Storytime STEM-packs: STEM + Computer Science PreK-2

GRADE LEVELS:
PreK-2

Educational Setting:
Both in school and out of school.

Award Provides:
- **1 Storytime STEM +Computer Science Adventure** (choose either: Moon Adventures, Dragonland Adventures, Earth Day Adventures, Blue Girl, Happy Planet, or the new Blue-Bot Mouse Adventures)
- **1 Science or Engineering Design Storytime STEM-pack** (choose 1 from 10 titles)
- **1 Mathematics Storytime STEM-pack** (choose 1 from 7 titles*)

For detailed descriptions please see:
[Storytime STEM Materials Description](#)

Additional Cost(s) to Awardee in 2024-2025:
- No additional cost

Approximate Sustainability Cost After Award Period:
- Refurbishment costs for consumable materials range between $10.00 and $20.00 per Storytime STEM+C Adventure, and between $ 0.00 and $12.00 per Storytime STEM-pack.

2024-2025 STEM Scale-Up Program Summary:
Storytime STEM-packs are a PreK-2 educational innovation designed to connect children's literature with STEM and computer science. They enable educators of young children to successfully incorporate age-appropriate STEM+C concepts into children's programming.

Using the storybook as context, Storytime STEM-packs present children with a phenomenon or problem. Through engagement in the practice standards for science, engineering, or mathematics, and the use of a crosscutting concept, children collaboratively explain the phenomenon or solve the problem, thereby making sense of the STEM concept. The facilitation guide offers suggestions for open-ended questions to elicit children's thinking and promote discussion.

Developed as part of a National Science Foundation I-Corps grant, Storytime STEM-packs are fun and engaging for kids, easy to use with minimal preparation time, and aligned to Next Generation Science, Common Core Mathematics Standards and CSTA Computer Science Standards, also with alignment to Iowa content and 21st century standards.

Storytime STEM-packs can be used in classrooms, as centers, in STEAM labs, as well as public libraries, STEM camps, out-of-school programs, and summer school. It takes approximately 45 minutes to complete one Storytime STEM-pack and 45 minutes to complete one learning challenge within each Storytime STEM+C Adventure. There are a total of five learning challenges in an Adventure.

Included in each Storytime STEM+C Adventure:
- 3 Storybooks
- Facilitator guides for each of the five learning challenges (each 45 min)
- Print materials
- Hands-on materials for 24 children
- 6 colorful themed vinyl mats
- 6 Bee-Bots (Blue-Bots for Mouse Adventures) with charging station

Included in each Storytime STEM-pack:
- 1 Storybook
- A facilitator guide with STEM-background and lesson plan (45 min)
- Print materials
- Hands-on materials for 24 children

Requirements to Implement the Program:
1. Educator(s) choose
   - 1 Storytime STEM+C Adventure
   - 2 Storytime STEM-packs (1 science/engineering and 1 mathematics)
2. Attend the 3-hour professional development
3. A memorandum of understanding signed by the organization's appropriate signatory is required before materials can be delivered.
4. Educator(s) must participate in the STEM Council Scale-Up Educator Survey.

Iowa Standards Alignment:
Storytime STEM+C Adventures focus on building foundations in computational thinking/computer science in PreK-2 and integrate science, engineering design, mathematics, and 21st Century Standards including the Employability Skills:21.K-2.ES.1, 21.K-2.ES.2, 21.K-2.ES.4, and Technology Literacy: 21.K-2.TL.1, 21.K-2.TL.3, Science Standards K-2-ETS1-1, K-2-ETS1-2, and K-2-ETS1-3, and mathematics standards K.GA &B, K.C.C.B, 1.OA.C, For a listing of all standards, please see the Storytime STEM Materials Description.

Professional Development:
Professional development includes an introduction to Storytime STEM-packs, facilitation support and engagement in parts of your selected Storytime STEM+C Adventure and facilitation support for math and science Storytime STEM-packs.

Duration: 9 a.m. – 12 p.m. (3 hours)
Date(s): Depending on your Adventure selection, **attend one** of these dates: July 16, 17, 18, 23, 24, 25
Location: Synchronous virtual

Photos:

STEM Scale-Up Program Application Link: www.IowaSTEM.org/Scale-Up-Application