

TI STEM and Coding Resources: Getting Started and Beyond

TI-Nspire TI-Basic using TI-Innovator Hub, TI-Rover and more

See link https://resources.tistemprojects.com/tistemprojects-home?resource_id=3555

Getting Started with TI-Nspire TI-Basic

- **Overview of TI-Nspire (video)** https://www.youtube.com/watch?v=gdHOCeoScio&list=PL17Fe0ZmhCR_j09b202PUI0wfaRYSLQka&index=2
- **Write your first TI-Basic program with TI-Innovator Hub (video)** https://www.youtube.com/watch?v=kaTWqt2CDx4&list=PL17Fe0ZmhCR_j09b202PUI0wfaRYSLQka&index=3
- **10 Minutes of Code for TI-Basic Unit 1: Program Basics** <https://education.ti.com/en/activities/ti-codes/nspire/10-minutes>
- **Meet the Rover** https://resources.tistemprojects.com/tistemprojects-home?resource_id=3485
- **10 Minutes of Code for TI-Basic with Hub and Rover Unit: 1 Hub and Unit 4: Rover** <https://education.ti.com/en/activities/ti-codes/nspire/10-minutes-innovator>

TI-Innovator Hub Projects and Activities

Smart System Projects

- **Digital Mood Ring** https://resources.tistemprojects.com/tistemprojects-home/?resource_id=1890
 - includes step-by-step videos https://www.youtube.com/playlist?list=PL17Fe0ZmhCR_j09b202PUI0wfaRYSLQka
 - download teacher document <https://education.ti.com/en/~media/95ee62a955f94b0cbbfde59fbd14f168.ashx?h=16&thn=1&w=16&rev=5a8d1baa-0bed-4b9c-ac46-a6b2a4a577f5>
 - download teacher project background document <https://education.ti.com/en/~media/6b32df8635b9403dba33ad8d32fbffdb.ashx?h=16&thn=1&w=16&rev=35bc94de-dc4e-48e7-b07d-c7b47b418061>
 - download student handout <https://education.ti.com/en/~media/196e269017224c0ba9827201c8b44c61.ashx?h=16&thn=1&w=16&rev=b1e656a3-5097-4e1f-8dd1-6758d17826fc>
 - download TI-Nspire file with example programs <https://education.ti.com/en/~media/4faa423ed9d74c95a759558e5f51613a.ashx?h=16&thn=1&w=16&rev=c6e2f245-176a-4778-9b64-3b010535c9fc>
 - download Explore the science of color TI-Nspire file <https://education.ti.com/en/~media/238fc7e6ab3649df9aa8cbf59eea7578.ashx?h=16&thn=1&w=16&rev=bad895af-0552-403b-8564-62fb5c46a70f>
- **Four-Chambered Heart** https://resources.tistemprojects.com/tistemprojects-home/?resource_id=2175
 - Download Heart Build Sheet PDF <https://education.ti.com/en/~media/5c8e40a17dab454b039f4cd563bed71.ashx?h=16&thn=1&w=16&rev=e526f9bc-e985-4454-9cec-ed2a52a838d3>
 - Quick demonstration video <https://www.youtube.com/watch?v=PqcsOORAiLO>
- **Smart Irrigation Project** https://resources.tistemprojects.com/tistemprojects-home/?resource_id=1802
 - Blog Post from US Teacher <https://education.ti.com/en/bulletinboard/2022/smartwater>
 - Demonstration Video by TI STEM Team https://www.youtube.com/watch?v=U3Nf_9xvWEs
 - Video from High School in Portugal <https://www.youtube.com/watch?v=afvYR8WNTbl>
- **Pet Car Alarm Project** https://resources.tistemprojects.com/tistemprojects-home/?resource_id=1852
 - Demonstration video by TI STEM Team <https://youtu.be/0EguJwSzcDQ>
- **Some Like it Tepid** https://resources.tistemprojects.com/tistemprojects-home/?resource_id=2435
- **Making Music with Code** https://resources.tistemprojects.com/tistemprojects-home/?resource_id=2271
 - download teacher document <https://education.ti.com/en/~media/5dfc7db4f13240729307ec0b74d4bc6d7.ashx?h=16&thn=1&w=16&rev=2049b042-388c-4812-bcd4-54894cbb779a>
 - download student handout <https://education.ti.com/en/~media/132a7455a6f3431eb348a80a4109aaec.ashx?h=16&thn=1&w=16&rev=1176b57d-89e8-4a9c-b8a8-2f8e4ccfb328>
 - download piano keyboard reference guide <https://education.ti.com/en/~media/397f23785ac34965bc1629b427f18405.ashx?h=16&thn=1&w=16&rev=8b781082-dee9-4a0f-9d9e-4b6ade7db41b>
- **Running the Bases (with TI-RGB Array)** https://resources.tistemprojects.com/tistemprojects-home?resource_id=3013
- **STEM Event TI-Innovator Hub and Rover activities** https://resources.tistemprojects.com/tistemprojects-home/?resource_id=2986

TI-Rover Projects and Activities

- **Meet the Rover** https://resources.tistemprojects.com/tistemprojects-home?resource_id=3485
- **Rover, Watch Out for Rover** https://resources.tistemprojects.com/tistemprojects-home?resource_id=2905
- **On-Ramp to Robotics: Unit 1 Motion Mars Challenge** https://resources.tistemprojects.com/tistemprojects-home/?resource_id=2069
- **On-Ramp to Robotics: Unit 2 Sensing Mars Mineral Challenge** https://resources.tistemprojects.com/tistemprojects-home/?resource_id=2176
- **Math in Motion Lessons** <https://education.ti.com/en/activities/innovator/math>
- **STEM Event TI-Innovator Hub and Rover activities** https://resources.tistemprojects.com/tistemprojects-home/?resource_id=2986

Other Resources

- **TI Codes Lessons and Resources** <https://education.ti.com/en/activities/ti-codes/nspire>
 - 10 Minutes of Code for TI-Basic_ <https://education.ti.com/en/activities/ti-codes/nspire/10-minutes>
 - 10 Minutes of Code for TI-Basic TI-Innovator and Rover <https://education.ti.com/en/activities/ti-codes/nspire/10-minutes-innovator>
 - RGB Array Unit 7
 - 10 Minutes of Code Teacher's Lounge <https://education.ti.com/en/activities/ti-codes/nspire/teacher-lounge>
 - Download student handouts
 - See curriculum alignments
- **Path to STEM Projects**, TI-Innovator Hub and breadboard engineering and coding activities that explore analog and digital inputs and outputs, calibration and a feedback and control system. <https://education.ti.com/en/activities/stem/path-to-stem/nspire-cx>
- **Learning to Code with Python Using TI-Nspire CXII Technology (On Demand Webinars)**
 - **Adventures in Coding and STEM in the Mathematics Classroom** <https://education.ti.com/en/t3-professional-development/for-teachers-and-teams/online-learning/on-demand-webinars/2018/adventures-in-coding-and-stem-in-the-math-classroom>