PROPOSED STEAM STUDIO CHARTER SCHOOL
EXECUTIVE SUMMARY

This was prepared by the STEAM Studio Charter School applicant group.

STEAM Studio **is a proposed public charter high school for creativity and innovation** that focuses on **S**cience, **T**echnology, **E**ngineering, **A**rt + Design, and **M**athematics. Our curriculum blends the mind of a scientist or technologist with that of an artist or designer, and teaches flexible thinking and creative problem solving needed to succeed in today's global economy.

Our learning model is a union of best-of-breed academics and project-based learning in which students pursue two concentrations:

- **Computing and Digital Arts**: Students take on the roles of professionals working in the field and explore areas that combine computing with the arts and humanities such as: mobile app creation, game design, software development, music and video production, and film/animation.
- **Health Sciences:** Students take on the roles of professionals working in the field and do projects in areas such as: internal medicine, nutrition, biotechnology, orthopedics, epidemiology, bioinformatics, clinical research, and health care policy.

Students invent and develop solutions with a "learning by doing" approach that prepares students for higher education and careers in high-growth, high-demand fields.

OUR FOCUS

- **Inspire students to be innovators, creators, and breakthrough thinkers**, by engaging them in challenging courses and projects that:
  - **Build** creative confidence to approach the challenges students will face in the future
  - **Cultivate** critical thinking, creativity, collaboration, and communication
  - **Develop** leadership & well-rounded life skills
  - **Prepare** students to excel in higher education or at jobs in the innovation economy
- **Help all students flourish.** Students who are struggling with a particular subject get the time and attention they need to master that area, while those who are ready to learn more can take on greater challenges.
- **Incorporate the latest advances** in technology and online learning, where students have anytime, anywhere access to all content– on smartphones, tablets, and PCs.

OUR APPROACH

Academic Foundation: Blended Classroom learning – integrating face-to-face with online instruction based on the Common Core and State Standards.

Project-Based Learning: Extends classroom learning with exciting projects that foster analysis, reflection, critique, and dialog. Students work individually and on teams, where they perform various project roles (e.g. designer, engineer, and entrepreneur). Students tackle real world challenges that provoke the imagination and ignite passion.

Students work in themed spaces – called Studios. Studios allow students who are visual thinkers, spatial reasoners, and mechanically minded to approach learning from a practical hands-on standpoint. Studios include Computing/Design, Biotech, and Music/Video Production

OUR CULTURE

Entrepreneurship in Practice: Entrepreneurship is a major theme throughout the school. Students will interact with innovative organizations, including UMass Lowell's Center for Innovation and Entrepreneurship and the Cambridge Innovation Center, home to New England's most exciting technology start-ups and life sciences companies.

Global Connections & Collaborations: Students will collaborate across countries & communities on projects that impact the world and produce documentaries sharing their experiences.
Teacher Community: Staff will collaborate several hours each week to discuss experiences; address what needs attention; enhance school culture; and refine curriculum and projects.
Parents as Partners: We will build close ties with parents and they will be briefed bi-weekly on what their children are learning and on their progress.

IN ADDITION TO THE ACADEMICS
We aim to instill these essential habits of mind in our students:

- **Confidence:** Being unafraid to tackle hard problems. Knowing how to break large problems into smaller pieces and address those pieces.
- **Creativity**: Being able to synthesize new ideas and apply them to new challenges.
- **Perseverance**: Seeing the value of grit and determination in both overcoming adversity and embracing opportunities.
- **Resilience**: Adapting to changing circumstances, new technology, different cultures, and new ways of thinking. Affirming the idea of lifelong learning.
- **Initiative**: Developing the attitude and skills of a self-starter, someone who dives into the solution of problems and makes discoveries even when the final outcome is unknown.
- **Kindness**: Treating people with kindness & respect, and treating oneself the same way.

SENDING DISTRICT & LOCATION
The sending district will be Andover and the school will be located in Andover**.** It will span Grades 9-12 with a maximum enrollment of 450. The school will enhance learning options and offer unique project-based concentrations - Computing & Digital Arts and Health Sciences – not offered in Andover or surrounding communities.

COMMUNITY DEMONSTRATION OF SUPPORT
Parents from across the community are expressing strong support for STEAM Studio. Additionally, Andover High School is 200+ students over capacity. In spring 2014 or 2015, Andover residents will likely be asked to fund a multi-millon dollar expansion at Andover High. If STEAM Studio is granted a Charter, Andover residents will likely not have to fund an expansion.

FOUNDING GROUP'S ABILITY TO MAKE THE SCHOOL A SUCCCESS
Team members are experienced in K12 and higher education, and possess deep knowledge of public policy, financial oversight, and governance. Our Founding Team:

- Current 10-year Andover School Committee member and former high tech CEO, with 10+ years budget experience with Andover Public Schools ($30M- 68M) and in the private sector
- E-Learning expert with 18 years of leadership and management experience in digital education at edX, PBS, and WGBH
- Neuropsychogist and learning expert who teaches at Harvard Medical School
- Experiened course developer, instructional designer, online teacher and author
- Artist and designer at MIT. Expert at the intersection between science and design, and a former charter and public high school Math and Visual Arts teacher
- Software engineer/entrepreneur, former Mass. Library Commissioner; 7 Yr. Finance Comm.
- Professor of Engineering at Tufts Univesity with vast technology & medical industry expertise.