Biomedical Engineering

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What do you think a biomedical engineer does?







http://www.jhuapl.edu/newscenter/stories/images/st12 0524_arm3.jpg



http://preparednessadvice.com/wpcontent/uploads/2014/01/BloodPressureCuff.jpg

What is biomedical engineering

 Bio: Relating to biology – study of living things







* Engineering: designing and building new things



Top: http://biology.phillipmartin.info/science_organisms.gif Middle: http://Listockimg.com/file_thumbview_approve/3843877/z/stock-illustration-3843877-medical-clipart-03.jpg Bottom: http://educationcareerarticles.com/wp-content/uploads/2013/01/Biomedical-Engineering.jpg

What do biomedical engineers do?



http://photos.uc.wisc.edu/photos/3821/view



http://www.bls.gov/ooh/images/1867.jpg



http://cafnrnews.com/uploads/2013/09/Doctor.jpg



http://www3.uwic.ac.uk/English/sport/research/groups/PublishingImages/TD_Wired_Runner newJPG.jpg

What do biomedical engineers make?



http://c.oobc.com/rf/image_5390215/Bosto n/2011-2020/2014/01/17/Boston.com/Business/Imag es/organ.jpg



https://images.accuchek.com/images/products/metersystems /advantage/nbg_advantage_mg_l



http://thehut.pantherssl.com/design-assets/images/exante/diet-tracker-app-1.png



http://www.atlanticog.com/hip/images/cor met4.jpg ttp://upload.wikimedia.org/wikipe dia/commons/e/ee/MRI-Philips.JPG

What we are working on:



What do you need to do to become a biomedical engineer?



http://cdn.articulate.com/images/blogs/rel/uploads/2009/01/eli.jpg







http://www.clker.com/cliparts/4/7/3/c/13671574971923346275microscope.jpg; ttp://schools.nyc.gov/NR/rdonlyres/1210CAE5-D563-4F87-AB77-4567547CB9F5/64928/Math_Symbol_Clipart.jpg; http://www.clker.com/cliparts/2/2/c/b/11971071922084539979metalmarious_Medicine_and_a_Stethoscope.svg.med.png; http://l.bp.blogspot.com/_FRcVxd4J9Vc/TT1ua_quSRI/AAAAAAAAA/M/dlxJrMCWs58/s400/computer_cliparts.jgf

Questions?

Activity: Background





http://1.bp.blogspot.com/-tbD12plkR5U/UI3E5nw5wTl/AAAAAAAAAAAAA/5fEDD97pviY/s1600/circulatory.png http://03516a5.netsolhost.com/WordPress/wp-content/uploads/2012/08/cloggedarterieschart1.jpg

Activity: Directions

* 5 minutes: Plan what you will use and how you will create a device to flatten or remove the plaque



* 10 minutes: Construct and implement your device

Activity Directions

* Retrieve or flatten the plaque – do not just knock it out



* Do not scrape against the side of the artery walls



Top: http://perfecthealthliving.com/wp-content/uploads/2012/09/cholesterol-in-blood.jpg Bottom: http://www.nutralegacy.com/wp-content/uploads/2009/01/how-ruptured-blood-vessels-occur_1.jpg

Activity: Directions

Materials you can use:

- * Pipe cleaner
 - * Paper clip
 - * Paper
 - * Tape
 - * Q-tip
- * Aluminum foil
- * Rubber bands
- Drinking straw
 - * Fuzzy balls



You do not have to use all of the materials provided

Questions?

Activity: Trial #2

* 5 minutes: Plan what you will use and how you will create a device to flatten or remove the plaque



* 10 minutes: Construct and implement your device

Activity: Discussion and Debrief

- * What worked well to remove or flatten the plaque? What did not work well to remove or flatten the plaque?
- * What would you do differently next time in order to make a more successful design?
- * What would be different or what would have to be changed to use this device in a real person?

Questions?