GARDEN WITH US!
at COASTAL MAINE BOTANICAL GARDENS

Looking for fun activities to bring nature home for the whole family? Follow along with Coastal Maine Botanical Gardens, and then share your results with us on Instagram and Facebook using **#CMBGatHome**!

BOTANI-CRAFT A BIRTHDAY BOUQUET

Supplies needed:

- Art supplies of your chosing: markers, paints and brushes, colored pencils, or collage supplies.
- Paper

Just because there may not be a lot of flowers blooming yet doesn't mean we can't have flowers on our minds! Did you know that each month has its own special flowers, and did you know that those flowers have their own unique meanings? Discover your birth month flowers on The Old Farmer's Almanac website www.almanac.com/content/birth-month-flowers-and-their-meaning.

Design a bouquet of your birthday flowers. You can draw, color, or paint your masterpiece. You can get unconventional with what materials you use as well. Maybe recycle old magazines that happen to feature your chosen flowers, or maybe use them for their colors, collage-fashion. You can tear or hole-punch a variety of colored papers, and then glue the bits in groups to create a complete texturized picture. You could go 3D with it if you have clay. Get creative! The possibilities are endless.

If a loved one's birthday is coming up, this could make a wonderful birthday card. Look up their birth month flowers, and design a bouquet to honor their special day using a piece of construction paper folded in half. Share the meanings of the flowers with them if you'd like, and don't forget to include a heartfelt message.

BECOME A PLANT SCIENTIST

EXPERIMENT 1

Supplies needed:

- Clear bowl
- A green leaf from an indoor plant
- Small rock

Steps:

1. Fill a clear bowl with water.
2. Place a green leaf in the water, and put a small rock on top of the leaf so that it is fully submerged under the water.
3. Place the bowl in a sunny spot, preferably outside.
4. Check your bowl in a few hours and observe what it forming around the leaf. Is the leaf breathing underwater? YES! Photosynthesis is causing the leaf to produce energy, and as this process happens, the leaf will get rid of the products it no longer needs, like oxygen and water. The oxygen that is being released by the leaf is what's causing the reaction you observe in the bowl.
5. For a more detailed explanation of photosynthesis, visit: photosynthesiseducation.com/photosynthesis-for-kids/

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BECOME A PLANT SCIENTIST
EXPERIMENT 2

Supplies needed:
- 2 glasses with 1/2 cup water in each
- 1 white carnation (or: a stalk of celery, preferably a pale inner stalk with leaves still attached)
- Red and blue food coloring

Steps:
1. Have an adult cut the stem in half lengthwise, about halfway up the stem or stalk.
2. Add red food coloring to one glass and blue food coloring to the other. Add enough to make the liquid a deep color.
3. Place the glasses next to each other, and put one half of the cut stem/stalk into the red glass and the other half into the blue glass. Leave standing for 48 hours.

Observe:
Did the colored water travel through the stem (or stalk)? Did it travel to the flower (or leaf)? How do you think the water traveled?

Results and Conclusion:
The flower (or celery stalk) should have changed color. It should be half red and half blue. Plants have many tiny transport tubes called xylem running the length of their bodies. When a plant is growing in the ground, its roots absorb water, and then the xylem carries that water from the roots all the way to the other parts of the plant. In this case the roots are not present; since the stem is cut, however, water can move right into the plant body as it would normally.

BECOME A PLANT SCIENTIST
EXPERIMENT 3

Supplies needed:
- Two clear bowls
- Several open pinecones

Steps:
1. Fill one bowl with warm water and one bowl with cold water.
2. Place an open pinecone in each bowl and observe what happens. Why did the pinecones close up? Are they protecting something inside? Did the pinecone in the cold water close up faster or slower than the one in warm water? What happens to pinecones in nature when it's wet and cold outside? Are they open or closed? Would a pinecone want to release its seeds in winter when it is wet and cold? Why or why not?
3. Next, take the pinecones out of the water and allow to dry. What happens to the cones when they are dry? In nature, a dry cone can easily spread its seeds.
4. Look for pinecones the next time you are outside, and see if the weather is affecting the pinecones that same way it did in your experiment.

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