

# STEM ADST Survey

[ADST Survey](#) GFolder

## Purpose

## Notes, Resources and Links

Key docs:

- [STEM ADST Survey](#)
- [ADST Survey](#) GFolder
- [STEM 9 Project 2](#) Links
- [STEM 08 2020-09 P1-Coding](#)

## Basic Project Structure

```

|— AUTHORS.md
|— LICENSE
|— README.md
|— docs
|  |— 1 final
|  |  • Survey1 FTC Sim
|  |  • P2 FTCSim Coding
|  |  • Survey2 Design in 3D
|  |  • P2 CT for 3D Design
|  |    ○ Tinkercad Floorplan of your House
|  |    ○ Code-based city map
|  |— 2 drafts
|  |  • P2 Coding with Minecraft EE
|  |— 3 text
|  |— 4 third-party
|— figures
|— notebooks
|— references
|  • 2021 STEM Textbook
|— reports
|  |— figures
|— requirements.txt

```

## 1. Virtual robotics

- a. <https://pixelpad.io/classroom/stem-9-q4-2021/?q=progress> | STEM 9 Q4 2021
- b. **FTC SIM**
  - i. <https://pixelpad.io/blockly/>

- ii. <https://pixelpad.io/first-simulator/>
- iii. [FTC Intro](#)
- iv. [FTC Sim Introduction](#)
- v. [Tutorial: FTC Movement](#)
- vi. [Tutorial: FTC Sensors](#)
  - 1. [FTC Sim Color Sensor 1 1](#)
- vii. [Tutorial: FTC Puzzles](#)
- viii. [Tutorial: FTC Grabby](#)
- c. mBots
- d. Arduino Sensor-actuator systems
  - i. <https://www.tinkercad.com/learn/circuits/learning>
  - ii. <https://www.arduino.cc/education/remoteteaching>
- e. <https://makecode.mindstorms.com/>

## 2. 2D & 3D Design

- a. Papercraft
- b. Tinkercad (<https://www.tinkercad.com/classrooms>)
  - To login to Tinkercad classroom either:
    - <https://tinkercad.com/joinclass>
    - paste in the code: Q6J3MAQ529MA
    - Join with Nickname (first name, no caps)
  - Or:
    - Go to your class at <https://www.tinkercad.com/joinclass/Q6J3MAQ529MA>.
    - Enter your Nickname (first name, no caps)
      - Grind through the "Direct Starters" (<https://www.tinkercad.com/learn/designs/learning>)
      - Check out the projects (<https://www.tinkercad.com/learn/designs/projects>), specifically:
        - Build a Tinkercad House (<https://www.tinkercad.com/learn/overview/OG2TEUVIOFHI7DT>)
        - How to Design the Best Boat in Tinkercad (<https://www.tinkercad.com/learn/overview/OHE00INJ70GENIP>)
        - Explore Buoyancy: Designing Sea Craft (<https://www.tinkercad.com/learn/overview/OGGLXOCIRXTM00B>)
        - <https://www.instructables.com/Tinkercoding-a-House-With-Shape-Generators-1/>
        - [https://www.google.com/search?q=site%3Agithub.com+tinkercad&safe=strict&rlz=1C1GCEB\\_enCA845CA845&sxsrf=ALeKk01Pf34pzOWolNuufFtSvIbKyK2\\_aQ%3A1622224853291&ei=1S-xYJmhEY\\_h-gT5qlfQAw&oq=site%3Agithub.com+tinkercad&gs\\_lcp=Cgdnd3Mtd2l6EANQsh1YjkJgjkZoAXAAeACAATqIAbMEkgECMTGYAQCgAQGqAQodnd3Mtd2l6wAEB&scient=gws-wiz&ved=0ahUKEwjZ34DB-uzwAhWPsJ4KHxnuUAToQ4dUDCA4&uact=5](https://www.google.com/search?q=site%3Agithub.com+tinkercad&safe=strict&rlz=1C1GCEB_enCA845CA845&sxsrf=ALeKk01Pf34pzOWolNuufFtSvIbKyK2_aQ%3A1622224853291&ei=1S-xYJmhEY_h-gT5qlfQAw&oq=site%3Agithub.com+tinkercad&gs_lcp=Cgdnd3Mtd2l6EANQsh1YjkJgjkZoAXAAeACAATqIAbMEkgECMTGYAQCgAQGqAQodnd3Mtd2l6wAEB&scient=gws-wiz&ved=0ahUKEwjZ34DB-uzwAhWPsJ4KHxnuUAToQ4dUDCA4&uact=5)
  - <https://www.tinkercad.com/things>
  - <https://www.instructables.com/Build-a-Tinkercad-House-1/>
  - [How to Design 3D Population Maps Using Tinkercad](#) - Instructables

## STEM ADST Survey

- <https://www.tinkercad.com/learn/codeblocks>
    - <https://www.instructables.com/Learn-to-Design-With-Code-Using-Tinkercad-Codeblock/>
    - <https://www.instructables.com/Designing-Icicles-With-Codeblocks-in-Tinkercad/>
    - <https://www.instructables.com/Badges-With-Tinkercad-Codeblocks/>
    - <https://www.instructables.com/member/Tinkercad%20for%20Education/instructables/>
  - <https://www.tinkercad.com/lessonplans/design-your-own-dream-room>
  - <https://www.tinkercad.com/lessonplans/design-your-own-dream-room/share>
  - <https://www.tinkercad.com/lessonplans/reinvent-the-shopping-cart>
  - <https://www.tinkercad.com/lessonplans/biomimicry-and-using-nature-as-a-design-partner>
  - <https://www.tinkercad.com/lessonplans/recreate-a-pattern-found-in-nature>
  - <https://www.tinkercad.com/lessonplans/recreate-a-pattern-found-in-nature/share>
  - <https://blog.tinkercad.com/author/donald-bell>
  - <https://www.instructables.com/tinkercad/>
  - <https://www.instructables.com/member/EdgertonCenter/>
- c. Lego
- i. <https://www.mecabricks.com/>
  - ii. <http://www.publishyourdesign.com/>

### 3. Coding

- a. Code.org
  - b. html/css/javascript
  - c. <https://arcade.makecode.com/>
    - i. <https://arcade.makecode.com/~skillmap>
  - d. ...
4. Electronics and Robotics
5. Career Education
- a. EverFi
  - b. myBlueprint
6. Other
- a. <https://minecraft.makecode.com/>

How to login:

- go to <https://pixelpad.io/ftcsim/>
  - 3 bars top left > login
  - Username: Lfname (Capital first-initial last-name Capital first-name; one-word)
  - Password: STEM092021
1. [FTC SIM](#)
- 1. <https://pixelpad.io/blockly/> (blockly documentation)
  - 2. <https://pixelpad.io/first-simulator/> (FTC documentation)
  - 3. [FTC Intro](#) (start here)
    - i. [FTC Sim Introduction](#) (video on youtube)
    - ii. [FTC Sim Reverse](#)

iii. [FTC Sim Right Turn functions](#)

4. [Tutorial: FTC Movement](#)
5. [Tutorial: FTC Sensors](#)
6. [Tutorial: FTC Puzzles](#)
7. [Tutorial: FTC Grabby](#)

- [https://teams.microsoft.com/\\_#/school/conversations/P2-ADST%20Survey?threadId=19:e9584c19ad944e3f9bf3c26442cecc4d@thread.tacv2&ctx=channel](https://teams.microsoft.com/_#/school/conversations/P2-ADST%20Survey?threadId=19:e9584c19ad944e3f9bf3c26442cecc4d@thread.tacv2&ctx=channel) | Microsoft Teams
- <https://drive.google.com/drive/u/0/folders/1bwaL67pUBaWmqVNUTg7qiyGatni8RmKz> | MinecraftCoding - Google Drive
- <https://education.minecraft.net/class-resources/computer-science-subject-kit/> | Computer Science Subject Kit | Minecraft: Education Edition
- <https://education.minecraft.net/lessons/intro-to-cs-with-makecode> | Intro to CS with MakeCode | Minecraft: Education Edition
- <https://education.microsoft.com/en-us/learningPath/3eede2ae> | Minecraft: Education Edition: Teacher Academy - Microsoft Educator Center
- <https://education.microsoft.com/en-us/learningPath/3eede2ae/course/d1357616/overview> | Minecraft Apply and Enrich: Introduction to Coding - Microsoft Educator Center
- <https://www.microsoft.com/en-ca/makecode?rtc=1> | Microsoft MakeCode
- <https://arcade.makecode.com/> | Microsoft MakeCode Arcade
- <https://arcade.makecode.com/courses/csintro1> | CS INTRO 1
- <https://minecraft.makecode.com/> | Microsoft MakeCode for Minecraft
- <https://makecode.mindstorms.com/> | LEGO® MINDSTORMS® Education EV3 - Blocks / Javascript editor
- <https://www.microsoft.com/en-us/store/workshops-training-and-events/game-maker-guide-design-a-space-explorer432471356> | Game Maker Guide: Design a Space Explorer - Microsoft Store
- <https://education.minecraft.net/class-resources/challenges/> | Challenges | Minecraft: Education Edition
- [https://www.google.com/search?q=site%3Aeducation.minecraft.net%2Fwp-content%2Fuploads%2F+code&safe=strict&rlz=1C1GCEB\\_enCA845CA845&sxsrf=ALeKk00wfELu3BGc4S-pfOe\\_FcCksB0tDw%3A1622577780821&ei=dJK2YOPGMcv2-gTd4legBA&oq=site%3Aeducation.minecraft.net%2Fwp-content%2Fuploads%2F+code&gs\\_lcp=Cgdnd3Mtd2I6EANQ268EWInaBGCg4gRoAXAAeACAATWIAaICkgEBNpgBAKABAaoBB2d3cy13aXrAAQE&sclient=gws-wiz&ved=0ahUKEwj0PuhnffwAhVLU54KHV3wAUQQ4dUDCA4&uact=5](https://www.google.com/search?q=site%3Aeducation.minecraft.net%2Fwp-content%2Fuploads%2F+code&safe=strict&rlz=1C1GCEB_enCA845CA845&sxsrf=ALeKk00wfELu3BGc4S-pfOe_FcCksB0tDw%3A1622577780821&ei=dJK2YOPGMcv2-gTd4legBA&oq=site%3Aeducation.minecraft.net%2Fwp-content%2Fuploads%2F+code&gs_lcp=Cgdnd3Mtd2I6EANQ268EWInaBGCg4gRoAXAAeACAATWIAaICkgEBNpgBAKABAaoBB2d3cy13aXrAAQE&sclient=gws-wiz&ved=0ahUKEwj0PuhnffwAhVLU54KHV3wAUQQ4dUDCA4&uact=5) | site:education.minecraft.net/wp-content/uploads/ code - Google Search
- <https://arcade.makecode.com/docs> | Documentation
- <https://www.edsurge.com/research/guides/game-based-learning-preparing-students-for-the-future> | Game-Based Learning: Preparing Students for The Future | EdSurge Guides
- <https://code.org/minecraft> | Minecraft | Code.org
- <https://makecode.microbit.org/> | Microsoft MakeCode for micro:bit
- <https://www.microsoft.com/en-ca/makecode?rtc=1> | Microsoft MakeCode
- <https://minecraft.makecode.com/> | Microsoft MakeCode for Minecraft
- [https://www.google.com/search?q=get+started+with+makecode+microsoft&safe=strict&rlz=1C1GCEB\\_enCA845CA845&sxsrf=ALeKk01tQjvk5Ekinnye132xNucGW-HQJQ:1622567148572&source=Int&tbs=qdr:y&sa=X&ved=2ahUKEwjK1I7U9fbwAhXWv54KHTGoD0cQpwV6BAGBECM&biw=1050&bih=1547](https://www.google.com/search?q=get+started+with+makecode+microsoft&safe=strict&rlz=1C1GCEB_enCA845CA845&sxsrf=ALeKk01tQjvk5Ekinnye132xNucGW-HQJQ:1622567148572&source=Int&tbs=qdr:y&sa=X&ved=2ahUKEwjK1I7U9fbwAhXWv54KHTGoD0cQpwV6BAGBECM&biw=1050&bih=1547) | get started with makecode microsoft - Google Search
- <https://minecraft.makecode.com/getting-started> | Getting started

## STEM ADST Survey

- <https://minecraft.makecode.com/tutorials> | Tutorials
- <https://minecraft.makecode.com/docs> | MakeCode for Minecraft Documentation
- <https://minecraft.makecode.com/setup> | Setting up MakeCode for Minecraft
- <https://minecraft.makecode.com/tutorials> | Tutorials
- <https://www.microsoft.com/en-us/makecode> | Microsoft MakeCode
- <https://education.minecraft.net/lessons/intro-to-cs-with-makecode> | Intro to CS with MakeCode | Minecraft: Education Edition
- <https://education.minecraft.net/lessons/coding-introduction> | Unit 1: Introduction | Minecraft: Education Edition
- <https://education.minecraft.net/worlds/code-builder-tutorial> | Code Builder Tutorial | Minecraft: Education Edition
- <https://education.minecraft.net/wp-content/uploads/Intro-to-Coding-Resource.pdf> | Intro-to-Coding-Resource.pdf
- <https://education.minecraft.net/lessons/functions> | Functions | Minecraft: Education Edition
- <chrome-extension://ecabifbgmdmgdlomnfinbmaellmclnh/data/reader/index.html?id=205&url=https%3A%2F%2Feducation.minecraft.net%2Fblog%2Fnew-ways-to-code-introducing-python-content-for-minecraft-education-edition> | New Ways to Code: Introducing Python Content for Minecraft: Education Edition | Minecraft: Education Edition :: Reader View
- <https://education.minecraft.net/lessons/python-101-lesson-1> | Python 101 - Lesson 1 | Minecraft: Education Edition
- [https://meedownloads.blob.core.windows.net/learning-experience/Python%20101/Educator\\_Guide\\_Lesson\\_01.pdf](https://meedownloads.blob.core.windows.net/learning-experience/Python%20101/Educator_Guide_Lesson_01.pdf) | Educator\_Guide\_Lesson\_01.pdf
- <https://meedownloads.blob.core.windows.net/learning-experience/Python%20101/Scope%26%20Sequence.pdf> | Scope & Sequence.pdf
- <chrome-extension://ecabifbgmdmgdlomnfinbmaellmclnh/data/reader/index.html?id=208&url=https%3A%2F%2Fwww.makeuseof.com%2Flearn-javascript-minecraft-microsoft-makecode%2F> | Microsoft MakeCode for Minecraft: Learn JavaScript for Free While Having Fun :: Reader View
- [https://www.google.com/search?q=site%3Ameedownloads.blob.core.windows.net%2Flearning-experience%2F&safe=strict&rlz=1C1GCEB\\_enCA845CA845&sxsrf=ALeKk01HEQbJuo5gdlyjzXuGD0\\_v5mLe4w%3A1622568032602&ei=YGy2YN7oG8r4-gTdvZW4BA&oq=site%3Ameedownloads.blob.core.windows.net%2Flearning-experience%2F&gs\\_lcp=Cgdnd3Mtd2I6EANQrJcFWKyXBWCSmQVoAHAAeACAATaIAW aSAQEymAEoAEBqgEHZ3dzLXdpesABAQ&sclient=gws-wiz&ved=0ahUKEwjemMv5-PbwAhVKvJ4KHd1eBUcQ4dUDCA4&uact=5](https://www.google.com/search?q=site%3Ameedownloads.blob.core.windows.net%2Flearning-experience%2F&safe=strict&rlz=1C1GCEB_enCA845CA845&sxsrf=ALeKk01HEQbJuo5gdlyjzXuGD0_v5mLe4w%3A1622568032602&ei=YGy2YN7oG8r4-gTdvZW4BA&oq=site%3Ameedownloads.blob.core.windows.net%2Flearning-experience%2F&gs_lcp=Cgdnd3Mtd2I6EANQrJcFWKyXBWCSmQVoAHAAeACAATaIAW aSAQEymAEoAEBqgEHZ3dzLXdpesABAQ&sclient=gws-wiz&ved=0ahUKEwjemMv5-PbwAhVKvJ4KHd1eBUcQ4dUDCA4&uact=5) | site:meedownloads.blob.core.windows.net/learning-experience/ - Google Search
- [https://www.google.com/search?q=site%3Ameedownloads.blob.core.windows.net%2Flearning-experience%2FIslands\\_Python%2F&rlz=1C1GCEB\\_enCA845CA845&oq=site%3Ameedownloads.blob.core.windows.net%2Flearning-experience%2FIslands\\_Python%2F&aqs=chrome..69i57j69i58.5374j0j4&sourceid=chrome&ie=UTF-8](https://www.google.com/search?q=site%3Ameedownloads.blob.core.windows.net%2Flearning-experience%2FIslands_Python%2F&rlz=1C1GCEB_enCA845CA845&oq=site%3Ameedownloads.blob.core.windows.net%2Flearning-experience%2FIslands_Python%2F&aqs=chrome..69i57j69i58.5374j0j4&sourceid=chrome&ie=UTF-8) | site:/meedownloads.blob.core.windows.net/learning-experience/Islands\_Python/ - Google Search
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- <https://docs.google.com/document/d/19F4BUN1FLyCNFuPFP3ZkJPIq-RJ5m0q25ctKKuxHXml/edit> | Tinkercad Floorplan of your House - Google Docs
- [https://www.google.com/search?q=tinkercad+make+new+shape+generator&rlz=1C1GCEB\\_enCA845CA845&oq=tinkercad+make+new+shap&aqs=chrome.1.69i57j33i22i29i30i2.5900j0j7&sourceid=chrome&ie=UTF-8](https://www.google.com/search?q=tinkercad+make+new+shape+generator&rlz=1C1GCEB_enCA845CA845&oq=tinkercad+make+new+shap&aqs=chrome.1.69i57j33i22i29i30i2.5900j0j7&sourceid=chrome&ie=UTF-8) | tinkercad make new shape generator - Google Search

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- <https://tinkercad.zendesk.com/hc/en-us/community/topics/200363518-Shape-Generators> | Shape Generators – Tinkercad
- <https://www.latinostem.org/blog/tinkercad-academy-creating-something-in-tinkercad-lt4cz-7w4h2> | TinkerCad Academy #9: Using Shape Generators and Scribble Tool – LSA
- <https://blog.adafruit.com/2014/07/24/tinkercad-shape-generators-lets-you-code-your-models-for-3d-printing/> | Tinkercad Shape generators lets you code your models for 3D Printing #3DThursday « Adafruit Industries – Makers, hackers, artists, designers and engineers!
- <https://blog.adafruit.com/2018/07/19/how-to-use-tinkercad-codeblocks-to-create-a-3d-design-chuckhellebuyck-3dprinting-3dthursday/> | How to use Tinkercad Codeblocks to create a 3D Design @ChuckHellebuyck #3DPrinting #3DThursday « Adafruit Industries – Makers, hackers, artists, designers and engineers!
- <https://blog.adafruit.com/2014/06/19/james-floyd-kellys-tinkercad/> | James Floyd Kelly's "3D Modeling and Printing with Tinkercad: Create and Print Your Own 3D Models" #3DThursday #3DPrinting « Adafruit Industries – Makers, hackers, artists, designers and engineers!
- <https://blog.adafruit.com/2014/10/09/3d-printing-jet-engine/> | 3D Printing Jet Engine #3DThursday « Adafruit Industries – Makers, hackers, artists, designers and engineers!
- <https://blog.adafruit.com/tag/tinkercad/> | tinkercad « Adafruit Industries – Makers, hackers, artists, designers and engineers!
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- [https://teams.microsoft.com/\\_#/school/classroom/General?threadId=19:4fa8d217c3e44af0874fb70d85966f8a@thread.tacv2&ctx=channel](https://teams.microsoft.com/_#/school/classroom/General?threadId=19:4fa8d217c3e44af0874fb70d85966f8a@thread.tacv2&ctx=channel) | (2) General (STEM 9 Templeton 2021) | Microsoft Teams
- <https://drive.google.com/drive/u/0/folders/1rWZQlQakpPPqMcaBVf3X3v2pQyefcl00j> | ADST Survey - Google Drive
- [https://vsbworld.sharepoint.com/:p:/r/sites/JanzeMADIT09C01001ATempletonSecondary2021/\\_layouts/15/Doc.aspx?sourcedoc=%7B9C2393B9-1A12-4E55-81D4-DE2965F103CC%7D&file=FTCSim%20Virtual%20Robot%20Code.pptx&action=edit&mobileredirect=true&wdOrigin=TEAMS-ASSIGN-WEB.ASSIGN-STUD-VIEW.TCHR](https://vsbworld.sharepoint.com/:p:/r/sites/JanzeMADIT09C01001ATempletonSecondary2021/_layouts/15/Doc.aspx?sourcedoc=%7B9C2393B9-1A12-4E55-81D4-DE2965F103CC%7D&file=FTCSim%20Virtual%20Robot%20Code.pptx&action=edit&mobileredirect=true&wdOrigin=TEAMS-ASSIGN-WEB.ASSIGN-STUD-VIEW.TCHR) | FTCSim Virtual Robot Code.pptx
- [https://vsbworld.sharepoint.com/:p:/r/sites/JanzeMADIT09C01001ATempletonSecondary2021/\\_layouts/15/Doc.aspx?sourcedoc=%7B156C7C9B-1DC3-4C3E-B20E-3A39B9738BF2%7D&file=microbit%20accelerometer%20data%20logger.pptx&action=edit&mobileredirect=true&wdOrigin=TEAMS-ASSIGN-WEB.ASSIGN-STUD-VIEW.TCHR](https://vsbworld.sharepoint.com/:p:/r/sites/JanzeMADIT09C01001ATempletonSecondary2021/_layouts/15/Doc.aspx?sourcedoc=%7B156C7C9B-1DC3-4C3E-B20E-3A39B9738BF2%7D&file=microbit%20accelerometer%20data%20logger.pptx&action=edit&mobileredirect=true&wdOrigin=TEAMS-ASSIGN-WEB.ASSIGN-STUD-VIEW.TCHR) | microbit accelerometer data logger.pptx
- [https://docs.google.com/document/d/1TdOi9AZOXzCxekN\\_0E4bRdKNW8s62mDWkENzRL8cYIU/edit#](https://docs.google.com/document/d/1TdOi9AZOXzCxekN_0E4bRdKNW8s62mDWkENzRL8cYIU/edit#) | P2 FTCSim Coding - Google Docs
- <https://docs.google.com/document/d/1gBYWBjUCoa56Z-wQ8AilZxwZyRnO1yjTfradcTnjlfQ/edit#> | P1 CTD Coding Explanation 1 - Google Docs
- <https://docs.google.com/document/d/1RtWIM09oaqqCS8Ew00r9qgSlj4qsynUrlUvV0Wmy874/edit#> | P1 CDT Data Collected - Google Docs
- [https://docs.google.com/forms/d/e/1FAIpQLSc3kra891ZSMbeRRQSqdrTGyN\\_HO3kFt3400KBdLhzc6yr8qw/viewform](https://docs.google.com/forms/d/e/1FAIpQLSc3kra891ZSMbeRRQSqdrTGyN_HO3kFt3400KBdLhzc6yr8qw/viewform) | Digital Egg Drop Capsule Info
- <https://docs.google.com/spreadsheets/d/1INnN4KUSLw-gC3cewzMxqHQNfvmcUgCPMHpLE6OrtQI/edit#gid=1041364172> | Digital Egg Drop Capsule Info (Responses) - Google Sheets
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## STEM ADST Survey

- [https://www.google.com/search?q=average+floor+thickness+canada&safe=strict&rlz=1C1GCEB\\_enCA845CA845&sxsrf=ALeKk02jPH0vr3L\\_TUt-DXA0ol8INSSXQg%3A1622149649423&ei=EQqwYIKkGZT9-wSTrbPQAw&oq=average+floor+thickness+canada&gs\\_lcp=Cgdnd3Mtd2l6EAM6BwgAEEcQsAM6BAghEApQrMgBWNvjAWD75AFoA3ACeACAAU2IAZQFkgECMTCYAQCgAQGqAQdnd3Mtd2l6yAEIwAEB&sclicent=gws-wiz&ved=0ahUKEwjC8lCt4urwAhWU\\_p4KHZPWDDoQ4dUDCA8&uact=5](https://www.google.com/search?q=average+floor+thickness+canada&safe=strict&rlz=1C1GCEB_enCA845CA845&sxsrf=ALeKk02jPH0vr3L_TUt-DXA0ol8INSSXQg%3A1622149649423&ei=EQqwYIKkGZT9-wSTrbPQAw&oq=average+floor+thickness+canada&gs_lcp=Cgdnd3Mtd2l6EAM6BwgAEEcQsAM6BAghEApQrMgBWNvjAWD75AFoA3ACeACAAU2IAZQFkgECMTCYAQCgAQGqAQdnd3Mtd2l6yAEIwAEB&sclicent=gws-wiz&ved=0ahUKEwjC8lCt4urwAhWU_p4KHZPWDDoQ4dUDCA8&uact=5) | average floor thickness canada - Google Search
- <https://www.bobvila.com/articles/standard-ceiling-height/> | Here's the Standard Ceiling Height for Every Type of Ceiling - Bob Vila
- [https://manual.eg.poly.edu/index.php/Prototyping\\_with\\_Microcontrollers,\\_Sensors,\\_and\\_Materials\\_\(Virtual\)](https://manual.eg.poly.edu/index.php/Prototyping_with_Microcontrollers,_Sensors,_and_Materials_(Virtual)) | Prototyping with Microcontrollers, Sensors, and Materials (Virtual) - EG1003 Lab Manual
- <https://www.microsoft.com/en-ca/p/3d-builder/9wzdnrcfj3t6?activetab=pivot:overviewtab> | Get 3D Builder - Microsoft Store en-CA
- <https://vsbworld.sharepoint.com/sites/ProD/SitePages/PowerPoint--Beyond-Presentations.aspx> | PowerPoint: Beyond Presentations
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