

Kids' KOrner

Tomorrow's space explorers may resemble early pioneers.

WASHINGTON — Tomorrow's space pioneers will display the same gumption common to yesterday's settlers of the Polynesian islands and the American West.

But instead of traveling in outrigger canoes or covered wagons, they may someday ride into the unknown on microwave-powered rockets and hitch their fortunes to passing comets.

"It won't just be the restless, explorer-adventurer types such as the Magellans and Amundsens who will break the human bond with earth, but self-reliant, imaginative people who are willing to take their chances raising families among the stars," predicts Eric M. Jones, an astrophysicist at the Los Alamos National Laboratory.

Extraterrestrial Babies

One of the few scientists in the country studying the implications of future space migration, Jones thinks that the first human children could be born in space "within the first few decades of the next century."

Jones refuses to predict where this happy event might take place, but he concedes that a permanent base either on the moon or on a

nearby asteroid could be a likely site for the first extraterrestrial nursery.

After that, the galaxy's the limit. History has proven that frontier folk multiply much faster than stay-at-homes. And there's no reason to believe that the space frontier will be any different, the experts say.

"Population-doubling once a generation — every 25 years — is not uncommon in frontier circumstances, so we can imagine a total solar system population approaching a trillion in 500 years," says Jones.

But where would they all live? Many might end up in the vast region of widely separated comets in the farthest reaches of the system. In a scenario advanced by Gerard O'Neill, a Princeton University physicist, they would not live on the comets, but in habitats built from materials from the comets such as silicon, aluminum, and carbon.

A budding comet colony's energy needs would be provided by solar power and by deuterium extracted from the comet's frozen nucleus. The comet would also be a source of water.

There is evidence that some comets aren't confined to a particular region, but wander through interstellar space.

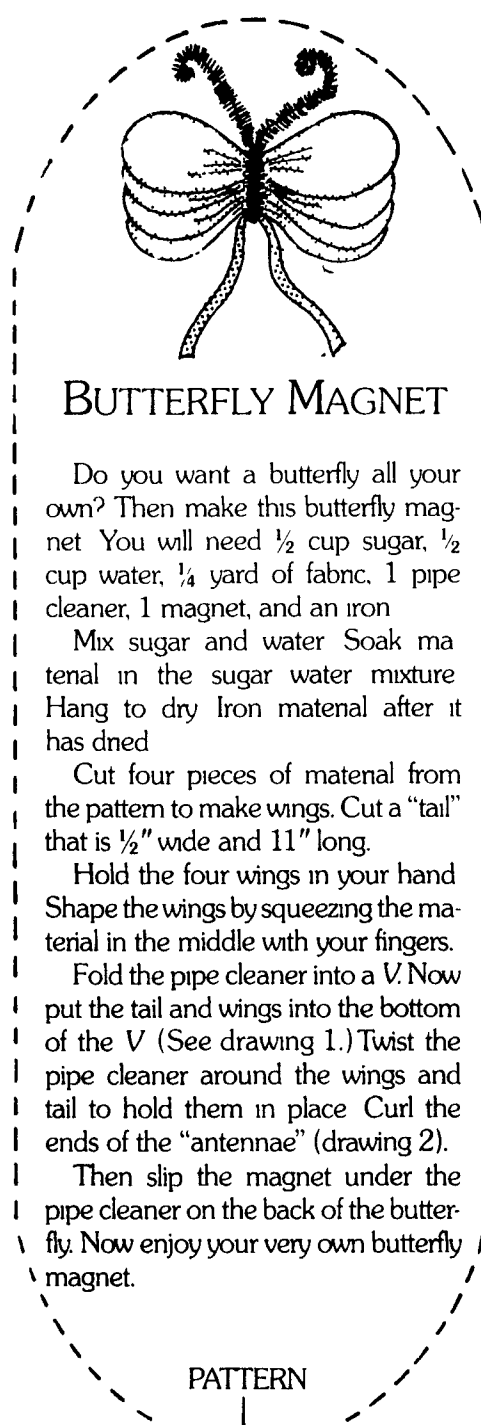
Small groups of colonists might decide to tie their fortunes to these interstellar wanderers by accompanying them in large, microwave-powered spaceships. A group tagging along with such a comet could then tap the comet's many resources to help sustain itself almost indefinitely.

"They, like the Polynesians who learned the seafarers' trade among the islands north of New Guinea, would have learned the nomad life in the comet cloud and then could move outward," Jones says.

Drifting With Comets

"Drifting through interstellar space, the nomad groups would 'fission' from time to time and gradually spread toward the distant stars. Even if there were no fast ships, by drifting with the comet, our descendants could reach the nearest stars in 100,000 years and fill the galaxy in a billion, a time still short compared with the galactic age."

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BUTTERFLY MAGNET

Do you want a butterfly all your own? Then make this butterfly magnet. You will need 1/2 cup sugar, 1/2 cup water, 1/4 yard of fabric, 1 pipe cleaner, 1 magnet, and an iron.

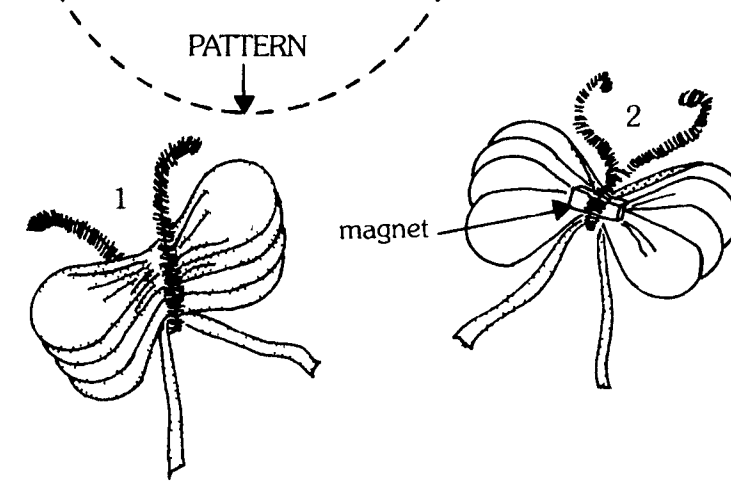
Mix sugar and water. Soak material in the sugar water mixture. Hang to dry. Iron material after it has dried.

Cut four pieces of material from the pattern to make wings. Cut a "tail" that is 1/2" wide and 11" long.

Hold the four wings in your hand. Shape the wings by squeezing the material in the middle with your fingers.

Fold the pipe cleaner into a V. Now put the tail and wings into the bottom of the V (See drawing 1.) Twist the pipe cleaner around the wings and tail to hold them in place. Curl the ends of the "antennae" (drawing 2).

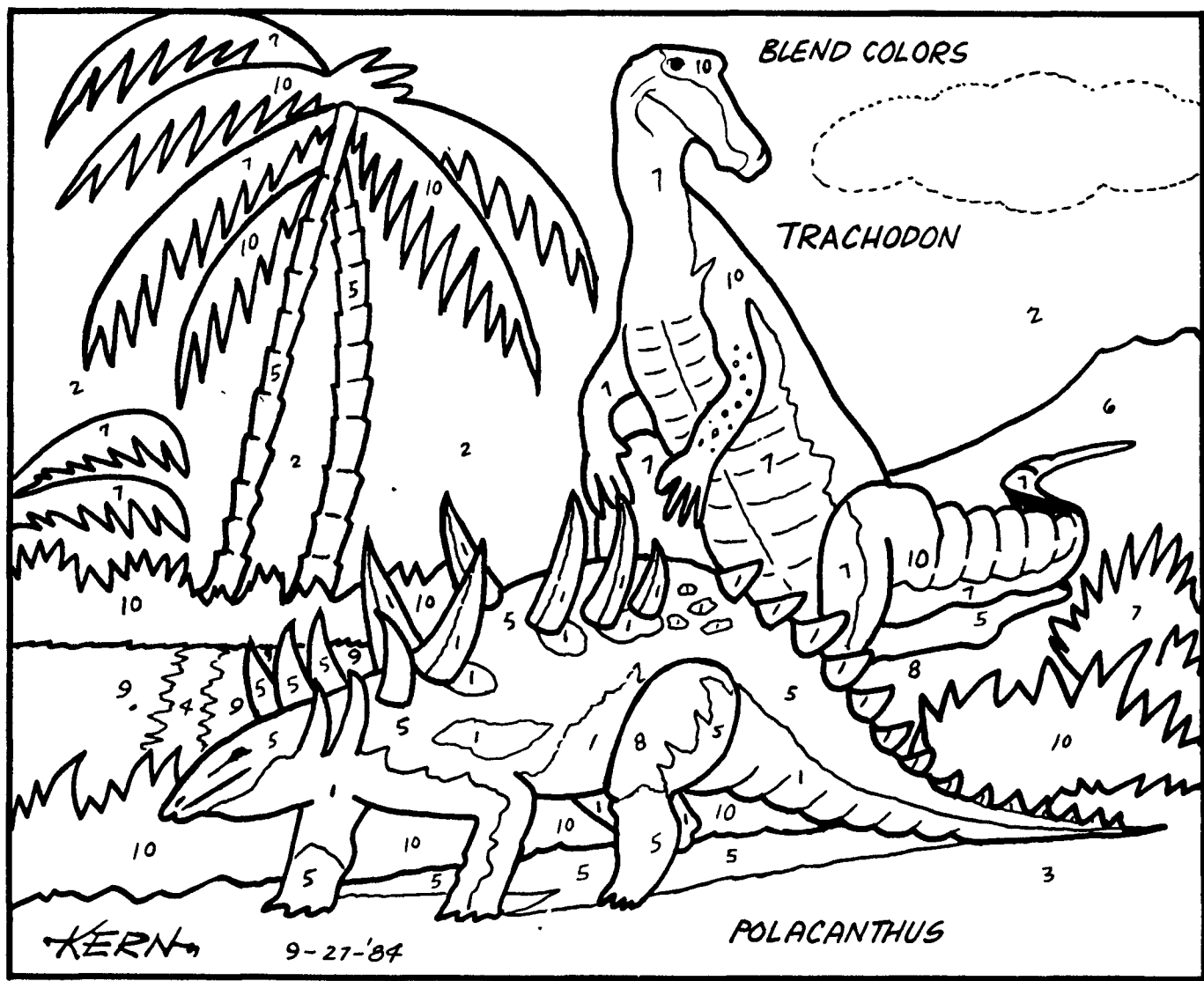
Then slip the magnet under the pipe cleaner on the back of the butterfly. Now enjoy your very own butterfly magnet.



COLOR THIS!

- | | |
|-----------|---------------|
| 1. BLACK | 6. GREY |
| 2. PEACH | 7. GREEN |
| 3. YELLOW | 8. LT. BROWN |
| 4. BLUE | 9. LT. BLUE |
| 5. BROWN | 10. LT. GREEN |

ANIMALS OF THE PAST. STRANGE ANIMALS ROAMED THE EARTH MILLIONS OF YEARS AGO. SOME HAD FINE SMOOTH SKIN, OTHERS HAD SCALY SKIN STUDDED WITH BONY SPURS AND PLATES. THE TRACHODON HAD SHORT NECKS AND LONG TAILS. THEY HAD DELICATE TEETH, EATING ONLY TENDER PLANTS. THE POLACANTHUS WALKED ON ALL FOURS ALSO EATING TENDER GRASS AND PLANTS.



BLEND COLORS

TRACHODON

POLACANTHUS