



Job Description Project Lead the Way Design Teacher

General Statement:

The **Project Lead the Way (PLTW) Design Teacher** facilitates collaborative problem solving with each student in order to effectively assess their needs and progress through PLTW Gateway units of study. The **PLTW Design Teacher** is responsible for planning hands-on lessons to engage students in collaborative problem solving with the primary aim of connecting their learning to the real world. The **PLTW Design Teacher** will use an interdisciplinary approach to teaching and learning of the Common Core and ISTE standards for educators through explorations of coding and robotics, data processing, and the design process. The **PLTW Design Teacher** reports to building administration.

Course Descriptions:

6th Grade - Design and Modeling.

Design and Modeling (DM) provides students opportunities to apply the design process to creatively solve problems. Students are introduced to the unit problem in the first activity and are asked to make connections to the problem throughout the lessons in the unit. Students learn and utilize methods for communicating design ideas through sketches, solid models, and mathematical models. Students will understand how models can be simulated to represent an authentic situation and generate data for further analysis and observations. Students work in teams to identify design requirements, research the topic, and engage stakeholders. Teams design a toy or game for a child with cerebral palsy, fabricate and test it, and make necessary modifications to optimize the design solution.

7th Grade - App Creators.

App Creators (AC) introduces students to the field of computer science and the concepts of computational thinking, through the creation of mobile apps. Students are challenged to be creative and innovative, as they collaboratively design and develop mobile solutions to engaging, authentic problems. Students experience the positive impact of the application of computer science to society as well as to other disciplines, particularly biomedical science.

The unit provides students opportunities for self-expression. Teams identify a personal or community problem of interest to them that can be solved with a mobile app solution. The problem can address issues such as health and wellness, the environment, school culture, emergency preparedness, education, community service—the options are endless!

8th Grade - Automation and Robotics.

In Automation and Robotics (AR) students explore robotics and automation as they take on the role of interns, and work in teams to create prototypes to meet the needs of clients. They build and analyze mechanical systems and automate them with programmed input and output devices.

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Major Responsibilities:

- Demonstrates knowledge and application in the Common Core standards of reading, writing, and mathematics and ISTE standards as they connect and support the PLTW Gateway units of study.
- Effectively engages students in hands-on lessons focused on collaborative problem solving.
- Demonstrates knowledge of human growth and development as it relates to connecting the teaching and learning process to real-world scenarios.
- Effectively communicates with students, parents, and staff.
- Effectively organizes time, space, materials, and equipment for instruction.
- Effectively assesses student needs and progress.
- Effectively meets the needs of exceptional students, including ELL strategies.
- Inspires students to stretch their learning in new and innovative ways.

Physical and Mental Demands, Work Hazards:

Works in standard office and school building environments.

Knowledge and Skills:

- Commitment to creating schools that provide an education that cultivates productive habits of mind, body, and heart in every student.
- Proficient in utilizing Google Classroom or other digital classroom platforms.
- Understands how to utilize multiple communication platforms such as email (Outlook and Gmail), Remind, Lions Bridge.
- Demonstrated knowledge of applicable Common Core State Standards, Technology Standards, and Design Criterion.
- Evidence of ability to work cooperatively with administrators, teachers, and paraeducators.
- Evidence of organizational ability and willingness to pursue tasks to successful completion.
- Superior communication skills (oral and written).
- Working knowledge of and/or demonstrate the ability to learn and implement Operating Systems (i.e. Windows, Chrome); Productivity Software (i.e. Microsoft Office Suite - Word, Excel, PowerPoint; Google Workspace - Docs, Sheets, Slides, Gmail; Adobe Acrobat); Communication and Collaboration tools (i.e. Google Meet, Zoom, Microsoft Teams); Accounting Software (i.e. Oracle, QuickBooks); Student Information Systems (i.e. Naviance, Power School, CT-SEDS); or any other technology deemed relevant for this position.

Qualifications:

- CT CSDE Teaching Certification endorsed for:
 - 6th Grade - Design and Modeling.
 - Any grade and content appropriate certificate endorsed for:
 - Elementary, K-6 (013) or Elementary, 1-6 (305)
 - Business, 7-12 (010)
 - Computer Science (110)
 - Home Economics, PK-12 (045)
 - Mathematics, 7-12 (029); Mathematics, Middle School, 4-8 (229)
 - Science:
 - Biology, 7-12 (030); Biology, Middle School, 4-8 (230)
 - Chemistry, 7-12 (031); Chemistry, Middle School, 4-8 (231)

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- Earth Science, 7–12 (033); Earth Science, Middle School, 4–8 (233)
 - General Science, 7–12 (034); General Science, Middle School, 4–8 (234)
 - Physics, 7–12 (032); Physics, Middle School, 4–8 (232)
 - Technology Education, PK–12 (047)
 - 7th Grade - App Creators.
 - Any grade appropriate certificate.
 - 8th Grade - Automation and Robotics.
 - Any grade appropriate certificate.
- CT CSDE Teaching Certification endorsed for Technology Education, PK–12 (047) or Computer Science (110) preferred.
- Must be willing to participate in 40 hours of initial training to acquire the skills required to work effectively in all aspects of PLTW as well as ongoing professional development as necessary.
- Demonstrated excellence in teaching the subject area(s) and/or instructional levels targeted.
- Such alternatives to the above qualifications as the Superintendent and/or Stamford Board of Education may find appropriate.

Union:

Stamford Education Association (SEA)

Work Year:

186 days

Salary:

Per SEA Contract

Finalized 06/05/2024; Revised 11/12/2024; Revised 06/03/2025

Employee Signature

Date

Employee Name (Please Print)