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STEM Apps for Android Devices

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STEM Apps for Android

Interactives

Anatomy 4D

http://goo.gl/HousPe
Anatomy 4D is an augmented reality app that gives you a virtual tour of the human body. Print out the image target, lay it out on a flat surface and aim your camera at it. Then the Anatomy 4D will display a 3D computer graphics rendering of the human body and its various organ systems. Users can zoom in and out on the model, change the viewing angle by moving your phone around the target, and selectively view particular systems in the body, such as the skeletal, lymphatic, or respiratory system.

Augment 3D

http://goo.gl/e61lN6

Augment (Android, iOS) is an AR app aimed squarely at sales and marketing, as well as design visualization. Through the use of an Augmentedev account, marketers and designers can upload 3D models that they can associate with custom tracker images, which they can then print out and view with the app in order to visualize their models in physical space. Check out their Educational examples: http://augmentedev.com/augmented-reality-education.php

Edudroid

http://goo.gl/N5PXPm

Current learning content includes... picture creator, stop motion, triangular maths, word searches, handwriting, phonics, spelling, reading, eBooks, quizzes, multiplication, number bonds, precision teaching, sound recording, money counting, hundreds tens and units, time, flash cards, app lock and more... all in one app.

Google Earth

http://goo.gl/XRiJm6

Fly around the planet with a swipe of your finger with Google Earth for Android. Explore distant lands or reacquaint yourself with your childhood home. Integrated Google Maps Street View allow you to explore the world at street level. Browse layers including roads, borders, places, photos and more. Visit the Earth Gallery to find exciting maps such as real-time earthquakes, planes in flight, hiking trails, city tours, and more.

Google Sky Map

http://goo.gl/Wdv96B

This app turns your Android device into a window on the night sky. Track constellations, see where planets and stars are to your actual location and viewpoint. Teach kids about their location in the solar system. Let them see how celestial bodies are still present even if we don't see them.

Kids Shapes (Preschool)

http://goo.gl/IYxydO

A hands-on, real-life way for kids to learn shapes.   The shapes currently included are circle, rectangle, triangle, square, rhombus and oval. The game does not overload children and parents with too many audio and visual stimuli. Coping with stress and over-stimulation is therefore one skill that your kids won't be practicing during this game.

Space Agency

http://goo.gl/eZB1y7

Do you want to build and fly your own space rockets? Of course you do! Are you a billionaire? No...that makes it tricky. Fortunately, there is a way for us non-billionaires to run our own space program...Space Agency! Build rockets, Launch satellites, Create a space station, Explore the solar system! This is a highly challenging and complex game. Only the most talented astronauts should attempt it. Have you got the right stuff?

Super Contraption

http://goo.gl/dV0DuP

Super Contraption is a physics sandbox construction game all about building machines. Build whatever contraption you can imagine! See what machines you can think up. See how your contraptions operate under different conditions, like on the moon or deep under water. Experiment with gravity, air resistance,magnetism and more with more concepts being added regularly. Build ANYTHING, like say a rocket ship with cupcake cannons, or a blimp fortress.
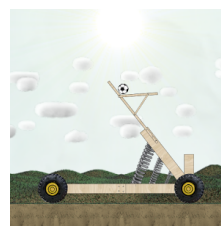
Utilities

## Chemistry Lab Suite

http://goo.gl/jNxNGy

Chemistry Lab Suite is the #1 app for professionals and students in the field of peptide chemistry, mass spectrometry based proteomics and metabolomics, biochemistry and general lab work. This completely free app offers a set of various dedicated tools grouped in four sections helping scientists and students: Solutions, Proteins, Peptide Synthesis, Chemicals & Elements

Geogebra

http://goo.gl/VDPYVy

GeoGebra (www.geogebra.org) is free dynamic mathematics software for all levels of education that brings together geometry, algebra, spreadsheets, graphing, statistics and calculus in one easy-to-use package. Interactive learning, teaching and evaluation resources created with GeoGebra can be shared and used by everyone at www.geogebratube.org. GeoGebra is the world's favorite dynamic mathematics software, has received numerous educational software awards, and supports STEM education and innovations in teaching and learning worldwide.
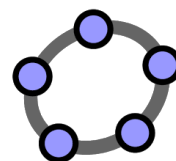
High School Physics - Free

http://goo.gl/0ZOfia

Mathematics is the language of Physics and is very critical for understanding some of the advanced concepts in it. But many times, a great number of Physics enthusiasts often get intimidated by the vast amount of Mathematics used in Physics. The app High School Physics tries to solve that problem. This app provides a great tool that helps student to concentrate on Physics without having to be drowned in the sea of Mathematical Equations. Includes equations calculator for over 170 equations, 160+ definitions covering all topics, equations and graphs for all formulas, and more.
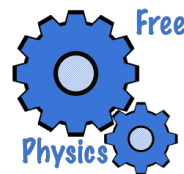
Mathlab Graphing Calculator

https://play.google.com/store/apps/details?id=us.mathlab.android

Graphing calculator with algebra. Essential tool for school and college. Replaces bulky and expensive handheld graphing calculators. Multiple functions on a graph, polar graphs, graphing of implicit functions, values and slopes, roots, extremes, intersections. Algebra: polynomials, polynomial equation solving, matrices, fractions, derivatives, complex numbers and more. Shows results as you type. Use menu to switch between modes.

Periodic Table

http://goo.gl/Xn90pQ
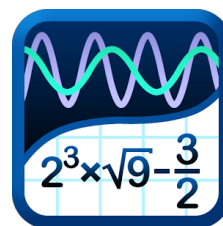
Best periodic table of chemical elements. Chemistry in your pocket. Features: 118 elements, Atomic, thermodynamic, material, electromagnetic, nuclear properties and reactivity for each element, Electron shell diagram for each element, Like Holo interface, Solubility chart.

Pocket Code

http://goo.gl/cERmSN

Create and Play! [Update: now with intro and tutorials at http://catrob.at/i and https://pocketcode.org/tutorial] Pocket Code allows you to create, edit, execute, share, and remix Catrobat programs in a visual, "LEGO-style" programming environment. You can develop your own games, animations, interactive art, music videos, and many kinds of other apps, directly on your phone or tablet. You can remix programs that others have made and share them with your friends and the world. With Pocket Code you can up- and download Catrobat programs through the Pocket Code community website athttps://pocketcode.org/ --- All Catrobat programs uploaded to this site can be downloaded by anyone under a free open source license to maximize learning, remixing, and sharing them freely.

STEM Mobile Labs

http://goo.gl/hL9MXt

STEM Mobile Labs provides high school students with some of the best STEM-focused digital educational content available for mobile devices. The app brings together a curated selection of innovative FREE apps that explore science, technology, engineering, and math, making it easy for students to conduct real-world and virtual experiments, participate in scientific research, collect data, and more, using the unique capabilities of wireless technology.

Games

Angry Birds Space

http://goo.gl/7ZStWW

Angry Birds Space features more than 200 interstellar levels on planets and in zero gravity, resulting in spectacular gameplay ranging from slow-motion puzzles to lightspeed destruction. This game was created in partnership with NASA and makes great use of game mechanics to teach about gravitational forces, & Newton's Laws.

Crazy Machines Golden Gears Lite

http://goo.gl/bs8aCk

How do you get the Professor's Wind-Up Mouse to the other side of the room? Open the inventory, choose your parts and put your thinking cap on! With over 60 different Parts in your inventory, each puzzle can be solved in your own unique way. Lasers, Nitros, Dynamite, and Explosives can be used to cause constructive damage. Tie objects with Balloons or Weights for a rise or fall. Activate the Mouse or Truck to push and pull your objects to their destination. The possibilities are endless!

Ingress

http://goo.gl/w0EPyJ

Ingress is a massively multiplayer augmented reality game, and the playing field is the world itself. Players take the role of members of rival secret societies fighting for control of a mysterious energy source. Players take their Android devices and then travel to real world locations to gather "XM" and gain control of portals around the world, encouraging you to explore the world around you.

Kid Mode: Free Games + Lock Zoodles

http://goo.gl/OpL6Oq

Fun, educational games for kids 8 and under. All your child's favorite Android apps in one place. This app also locks your device so that the child cannot leave it easily.

Math Duel

http://goo.gl/vxfjJH

This free game for kids and adults includes basic mathematical operations – addition and subtraction, multiplication and division and there is also an option for you to turn off whichever operation you want, for example, to give your preschool kid to play and learn math in a fun way. If you don't believe us, try it and see it for yourself how challenging it can be. Don't start a fight, unless it's a math fight!

PBS Parents Play & Learn HD

http://goo.gl/PPi0sT

The PBS Parents Play & Learn app makes it easy for parents to seize upon those daily "teachable moments" through theme-based interactive games and simple hands-on activities that connect math and literacy skills to everyday experiences. Engage with kids in fun learning games tied to everyday experiences – cooking in the kitchen, a trip to the grocery store, bath time, riding in a car, a visit to the park. This bilingual (English/Spanish) app makes anytime learning time!

PowerGrid

http://goo.gl/qW8yg0

Fun, fast and challenging game where you have to connect power nodes as fast as you can to complete the power grids.

Rocket Crane

http://goo.gl/Vp2NLi

Rockets are cool⋯ Cranes are cool⋯ How about a rocket powered Crane? Use the crane to solve complex construction puzzles. Use the sandbox to build anything you like. This game helps reinforce concepts of simple machines and Newton's Laws.

STEM Trivia

http://goo.gl/Y3PM0B

This trivia game was created to inspire and educate children and adults alike about the STEM fields (Science, Technology, Engineering and Math). As an added bonus, there are trivia questions about the organization of FIRST. FIRST's mission is to inspire young people to be science and technology leaders, by engaging them in exciting mentor-based programs that build science, engineering and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.
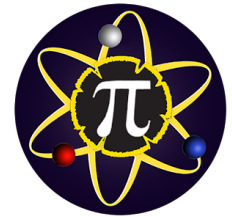
Table Zombies AR Lite

http://goo.gl/2CLg4E

Table Zombies is more of an augmented reality tech demo than a real learning app, but kids love it and it helps start a conversation about Augmented Reality apps. The primary objective of the game is to stop the zombies from reaching the survivor base and you are not all alone, you have the survivors team to back you up at Ground Zero and stop the zombie infestation.

Download the pdf from here: http://srgunitedsolutions.com/tz_marker.pdf   print it out and place it in your desktop, the game level will pop right on top of it.

Where's My Water (Free)

http://goo.gl/1zqWCE

Help Swampy by guiding water to his broken shower. Each level is a challenging physics-based puzzle with amazing life-like mechanics. Cut through dirt and guide fresh water, dirty water, toxic water, steam, and ooze through increasingly challenging scenarios! Every drop counts!   This game teaches basic physics, problem solving, and simple machines.

World of Goo (Demo)

http://goo.gl/4sRpsy

Drag and drop living, squirming, talking, globs of goo to build structures, bridges, cannonballs, zeppelins, and giant tongues. This game helps teach basic concepts of engineering, construction, and physics.