

Article of the Week

Week of 9/19-9/23

Directions: Complete all steps below, which includes annotating, answering questions, and margin notes. You should read this article multiple times before Friday. Be prepared to share your thoughts, ideas, and opinions on Friday!

Step 1: Read the article. Use the coding we practiced in class to annotate the article. You can use the following options:

* important idea + you agree

X you disagree

! surprising idea Underline a specific line that you found interesting

⊙ Circle a word you don't know-try to guess the meaning using context clues

? you are wondering about that idea

Step 2: Read the article a second time. **Number** the paragraphs. Read the article carefully and **make notes in the margin**. Notes should include:

- The 5W's:
 - **Who** is involved in the text?
 - **What** is the main subject of the text?
 - **When** is the event of the text happening?
 - **Where** is the event of the text taking place?
 - **Why** is this text written? What is the point?
- Comments that show that you understand the article. (A summary or statement of the main idea of important sections may serve this purpose.)
- Questions you have that show what you are wondering about as you read.
- Notes that differentiate between **fact** and **opinion**.
- Observations about how the writer's strategies (organization, word choice, perspective, support) and choices affect the article.

Step 3: Read the article again noting anything you might have missed during the other reads of the text.

Step 4: Answer the questions that follow the article. Be sure to use evidence from the article when necessary.

Teens give boy a helping hand

Use 3-D printer to build prosthetic

A small boy has a new hand, thanks to a group of brainy North Shore teens.

The 13 eighth-graders and one high school senior built a prosthetic hand for 3-year-old Max Lehrer, who has amniotic band syndrome and was born without fingers on his right hand. He tried on the new robohand last week. For the first time in his life, he used his right hand to pick up a ball and toss it.

“It was amazing, because he was doing something he couldn’t do before,” said his mother, Nicole Lehrer. “As a mom, you just want him to have the same opportunities other kids have to ride a bicycle, to pick up a ball, to shake someone’s hand.”

Max’s parents both work at Brookwood School in Manchester. Rich Lehrer is a science teacher there. Last summer he started researching how to make a prosthetic hand for his son. He decided to involve his eighth-grade students, thinking it would be a good learning experience.

A couple of months later, Lehrer learned that Governor’s Academy in Byfield had a 3-D printer, and a student named Arjun Bhatnagar, 17, knew how to work it. He asked Bhatnagar to help.

“I was all up for it,” said Bhatnagar, of North Andover. “I thought it was a super cool project.”

“I’ve always loved building things,” added Bhatnagar, who knows 15 computer programming languages and has built websites and apps in the past.

Using a free design available online, Bhatnagar learned how to print the dozens of plastic pieces needed for the hand, with fingers that grip or release as Max moves his wrist. Lehrer’s students worked on the metal components and assembly.

They spent less than \$150 on supplies and received a donation of one key material, thermoplastic, from a Boston prosthetics company. The project took months, but the finished product was a bargain compared to the tens of thousands of dollars that professionally made prosthetics can cost.

When little Max saw the completed hand last week, he shrieked, “Wow, that’s cool!”

And his parents choked up with emotion. And the students felt a satisfaction they don’t get from most school work.

“The stuff you do at school, sometimes it seems like it’s for no reason,” said Christian Blake, 14, one of the members of Lehrer’s Robohand Club. “This actually made a difference.”

Bhatnagar, who graduates in May and is college-bound this fall, wants to start a tech company someday — maybe, he said, a company that makes robotic hands for needy people in impoverished countries.

Notes on my thoughts,
reactions and
questions as I read:

Directions: For these comprehension questions, respond in complete sentences.

1. What medical condition resulted in the need for the prosthetic in the first place?
2. What is the purpose of a 3-D printer?
3. Define open source as used in the article.
4. From what countries do the original creators of the prosthetic hail?
5. Define prosthetic as used in the text.

Directions: Answer each question in one or more complete sentences and by providing complete explanations.

6. What is the text mostly about?
7. How did perseverance play a part in creating the prosthetic? Cite evidence from the text to support your response.
8. Explain the author's use of quotations in the third paragraph.