the American Field Services International Scholarships on seventeen applicants from the Trust Territory for the 1972-73 Winter Program..... Trust Territory Education Assistance Grants for the Spring Semester 1972 and Summer Session were awarded to 64 students..... The publication entitled **GUIDE TO PLACE NAMES IN THE TRUST TERRITORY OF THE PACIFIC ISLANDS** compiled by E.H. Bryan, Jr., was distributed to all Trust Territory schools, both public and non-public..... The T.T. Advisory Council for the Library Services and Construction Act met and discussed priorities in public library work..... The Micronesian Curriculum Council met on Saipan from January 11-14..... Three Marianas District teachers received certification as Cooperating Teachers: Dolores C. Cruz, Rita C. Cabrera and Andresina T. Dela Cruz..... Eighteen educators from the six districts departed for the East-West Center on January 8, where they will participate in a semester-long program for Educational Administrators and Teacher Educators..... An Education Administrators Meeting was held at Headquarters, Saipan, from January 17-21: in attendance were all District Directors of Education, and representatives from Headquarters, from CCM and from MOC..... The six District Vocational Education Specialists and Headquarters Manpower Development Training Act personnel met on Guam with representatives from the Department of Labor in San Francisco..... The Headquarters Coordinator of Adult Basic Education, together with the six District Coordinators, met at the Hawaii Community College with educators from Guam and American Samoa for a two-week seminar on Adult Education in the Pacific Basin..... The Trust Territory Manpower Advisory Council met on Saipan from January 24-28 to make the final selection of recipients of full Trust Territory Scholarships for 1972-73 and to discuss matters related to Labor and the Manpower Development Training Act.....



this wood block print

was done by MR. EMIWO MAD

of the Palau Teacher Training Center

mr. mad is a student in miss tabelual's

a r t class

FEBRUARY 6-13 WAS OBSERVED AS VOCATIONAL AND TECHNICAL WEEK IN THE TRUST TERRITORY, IN ACCORDANCE WITH A PROCLAMATION OF HIGH COMMISSIONER EDWARD E. JOHNSTON dated Feb. 3, 1971.

Although Vocational and Technical Education in Micronesia is only four years old it is a broad area encompassing many skills and occupations which go hand-in-hand with the economic development of Micronesia.

In the Trust Territory there are three vocational-technical schools - Micronesian Occupational Center, Palau; Micronesian Maritime Center, Dublon, Truk; and Ponape Agriculture and Trade School in Ponape.

All T.T. public schools have a vocational department and there are numerous MDTA projects which have to do with vocational training.

FOCUS" IS A MONTHLY PUBLICATION OF THE DEPARTMENT OF EDUCATION, TRUST TERRITORY OF THE PACIFIC ISLANDS. ANNE MARIE HANNIGAN, EDITOR.

TRUST TERRITORY OF THE PACIFIC ISLANDS

Department of Education

newsletter



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AIR MAIL