THE PATRON SAINT OF
MAKING AND CODING

To support children's learning, we must give them opportunities to design, create, experiment, and explore. Logo, Scratch, and the maker movement do just that.

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Seymour Papert has served as inspiration for every educational technology project I've worked on: LEGO Mindstorms, Computer Clubhouses, Scratch, and more. Seymour was a true visionary, recognising possibilities and opportunities decades before others. The projects and ideas that he developed, starting in the 1960s, laid the intellectual foundation for today's maker movement and Learn to Code movement. I think it's fair to consider Seymour as the patron saint of making and coding.

Looking beyond technology

To understand Seymour's contribution, it's important to look beyond the technology. Seymour is probably best known for his Logo programming language, the first programming language for children. But what's more important are the ideas underlying Logo. Seymour's Constructionist theory of learning provided a new vision of how children learn, and how we can support their learning. Seymour argued that children learn best when they are actively engaged in making things and expressing themselves.

Seymour's Constructionist theory has guided our work on Scratch. On the MIT Scratch Team, we sometimes talk about our approach in terms of the "Four P's of Creative Learning," all of which build on Seymour's ideas.

A Scratch project honouring Seymour Papert, created by Scratch community member eduardm. See the full project at **helloworld.cc/2jrdCUu** ▼

Thank You Seymour! 1928-2016
by eduardm

? Thank you Seymour!

Four P's of Creative Learning

Projects. Seymour worried that schools too often introduce students to a disconnected set of concepts and skills. Instead, Seymour advocated a project-based approach to learning, in which students learn concepts and skills in the context of meaningful projects. Rather than introducing coding through a series of puzzles, Scratch supports children in turning their ideas into games, stories, and other projects.

Passion. People often think that children want things to be easy. Seymour knew otherwise. He recognised that children are willing to work hard, and tackle difficult problems, when they were working on projects connected to their interests. He called this "hard fun." In Scratch, we support many different types of projects, since we know that children have many different interests. We view the incredible diversity of projects on the Scratch website as a sign of success.

Peers. Seymour was inspired by the samba schools in Brazil, where people come together to create music and dance routines for the annual carnival festival. We see Scratch as a type of online samba school. We created the Scratch online community at the same time as creating the programming language, since we recognised the importance of children learning with and from one another.

Play. Seymour embraced a playful approach to learning, encouraging learners to try new things, experiment, take risks, and learn from failures. We designed Scratch to support playful tinkering. It's easy for children to snap together programming blocks, take them apart, and playfully experiment with new possibilities.

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Putting ideas into practice

It's not always easy to put Seymour's ideas into practice, but it's worth the effort. I will be happy and proud to spend the rest of my life trying to turn Seymour's visions into reality, and I hope others will too.   (HW)