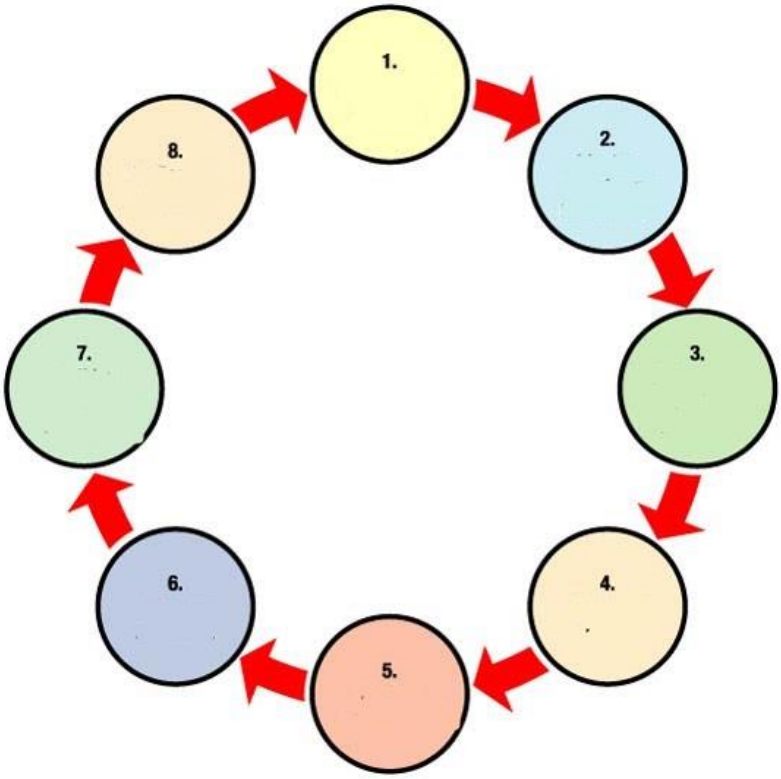
6th Grade STEM Blizzard Bag Assignments

Blizzard Bag #1

Name_____

Fill in the following **8 Step Engineering design process web**



1.

2.

3.

4.

5.

6.

7.

8.

List 5 different types of engineering and describe them.

1)_____
_____

2)_____
_____

3)_____
_____

4)_____
_____

5)_____
_____

Blizzard Bag #2

Name:_____

<u>Define the following Bridge terms.</u>

Span

Force

Compression

Tension

Beam

Load

Truss

Blizzard Bag #3

6th Grade Read Following article and explain in one paragraph to how 3D Printing is improving people's lives.

Live Science staff compiled these images for Live Science's Expert Voices: Op-Ed & Insights.

As 3D printers get cheaper and designers grow more inspired, patients are benefitting from a revolution in new medical tech. Read more about the developments in "Surgeon's Helper: 3D Printing Is Revolutionizing Health Care" and see images from a range of cutting-edge 3D-printed health applications below.

Face transplant

This is 3D-printed model was used by doctors planning a face transplant surgery. From "3D Printing Can Improve Face Transplants." (Credit: RSNA.)

Young super heroes

Young super heroes in Dallas, Texas, recently had the opportunity to sit down with members of the e-NABLE prosthetics team and cast members of the Marvel Universe LIVE! show to create their own 3D-printed prosthetic devices on-the-spot. (Credit: Jen Owen, e-NABLE.)

Practice makes perfect

A new, anatomically accurate replica of a liver could make surgeries safer. From "3D Printed Liver Makes Surgery Safer." (Credit: Cleveland Clinic.)

Prepping for surgery

A close-up of a 3D printed heart. From "3D-Printed Hearts Help Surgeons Save Babies' Lives." (Credit: James Carlson/ OSF St. Francis Medical Center.)

A fabricated ear

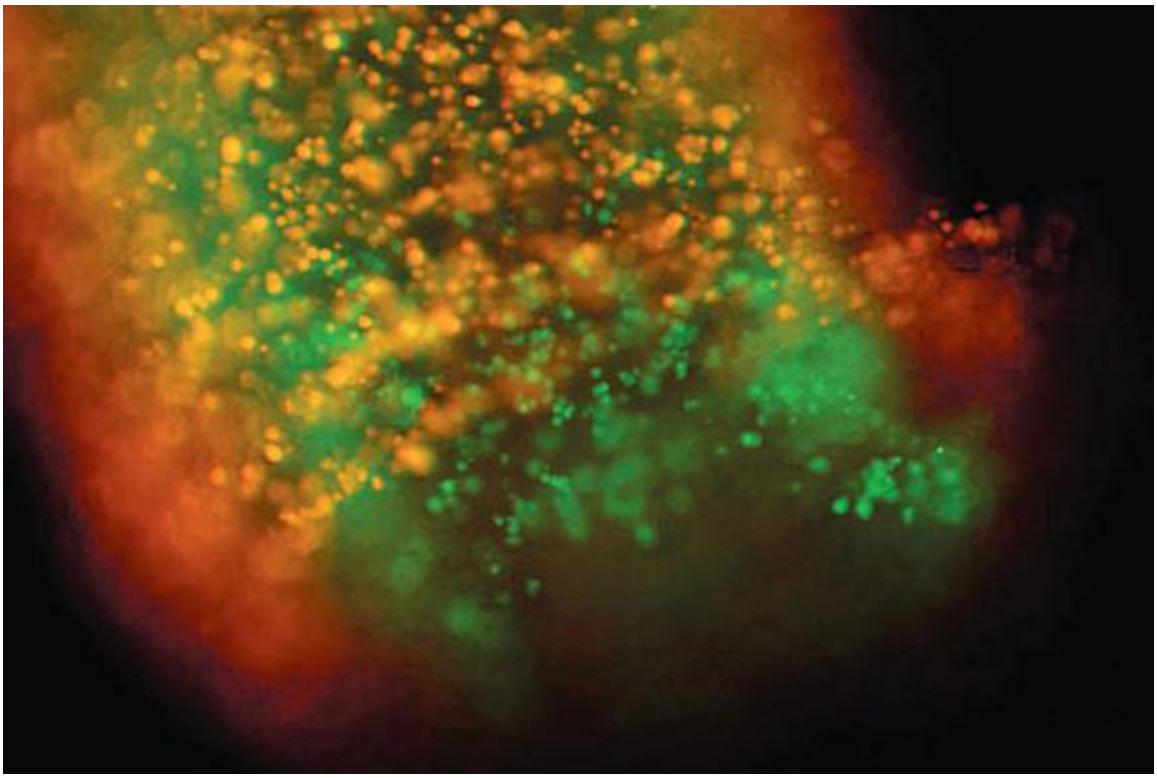
Mechanical engineer Larry Bonassar holds a fabricated ear printed with a 3D printer in his lab at Cornell University's Weill Hall. From "3D-Printed Ear Created in Lab." (Credit: Lindsay France/Cornell University Photography.)

A proud fan


www.enablingthefuture.org

A Captain America fan shows off his custom, 3D-printed prosthetic during an event with cast members of Marvel Universe LIVE! and the team from the charity eNABLE. (Credit: Jen Owen, e-NABLE.)

Mini-printed materials



Stem cells can now be printed, at least in the lab of researchers from the University of Edinburgh. The cells may eventually lead to tissue specimens for testing pharmaceuticals or even the fabrication of replacement organs. From "Stem Cells Printed in 3-D with Inkjet Devices." (Credit: M. Nakamura, Bioprinting Project, Kanagawa Academy of Science and Technology.)

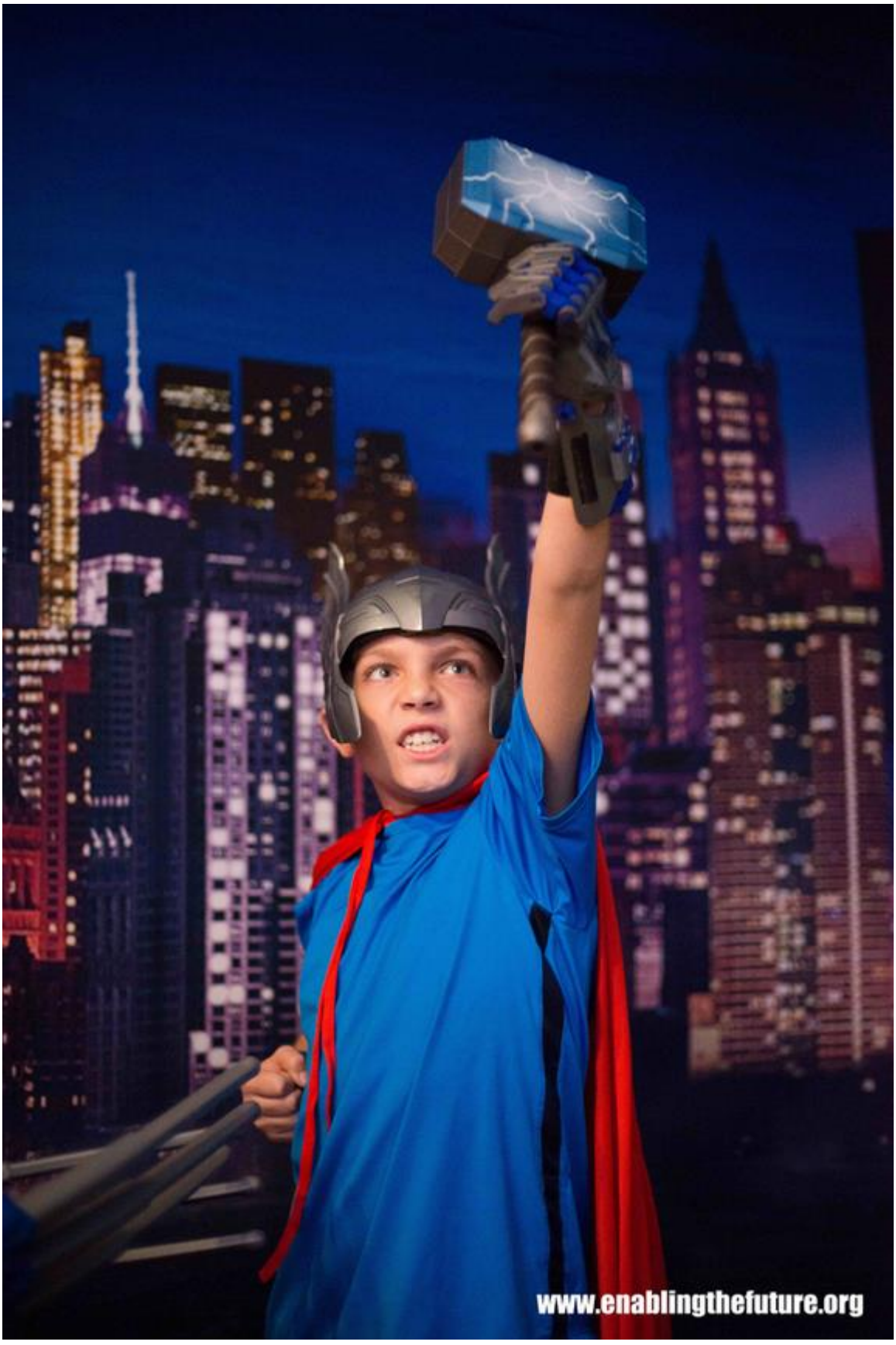
Proud in purple

Don't let the purple of her 3D-printed prosthetics fool you, she's a big fan of Captain America. (Credit: Jen Owen, e-NABLE.)

Unique look

Bespoke Innovations, a San Francisco-based company founded in 2009 by an orthopedic surgeon and an industrial designer, uses 3D printing to make custom-designed "fairings," or fashionable fitted covers for prosthetic legs. From "15 Odd and Unusual Things That Can Be 3D Printed." (Credit: Bespoke Innovations.)

Good wins again!


www.enablingthefuture.org

A young Thor clutches Mjölnir with his newly printed prosthetic. (Credit: Jen Owen, e-NABLE.)