



Gordon A. Cain Center

INTRODUCTION TO STEM PATHWAYS AND CAREERS

1. Materials

Internet access, one-to-one computer use daily, and access to the LSU servers. Chromebooks will not work with the free Arduino software.

Reusable Hardware/Material	Recommended Unit	Cost/Unit
Various reusable material and hardware for projects	1 per classroom	\$1,500
Consumables		
Various consumables for projects	1 per classroom	\$500
Software		
Arduino IDE	1 per computer	Free on computer, \$1/month for chromebook

*Complete supply list can be found [here](#).

2. Required software, networking access, and access to LSU servers

- Students will need to sign up with online development and testing environments, including but not limited to codesandbox.io, jsfiddle.net, scratch.mit.edu and others.
- Students will need access to YouTube instructional videos relevant to the course, as well as other educational video repositories.
- Teachers will need to be able to access the LSU servers using several Internet protocols including but not limited to HTTPS and SSH.
- Students and teachers will access the curriculum and teaching materials through Google Drive.
- Arduino software will need to be installed on computers. It is free to download on computers. There is a cloud based version that is also available but requires drivers to be downloaded and will not work on Chromebooks. There is also a Chrome App that can be purchased for \$1/student per month (only required for one month). However, IT would have to install it on student chromebooks.
- Teachers will need to share sample student work with their designated LSU Pathway Point-of-Contact.
- Principals will need to communicate with the district's information technology department to ensure that there are no technological restrictions that block access to the LSU servers in the lsu.edu, college-readiness.lsu.edu or stempathways.lsu.edu domains on any port. In addition to the sites mentioned above, students will need web access to:

khanacademy.org	www.ucas.com	study.com	GoFormative
	kizoa.com	Animaker.com	band.us app
brainpop.com	wevideo.com	weebly.com	www.lsp.org
vimeo.com	Teach Computer Science & Coding to Kids - CS First	wix.com	Arhttps://sciencespot.net/Media/Solve%20the%20Outbreak_All.pdfduino.cc



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Careers and Career Information - CareerOneStop	En.scratch-wiki.info	www.mynextmove.org	U.S. Bureau of Labor Statistics (bls.gov)
https://www.futurefabric.co/	http://www.panicstudio.tv/en/	https://www.hugeinc.com/	https://meat.agency/
https://simplychocolate.dk/	https://jamboard.google.com .	https://incompetech.com/music/royalty-free/?genre=Silent%20Film%20Score	https://www.tinkercad.com/learn/
canva.com	http://www.citationmachine.net/mla/cite-a-website	https://sciencespot.net	https://www.wikihow.com/Dust-for-Fingerprints
https://flexbooks.ck12.org/cbook/ck-12-middle-school-life-science-2.0/section/11.61/primary/lesson/barriers-to-pathogens-ms-ls	http://www.nih.gov	http://www.cdc.gov	https://www.nwabr.org/teacher-center/introductory-bioinformatics-genetic-testing#lessons
http://www.23andme.com	https://www.ncbi.nlm.nih.gov/	(http://blast.ncbi.nlm.nih.gov/Blast.cgi).	

3. Required teacher collaborations

Teachers will communicate with LSU instructors via emails, apps hosted on the LSU servers, and the band.us app.

4. Required administration of course content, pre/post test, and research instruments

All required materials and instruments will be either posted in the LSU servers, Google Drive, or their location announced via email or on Google drive.

7. Course Work

Teachers must present the course material in sequence or as approved by collaboration with the LSU Pathway Point-of-Contact. Teachers are expected to deliver a minimum of 80% of the course material.

5. Other

As this is a project-based learning class, we strongly suggest that each section of the course be limited to a *maximum* of 25 students. The course is dependent on the teacher providing feedback and reviewing student code. The course requires that teachers have adequate time to interact with each student.