

K-5 Computing: Design in Action

What's going on?

One level of abstraction related to the development process, can be labeled as problem, design, code and running the code. A student's ability to move between these levels is a key indicator of programming ability. As a teacher you are probably using the essence of these levels in your classroom already, especially the **design level**.



What is it?

Imagine a builder who is going to build a house without knowing how many windows and doors it should have! Just like in construction, in programming, design is necessary to map out your intended result.

Design is a key component of any software project.



Why does it matter?

As students move on to higher levels of computer science, design skills become more necessary with more complex projects. Students will take with them an ability to create a clear plan that lays out what they need to learn and do.



How to use it?

- **Inform lesson plans.** Use students' designs to create future lesson plans. Decide what needs to be taught and when based on the skills students need.
- **Keep on track.** Periodically lead students back to the design stage to keep them on track and on task. For upper elementary students, this may include assessing learning through their progress.



Design in Action

Teacher Toolkit

Research

Podcast



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