

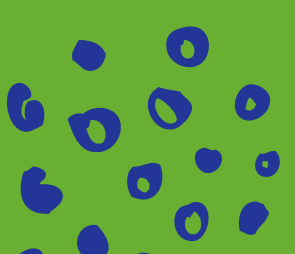




**NEXT GEN
STEM**



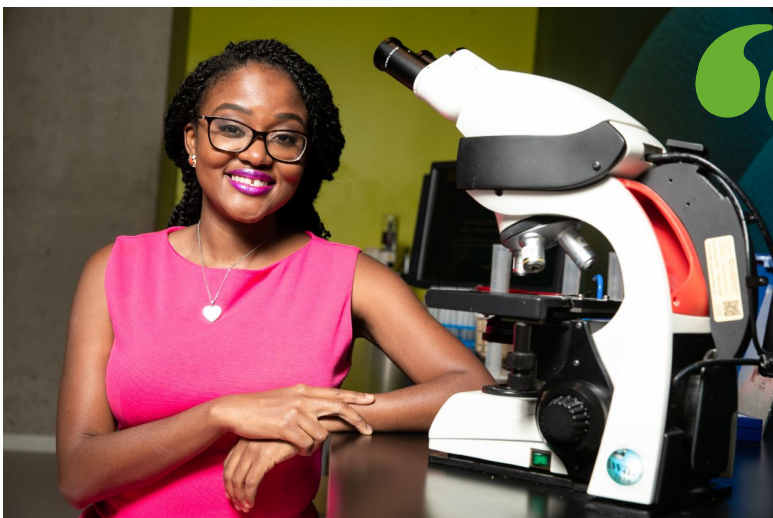
**EMPOWERING THE NEXT
GENERATION OF STEM
INNOVATORS**

MEET DR. ARLYNE SIMON, A BIOMEDICAL ENGINEER

Dr. Arlyne Simon is a Biomedical Engineer, Inventor, Author and Entrepreneur from Dominica, a small Caribbean island, and now resides in Portland, Oregon. When she was five, Arlyne fell in love with science after conducting her first messy experiment at home, which fueled her curiosity and set her on a path to become a biomedical engineer.

Arlyne holds a Ph.D. in macromolecular science and engineering from the University of Michigan and an undergraduate degree in chemical & biomolecular engineering from Georgia Tech. She became the first person in her family to get a Ph.D., and graduated with an invention to her name! Recognized as a trailblazing female innovator by the United States Patent and Trademark Office, Arlyne invented a blood test that detects when cancer patients reject bone marrow transplants.

Her passion for healthcare has led her to design syringes, train clinical laboratory technologists in Kenya, help build supercomputers, and now design medical imaging equipment at Intel. Eager to inspire more girls to become inventors, Arlyne founded Timouns - a multicultural children's products company that creates picture books for kid inventors. Arlyne is also the author of the Abby Invents picture book series, which stars a girl inventor who invents unbreakable crayons and more! Arlyne hopes to challenge everyone to explore science and encourage them to be among the greatest of inventors, too!



[CLICK TO WATCH OUR INTERVIEW WITH ARLYNE](#)

“You were born to be an inventor. Yes, you. If we are going to create a kinder world, a healthier world, a more sustainable world, then you need to share your creativity.”
- Dr. Arlyne Simon

A DAY IN THE LIFE OF DR. ARLYNE SIMON

Arlyne is a Biomedical Engineer, Inventor, Author and Entrepreneur and is committed to creating next-generation technologies that transform medicine. Can you find some of the terms she uses in her practice?

U E D Y T I V I T A E R C D E N E F G B
P N U R N B M Y U B I O M E D I C A L G
X G N Y W O A U K N N M W X B F X W L B
K I S E I R E S K O O B C Q S A X R A M
D N I T V I T E T J V Q G S U K B G I E
U E B B V P S U R Z U K P U S H A X C D
R E T F L L X G A T T I U P T T V R I I
S R I N T E L L I G E N C E A U T K F C
L A K W E E E V L J C V A R I S L N I A
A B U T J V Q Y B B H E K C N T M F T L
B A D T C F A K L K N N V O A N T Q R I
O U Y S H K D V A P O T W M B E D N A M
R J T I O O J U Z Y L O A P I V A O Z A
A Q I V T T R D E H O R T U L N Q S F G
T W S K E B F N R M G W L T I I O H A I
O S O I I E A A F O Y Q E E T Y Y A N N
R H I E G D U D N K S P U R Y B Q U V G
Y L R Y A P A T E N T P K S L B P R P J
C Z U A D E R A C H T L A E H A T O M S
K P C E N T R E P R E N E U R L H C W O

- STEAM
- inventor
- author
- entrepreneur
- curiosity
- biomedical
- engineer
- patent
- healthcare
- sustainability
- supercomputers
- Abby Invents
- artificial
- intelligence
- medical imaging
- trailblazer
- creativity
- book series
- technology
- laboratory

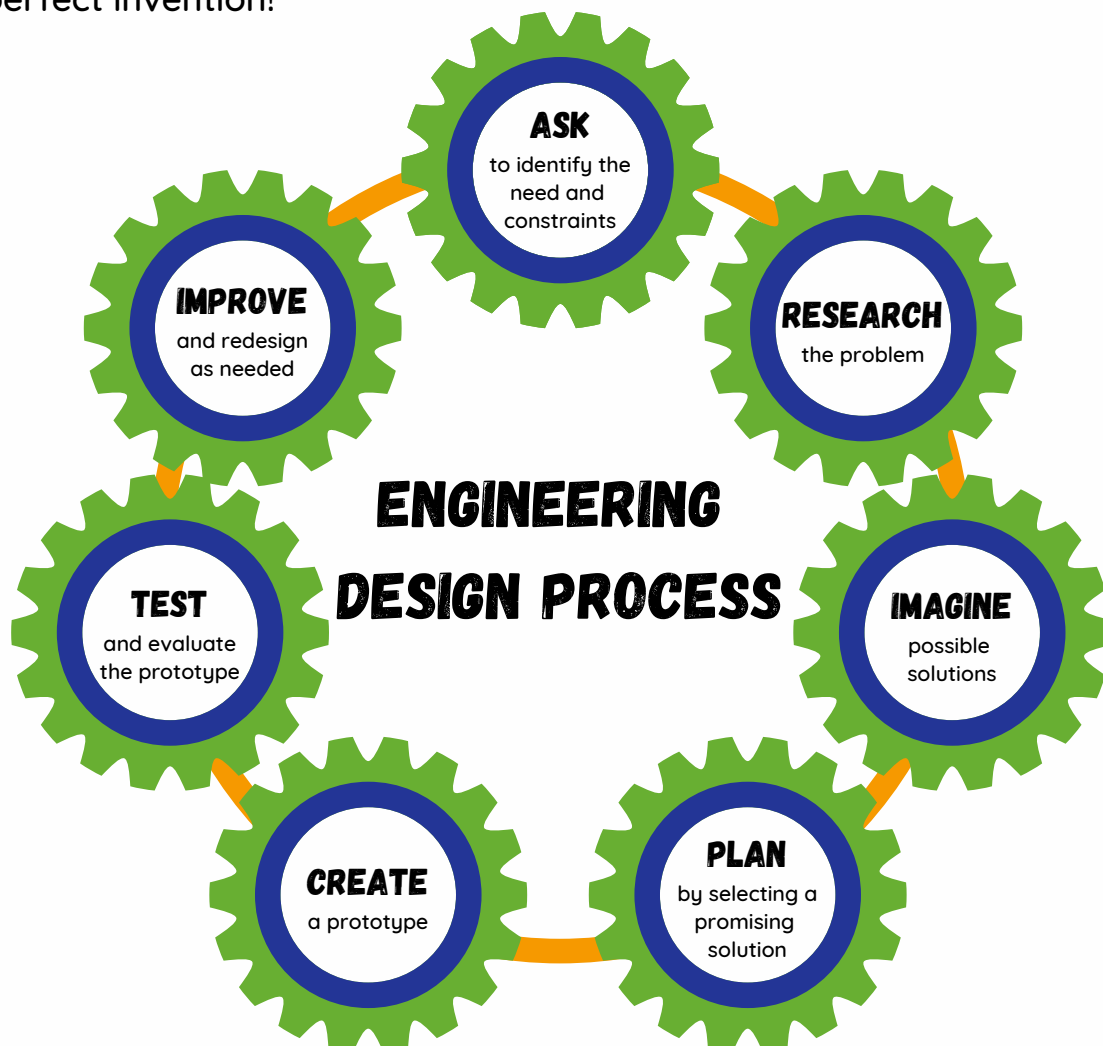
Please note: some words are found when spelled backwards!

CREATE YOUR OWN INVENTION!

Inventors are problem solvers. They notice something about the world that could work better - if only we had the right tool.

The first question to ask yourself as an inventor is: What need is not being met? Who experiences this problem, and in what setting?

Next, comes research. Has someone else already invented this solution? If so, their design may have a patent. A **patent** is a legal document that records how an invention works, what makes it original, when it was first invented, and who owns the rights to it. Does a tool to solve the problem already exist? Maybe it needs improvements. Many inventions are actually created as improvements to an existing item - like inventing a smaller, faster computer. Once you are sure a need exists, you can use the **engineering design process** to guide you on your journey to the perfect invention!



The most important thing about being an inventor is to never give up!
Learning from mistakes is how the best inventions are created.





PLANNING MY NEW INVENTION

- What problem do I want to solve? Who will my invention help?
- Can I improve something that already exists in order to solve this problem? What existing things can inspire my new invention?
- What is unique about my invention? How will it be used?
- What materials do I need? How much do they cost?
- Describe your invention. Consider the size, weight, shape, color, smell, movements, and sounds it makes.
- How does my invention work? Use the next page to brainstorm!



MY GREAT INVENTION:

Name of my invention:

Use this page to sketch and then label the parts of your invention.
Try showing how it looks when someone uses it.

