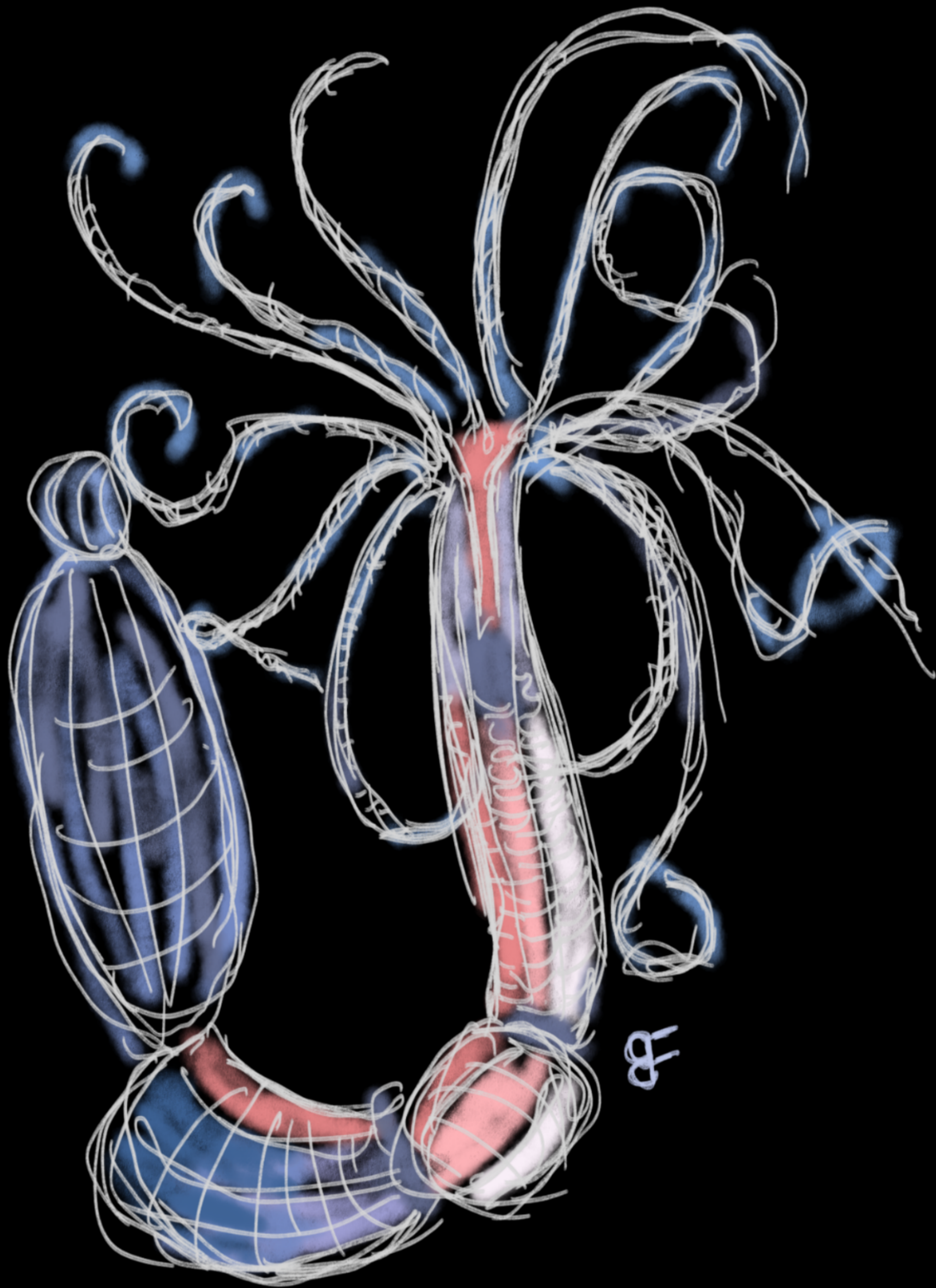
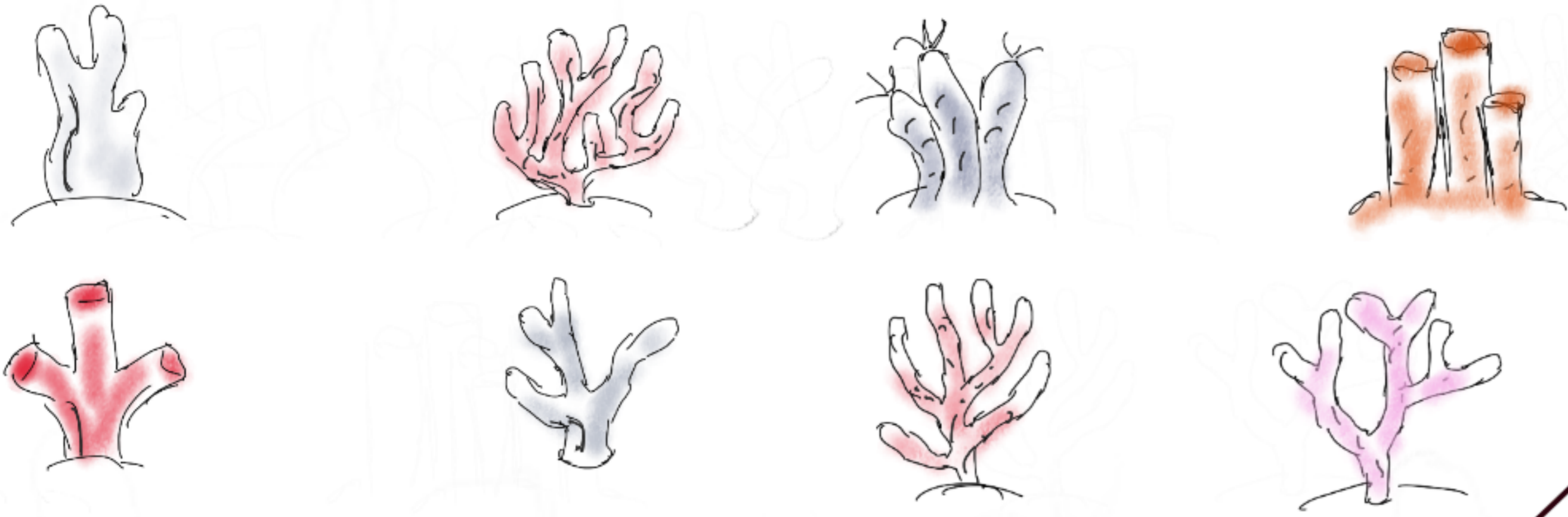


Rising starlet:



How soft-bodied anemones
are helping Whitney Lab biologists
solve hard problems

Corals are basically living rocks



and they come in all sorts of shapes and sizes.

My lab is using



the starlet sea anemone to figure out how corals make their beautiful structures.

We don't have a full answer yet. But we're starting to put the puzzle pieces together.



BIG

puzzle. We've had to get creative.

It's a

Corals live in the ocean, where there's a lot going on. It's hard to see all the details.

Some scientists try to take corals back to their labs to get a closer look at them.

Except ...

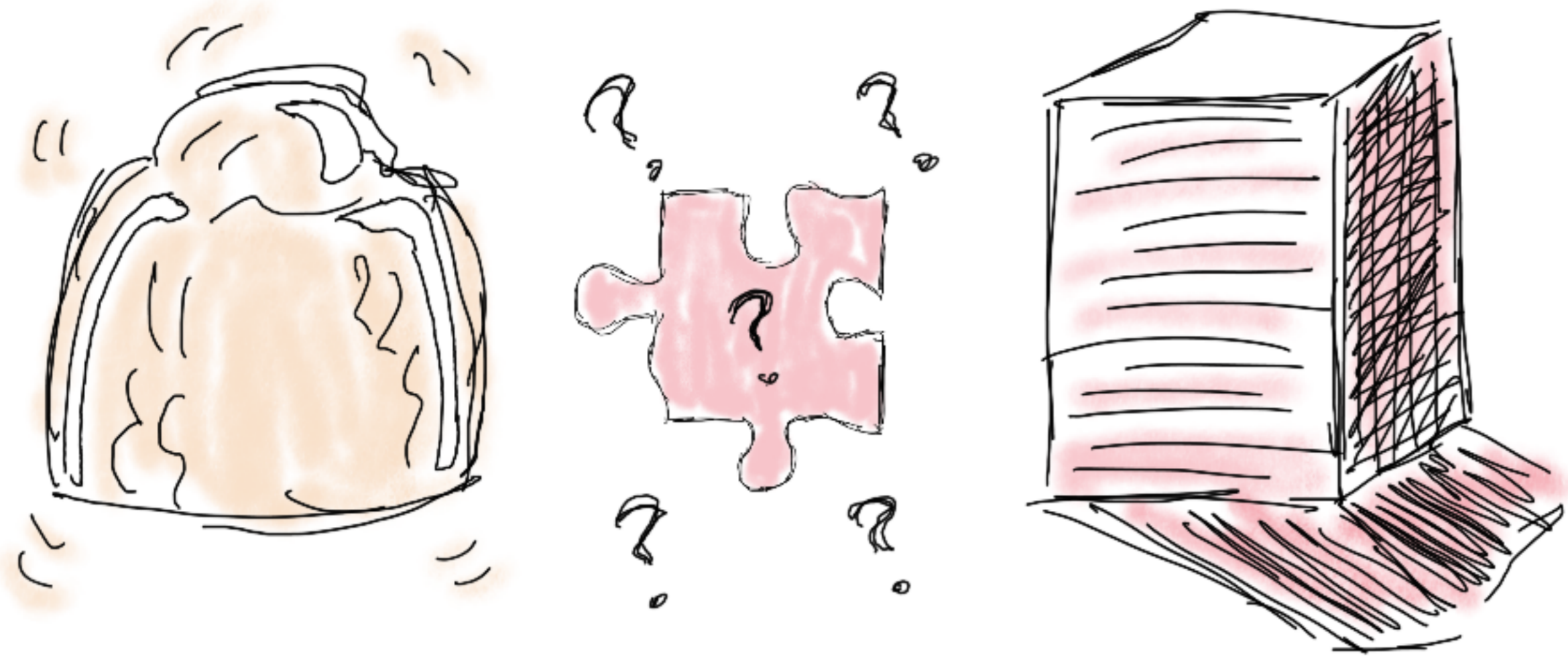
... corals don't like growing up in labs.



But our anemones like it juuust fine.

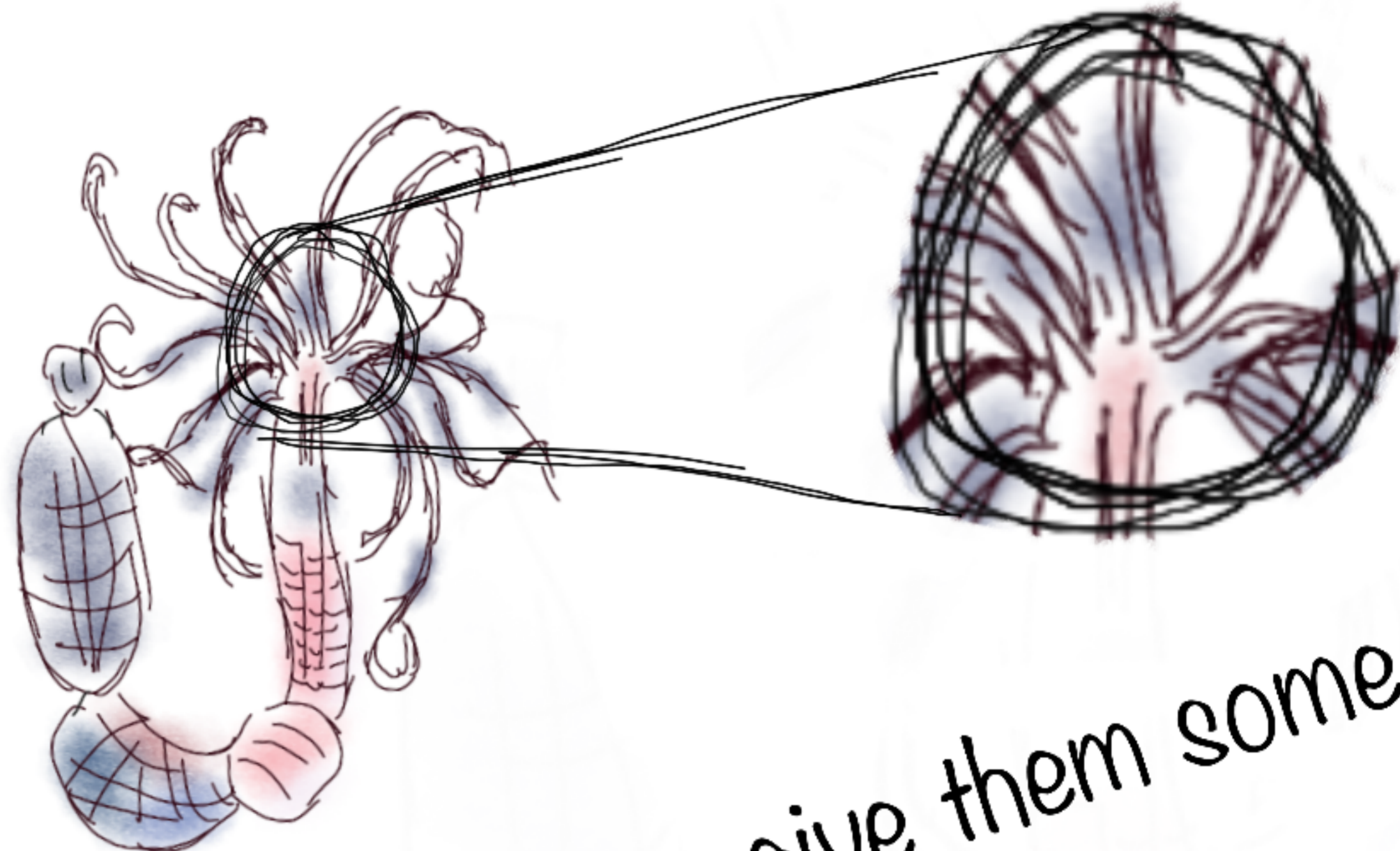


There's just one problem—
anemones are soft, like Jell-O.



It seems silly to use Jell-O
to learn about making something
hard, doesn't it?

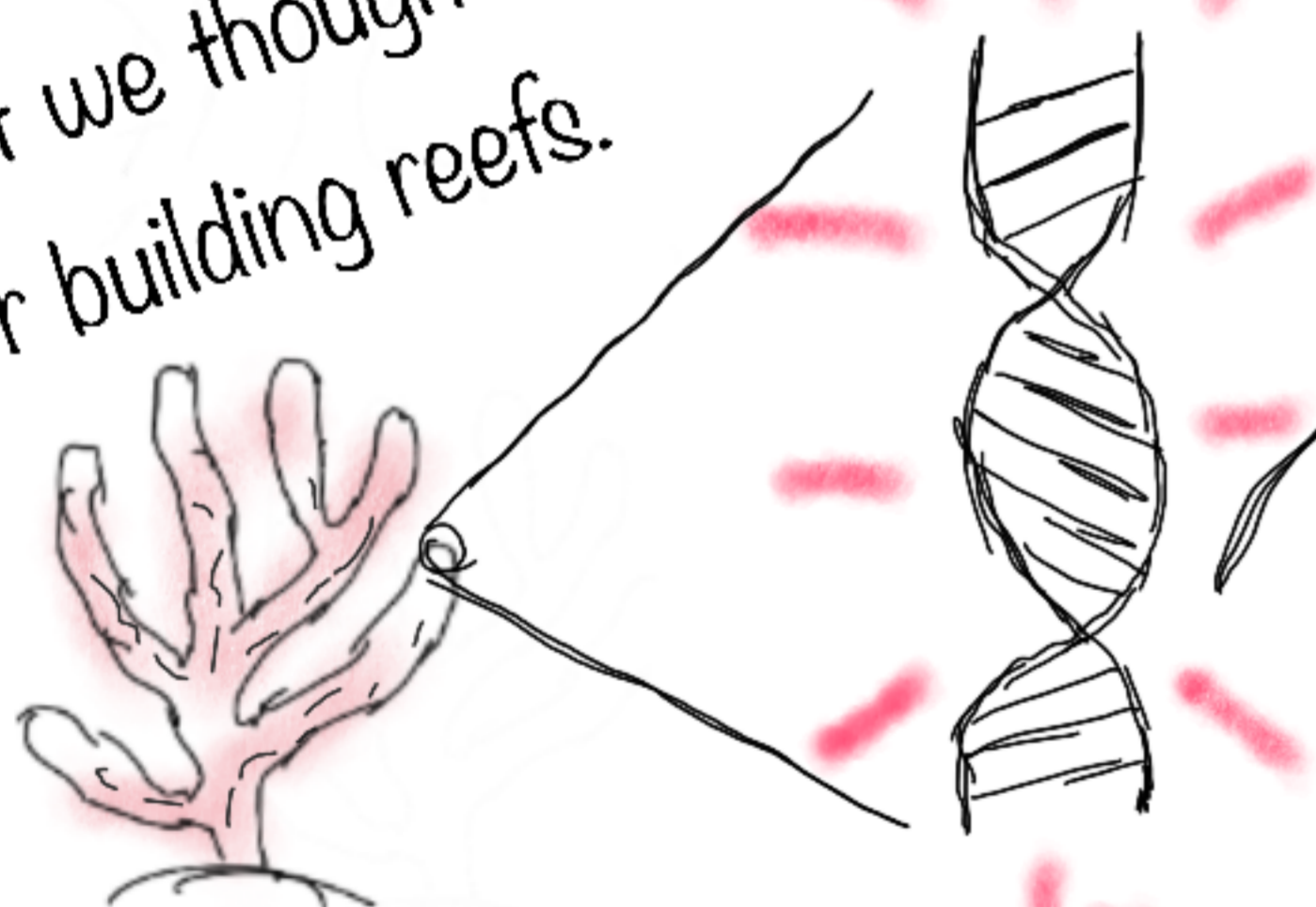
... we saw that anemones had most
of the tools to make hard structures
like corals.



We just needed to give them some help.

But when we started looking deeper ...

We took a coral molecule
that we thought might be important
for building reefs.



(we made it glow red!)

Then we injected it into our anemones.



Later, when we saw glowing red dots
under a microscope, we knew
the anemone was making
the coral molecule.



But the tough part was figuring out
if the coral molecule was doing its job.

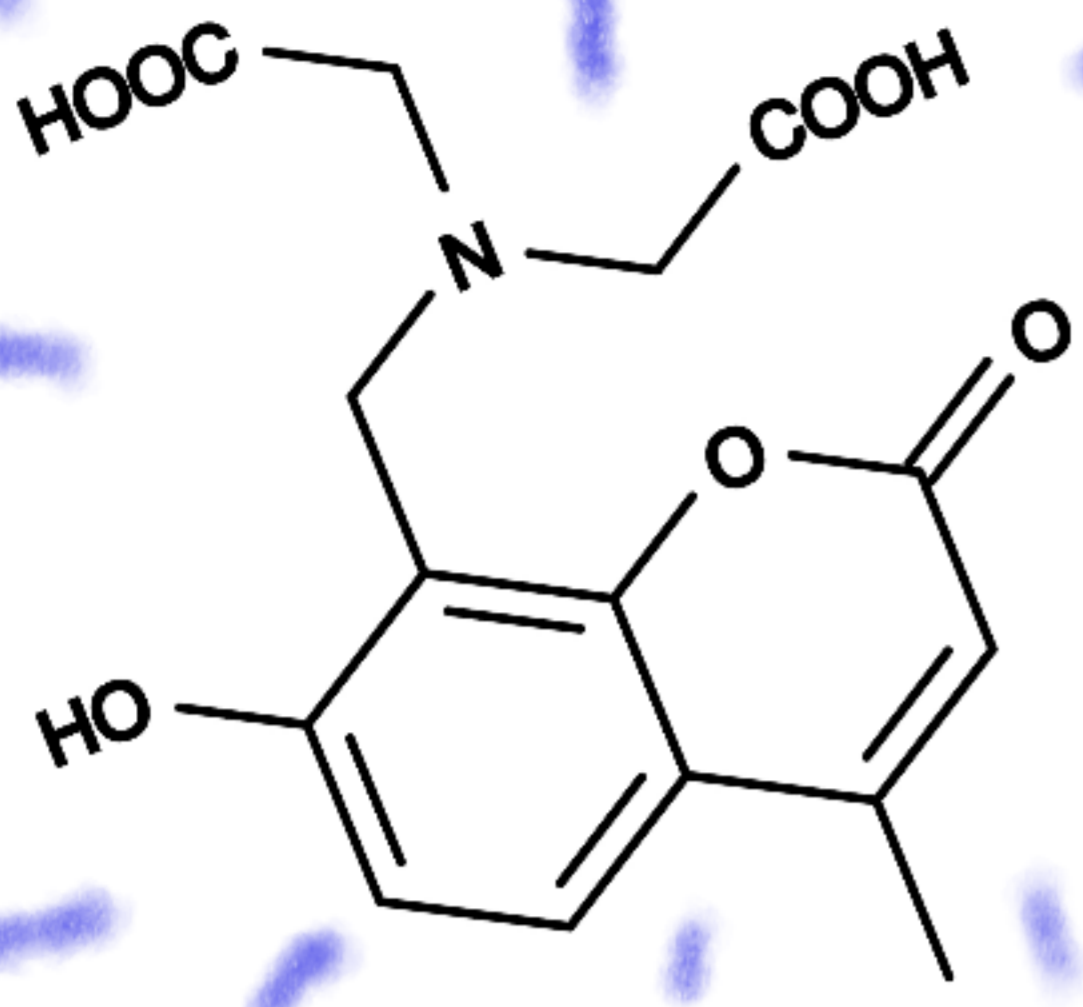
We struggled for

2 years!

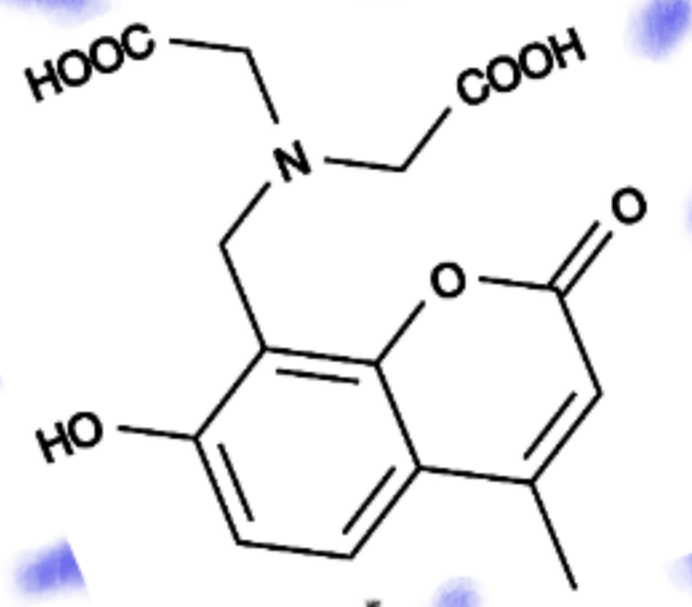
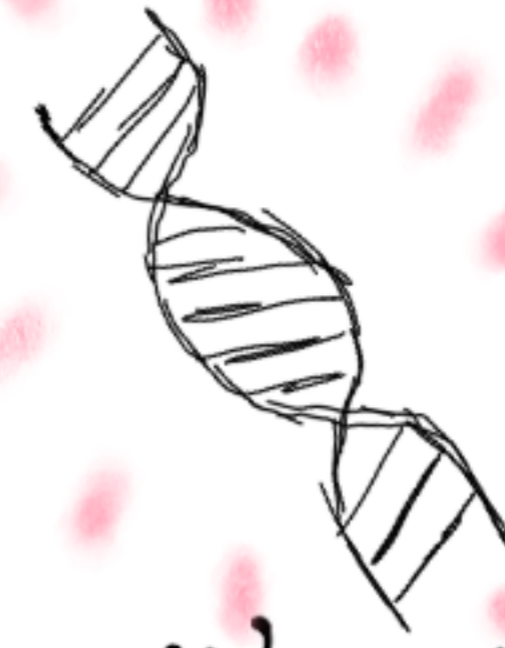
Then, just 5 months ago,
one of our scientists had
an idea.



She took the anemone and soaked it in a special dye that glows blue when it touches calcium, a key ingredient of coral's rocky structure.



If our coral molecule overlaps with our blue dye



then we know it's sticking to calcium (like tiny strips of tape).

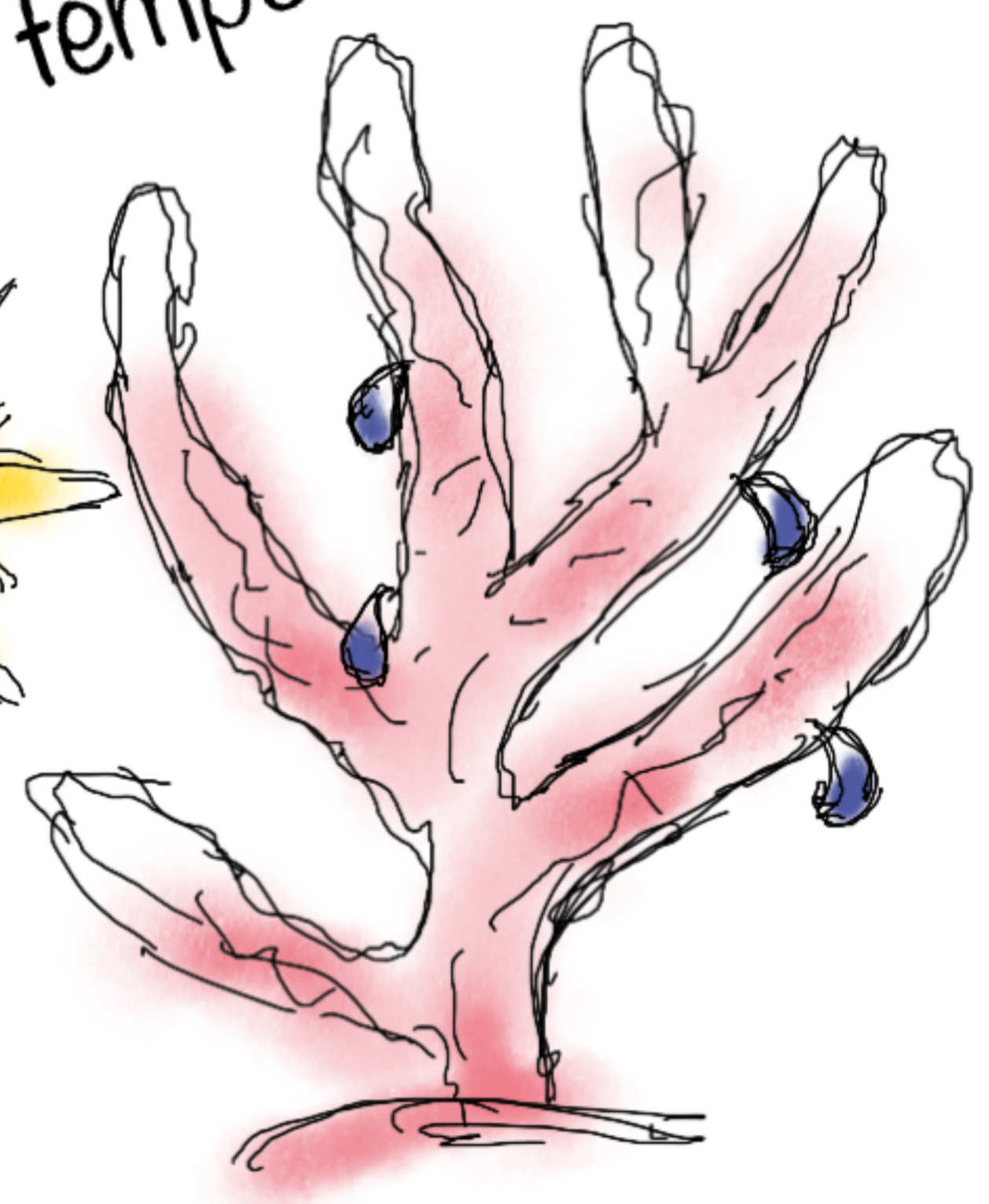
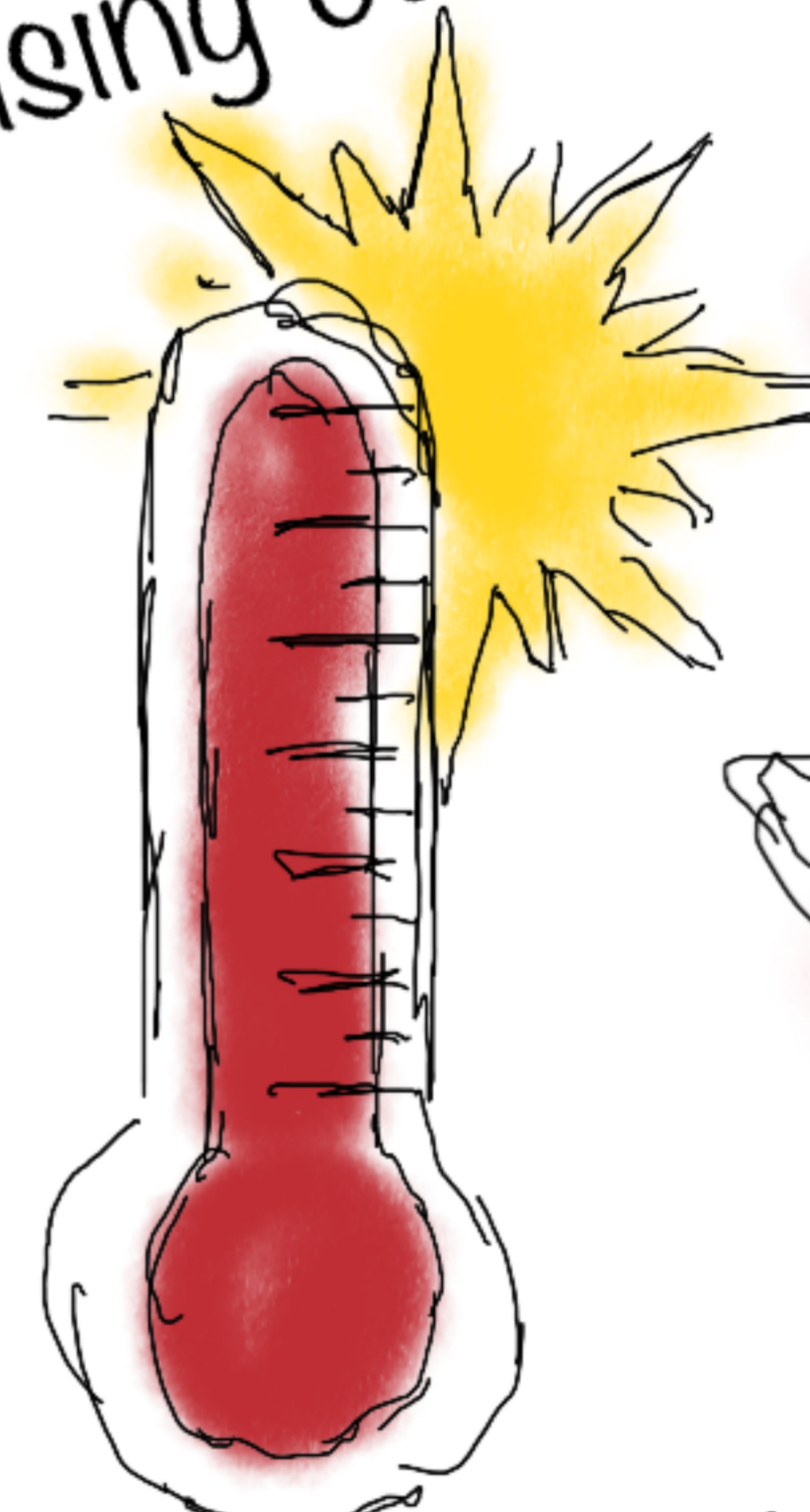
That's EXACTLY what we saw!



Now we can use our soft anemones to start building a coral from scratch so we can learn more about how they make their beautiful structures.

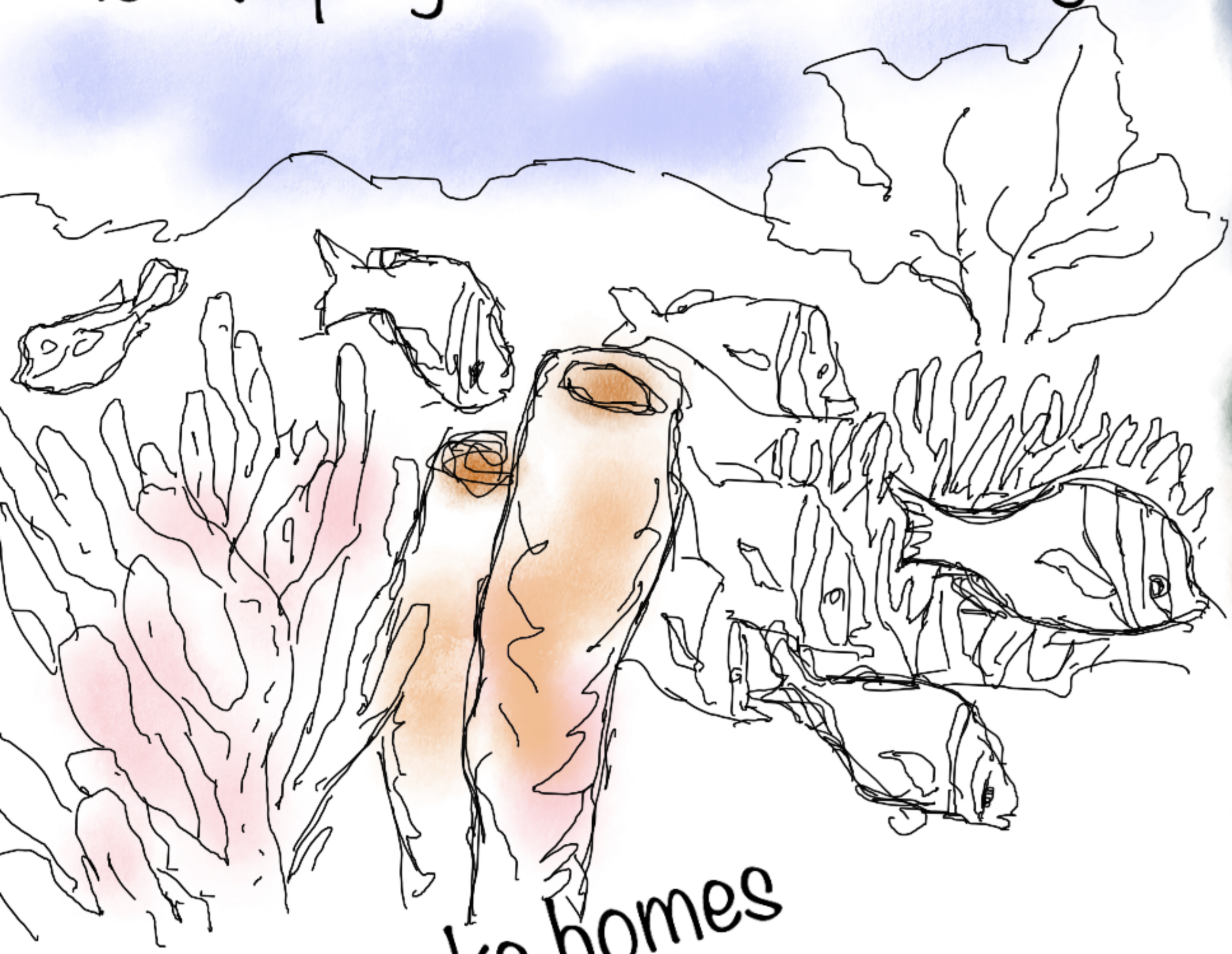
And just in time . . .

Coral reefs are getting sick and dying from rising ocean temperatures



And because we know so little about them, it's been tough trying to figure out how to get them healthy again.

Corals are SUPER important for keeping our oceans healthy.

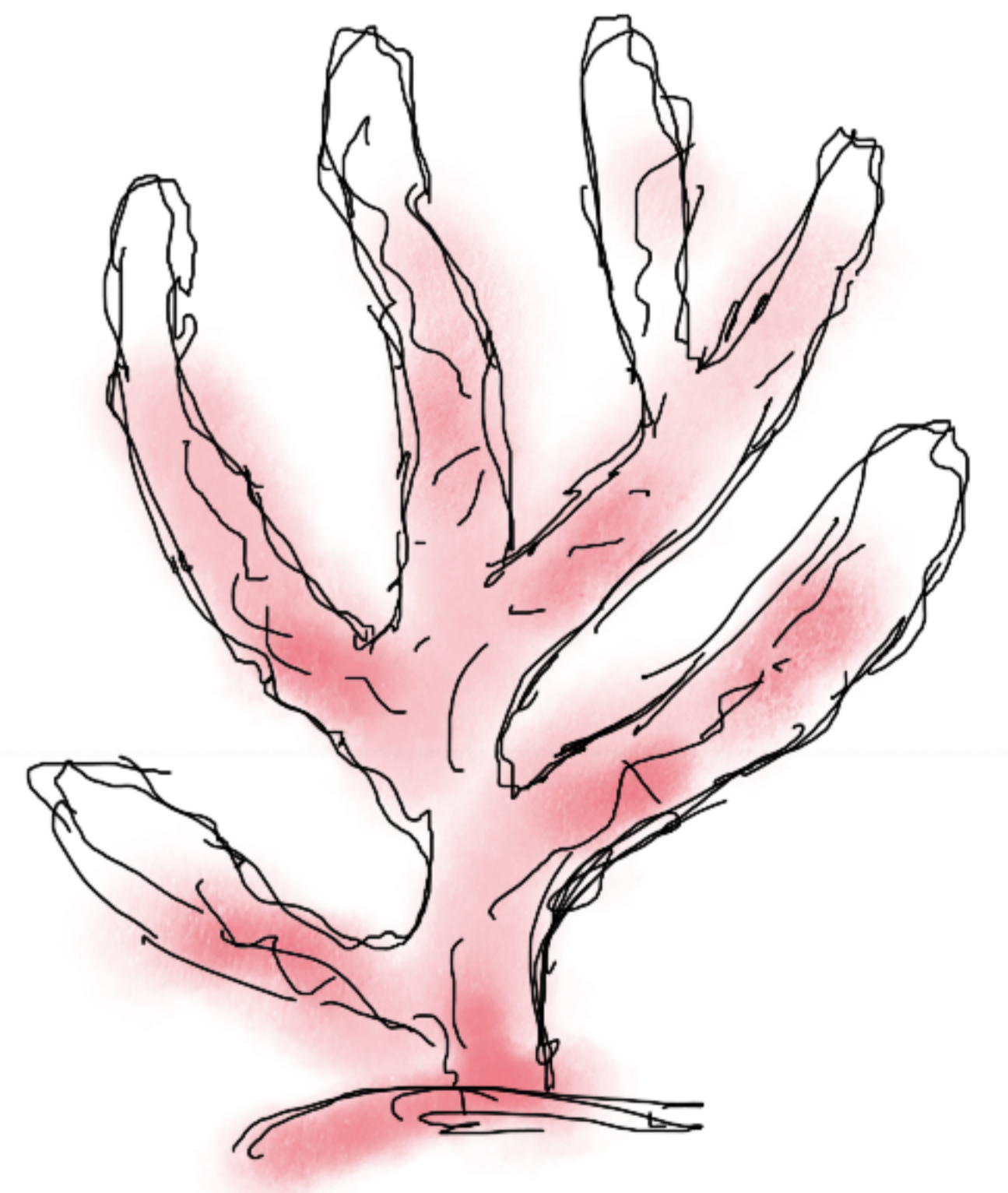
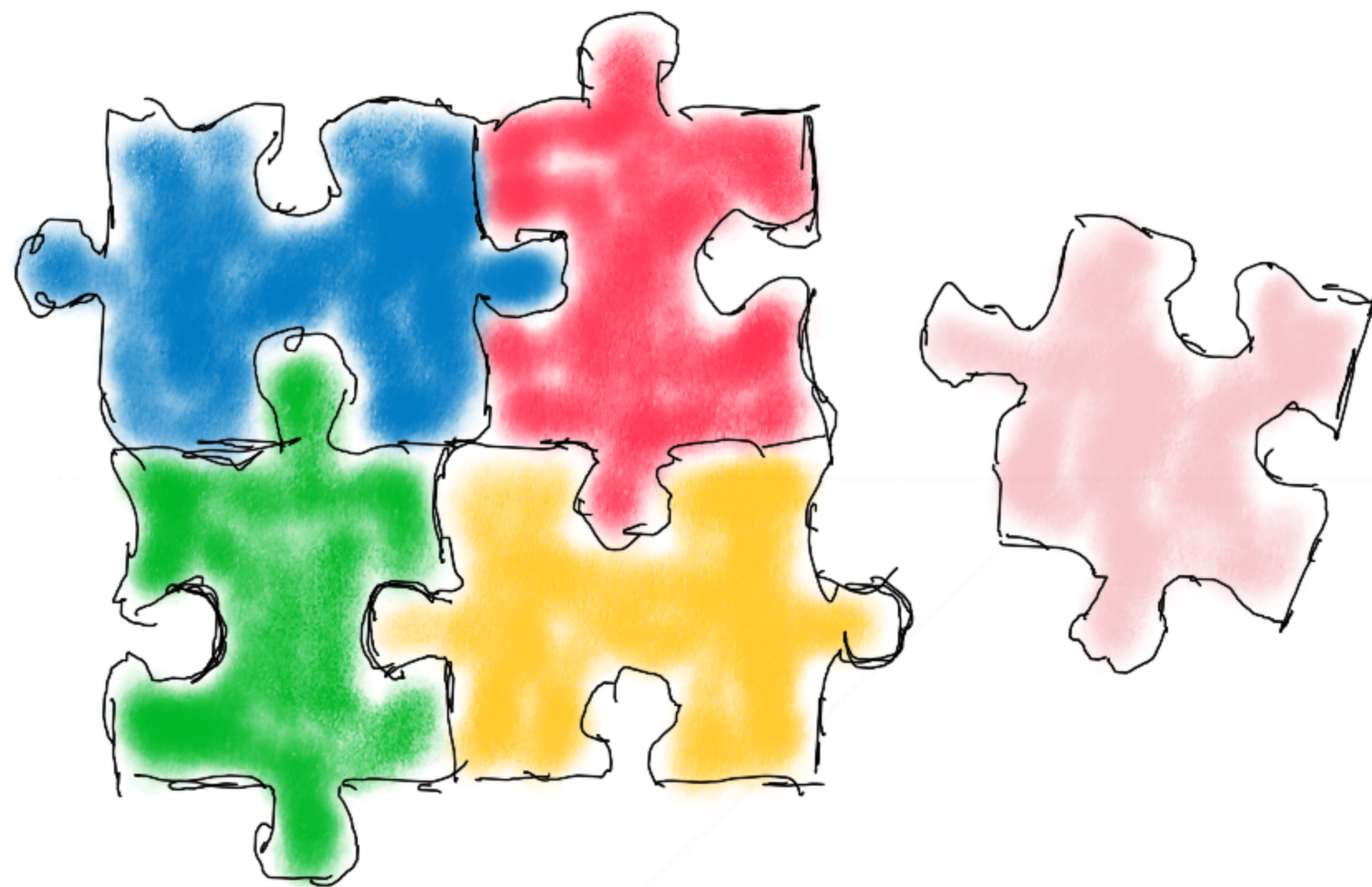


They make homes for all sorts of fish and other sea creatures.



They even help glue the sand together so the beaches you visit in the summer don't get washed away by storms.

We still have a BIG puzzle to solve.



But with our anemone, we now have a new set of tools to fit the pieces together.