What is computational thinking?

It sounds complex, but computational thinking is something you already know how to do. You use it every day when you take a "big problem" or a big activity and break it down into little, easy-to-do steps. You use it when you prepare a meal, learn a sport, draw a picture, dance, tell a story, or sing a song. Computational thinking makes it easier to solve *any* problem or create and complete *any* activity.

Humans designed computers to use computational thinking so that a computer -- or human — can effectively solve a problem or complete an activity, step by step.

"Computational thinking" is not trying to get humans to think like computers. It's the other way around. Computational thinking is a natural thought process humans have been using way before computers were invented. Now it's time for students to creatively exercise their computational thinking skills, starting in elementary school.

"Computational thinking will be a fundamental skill used by everyone in the world by the middle of the 21st century. By fundamental, I mean as fundamental as reading, writing and arithmetic." It's a process of thinking that is recognized as the ABCs of the 21st Century."
Jeannette M Wing, Corporate Vice President at Microsoft Research

What is Play by Play™?

PLAY by PLAY is a computational thinking curriculum for the creative arts, designed to help teachers and students understand and practice computational thinking strategies needed for the 21st Century.

PLAY by PLAY enables teachers and students to use computational thinking to collaborate together to create and perform original songs, stories, scenes and plays about any STEAM subject or any topic.

While doing PLAY by PLAY "unplugged" –— no computers necessary -- teachers and students experience how rapidly computational thinking streamlines the creative process and – at the same time -- effectively strengthens teamwork and community collaboration.

Once teachers and students understand how natural the computational thinking process is, and it's time to power-up the computers, PLAY by PLAY offers STEAM activities for using computer technology as an additional creative tool.