

## Components of Effective Professional Development Programs for K-12 educators

- Long-term, sustained and intensive
- Integrates content and pedagogy
- Modeling of teaching strategies
- Connects to classroom practice and include supports
- Connects to standards/frameworks
- Incorporates the Science and Engineering Design practices and learning progressions
- Establishes a supportive culture
- Provides models for adapting materials and teaching effectively with them
- Creates opportunities for teachers to share/network/work collaboratively
- Embraces online technology
- Creates opportunities for teachers to share/network/work collaboratively
- Shares local and regional resources for teachers and classrooms
- Clarifies objectives and regularly points out where participants are in the process
- Structured but adaptable facilitation
- Provides opportunities to reflect on learning
- Participants move between roles as “adult learners” and that of “teachers”
- Participation and/or support of school leadership
- Provides continued support during and after PD session(s)
- Facilitators debrief, use tools for surfacing participants learning and for engaging everyone – goals is to move whole group forward
- Provides feedback loop for both participant and PD provider
- Provides professional learning points and/or graduate credit
- Recognizes that teachers have different backgrounds and learning needs
- Is off sufficient depth to be meaningful
- Models and engage teachers in instructional practices that support learning
- Includes discussion of what participants experienced and its implications for their own classrooms