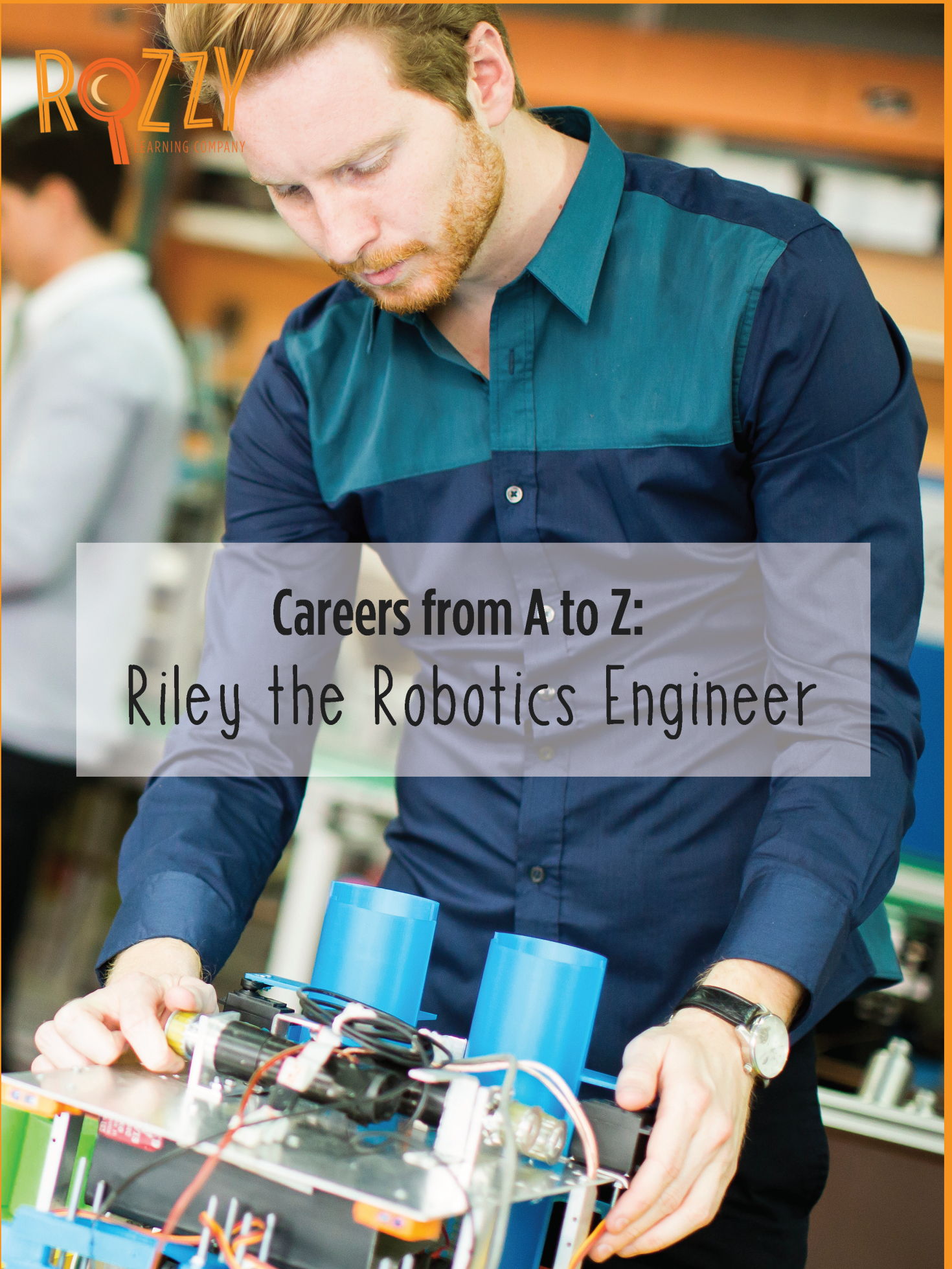
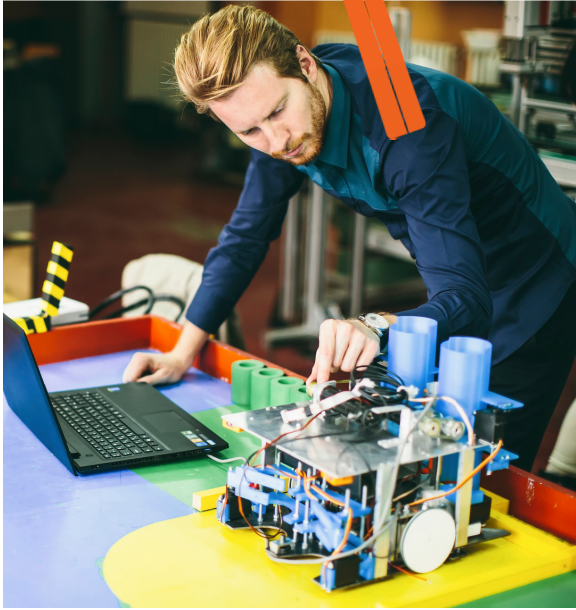
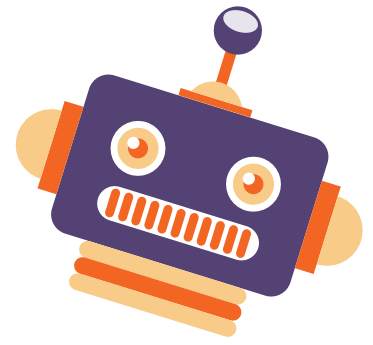


Careers from A to Z:
Riley the Robotics Engineer



WHO IS RILEY?



Riley is a **robotics engineer!**

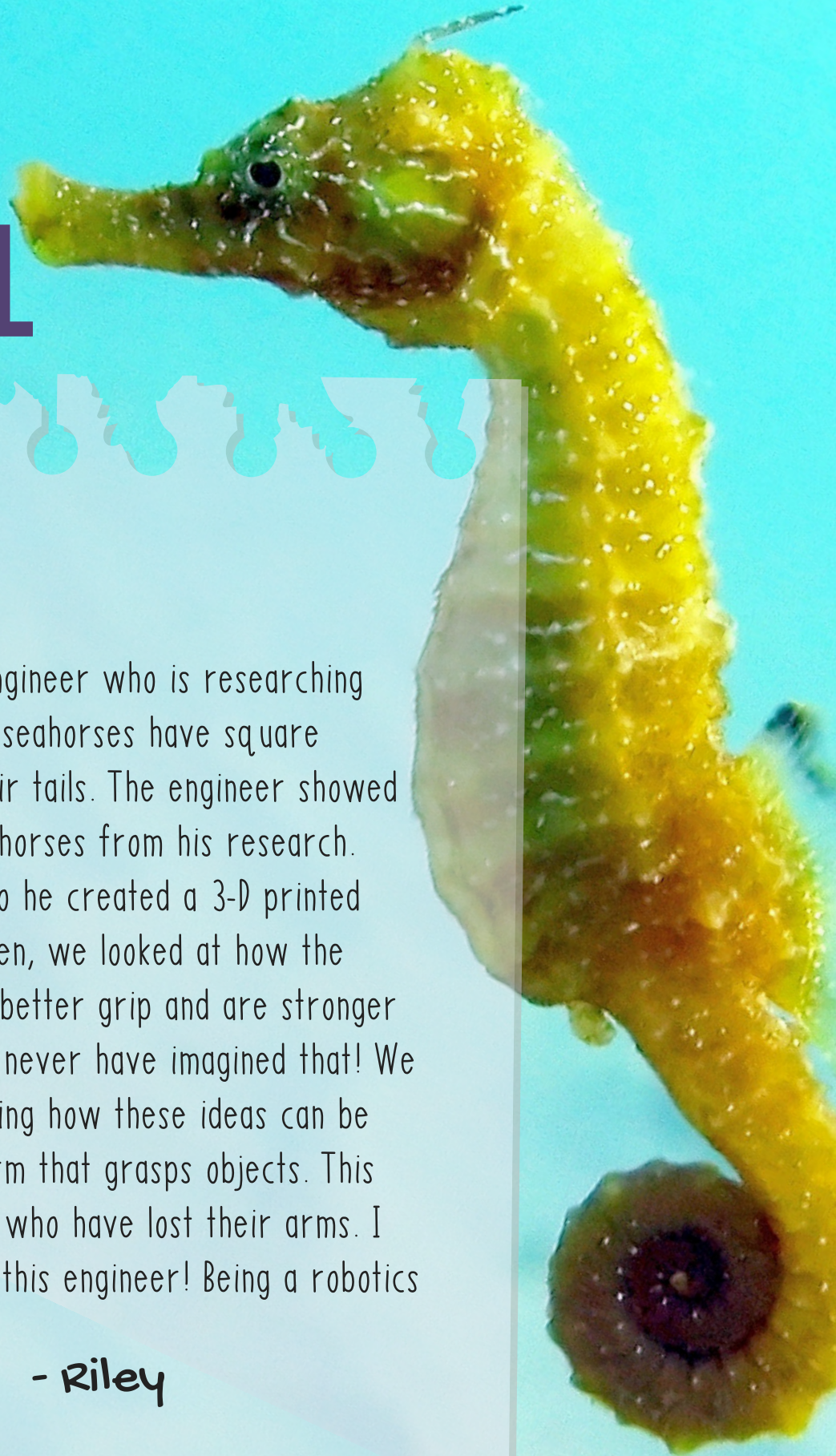
Robotics engineers create robots that do jobs that humans are unable to do. For example, robots can go to the bottom of the ocean. Robots also help make jobs easier. Can you imagine putting the top on each and every soda bottle in a factory? A robot can put on 12,000 bottle caps in one hour! Robots also help keep people safe. Robots can go into a volcano and bring back lava samples. A human would not be able to do that! Robotic engineers can also invent robotic toys or build equipment and special effects for amusement parks. What a cool job!

WHAT IS BIOMIMETICS?

Engineers observe nature to come up with new ideas for inventions. This process is called biomimetics. Did you know that Velcro was created because of something seen in nature? An engineer noticed the fruit of a burr was sticking to his dog's hair. He researched this fruit and found that burrs have little hooks that stick on animals' hair. The engineer then created Velcro which has hooks, like burrs!



RILEY'S JOURNAL



February 1, 2018

Today, I worked with an engineer who is researching seahorses! He noticed that seahorses have square segments that make up their tails. The engineer showed me a lot of pictures of seahorses from his research. He wanted to learn more so he created a 3-D printed tail to experiment with. Then, we looked at how the square segments create a better grip and are stronger than rounded tails. I would never have imagined that! We finished the day by discussing how these ideas can be used to create a robotic arm that grasps objects. This invention could help people who have lost their arms. I learned a lot working with this engineer! Being a robotics engineer is really fun!

- Riley

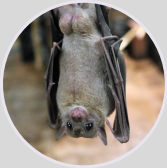
IT'S YOUR TURN

It's your job to create a robot inspired by an animal that solves a problem. For example, you might design a robot that is hard like a turtle's shell and can be sent into a cave without getting hurt by falling rock.

1 Circle the animal you want to use as inspiration for your robot: Bat, Gecko, or Octopus.

Think about what special features of the animal you will use as inspiration for your robot.

Draw what your robot will look like below. Label what part(s) of the robot were inspired from the animal.



BAT



GECKO



OCTOPUS

What task will your robot help humans complete?