

Tech Tots Syllabus

Geek Cred at HEC 25/26

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Objective: To introduce electronics and computer science concepts with developmentally appropriate activities that create a foundation of understanding and spark an interest for future, in-depth learning.

Note: The following is a detailed outline of the complete course. Activities are subject to change based on the needs of individual classes. E.g. Some classes will struggle with a subject, so we will take an extra week to achieve mastery.

FALL SEMESTER

Week 1 (Aug 25-29) - *What is Electricity?* Demonstration of projects. Safety. Will it conduct?

Week 2 (Sep 1-5) - *What is a Magnet?* Metals, electromagnets, generators

Week 3 (Sep 8-12) - *My First Circuit Journal* - Simple Circuits

Week 4 (Sep 15-19) - *My First Circuit Journal* - Parallel Circuits

Week 5 (Sep 22-26) - Snap Circuits - light with a switch

Week 6 (Sep 29-Oct 3) - Snap Circuits - motor with a fan

Week 7 (Oct 6-10) - LED Bugs (extra safety discussion about coin cell batteries)

Fall Break Oct 13-17

Week 8 (Oct 20-24) - *What is a Computer?* Make an abacus.

Week 9 (Oct 27-31) - *What's inside a Computer?* Make your own paper computer.

Week 10 (Nov 3-7) - *Hello Ruby*. Play Lego Bits and Bricks

Week 11 (Nov 10-14) - *Hello Ruby - Journey inside the Computer*. Create a Clicker Game on SCRATCH

Week 12 (Nov 17-21) - Finish Clicker Game on SCRATCH

Thanksgiving Break Nov 24-28

Week 3 (Dec 1-5) - Explore Minecraft Education Edition

Week 14 (Dec 8-12) - Explore Minecraft Education Edition

Week 15 (Dec 15-19) - Explore Minecraft Education Edition

SPRING SEMESTER

Week 1 (Jan 12-16) - *What is Electricity?* Demonstration of projects. Safety. Will it conduct?

Week 2 (Jan 19-21) - *What is a Magnet?* Metals, electromagnets, generators

Week 3 (Jan 26-30) - *Circuit Journal* - Simple Circuits

Week 4 (Feb 2-6) - *Circuit Journal* - Series Circuits

Week 5 (Feb 9-13) - *Circuit Journal* - Parallel Circuits

Winter Break Feb 16-20

Week 6 (Feb 23-27) - *Circuit Journal* - Switch Circuit

Week 7 (Mar 2-6) - Snap Circuits - Yellow Book

Week 8 (Mar 9-13) - Snap Circuits - Yellow Book

Week 9 (Mar 16-20) - Snap Circuits - Yellow Book

Week 10 (Mar 23-27) - Snap Circuits - Yellow Book

Spring Break Mar 30-Apr 10

Week 11 (Apr 13-17) - Challenges in Minecraft Education Edition

Week 12 (Apr 20-24) - Challenges in Minecraft Education Edition

Week 3 (Apr 27-May1) - Challenges in Minecraft Education Edition

Week 14 (May 4-8) - Challenges in Minecraft Education Edition

Week 15 (May 11-15) - Challenges in Minecraft Education Edition

Week 16 (May 18-22) - Challenges in Minecraft Education Edition