

STEAM in Elementary School

40 Inservice Points

Component No. 3-007-012

General Objective:

To enable instructional personnel to improve professional knowledge and expertise in STEAM topics specific to their grade level or content area responsibilities: preschool and elementary school.

Specific Objective:

- Communicate clear STEAM vision, goals, and action plan to faculty and school constituents (parents, board members, etc.) at the beginning of the school year. Provide calendar of professional development events. Specify the learning goals and the connection to STEAM/PBL initiative of each opportunity.
- Spotlight classroom activities connected to STEAM and project-based learning, and publish to school community once a month to provide real-life examples of “STEAM in action”.
- Provide meaningful professional development opportunities (Sarah Schaefer and Singapore math training, Tony Vincent and PBL workshop, UF partnership STEAM workshops, focused faculty meeting planning time, etc.) for teachers to enrich their understanding of STEAM components and how these elements can be effectively integrated into the existing (and ever-evolving) curriculum through inquiry-based and project-based learning.
- Devote at least one faculty meeting per month (more if possible) to curriculum mapping and project-based learning planning. Use this as a structured and supervised time for various teams of teachers to plan together across departments/subject areas. Incorporate 21st century skills and STEAM components into meaningful and student-driven project-based units.
- Complete updated science curriculum maps (mapped to meet NGSS) for grades K-5 by the end of school year.
- Update other areas of the curriculum as needed (i.e. revise/re-order writing themes, introduce expository texts, incorporate engineering projects in art and math lab, etc.) to reflect new units incorporating 21st century skills, STEAM components, and project-based learning plans.
- Seek feedback from science teachers regarding the sample texts/resources ordered to match the updated NGSS:
 - *Pearson Interactives* (teacher editions, student editions, STEM activity books)
 - *TCI: Bring Science Alive!* (teacher editions, student editions, student interactive notebooks)
 - Which resources best align with the standards and skills? Which resource provides supplemental STEAM and hands-on learning activities and ideas? Which resource offers various types of assessments to provide meaningful feedback to students?
- Research and purchase additional teacher/student resources and materials as needed throughout the year to support updated science curriculum.

Activities

1. Demonstrations
2. Lectures, demonstrations,
3. preparations of lesson plans
4. Hands-on professional development activities
5. Group and individual practice designing units of activities in a preschool or elementary school curriculum

Evaluation

1. Participate in group discussion with STEAM integration as the focus
2. Cross grade level teams will develop and present lesson plans that reflect specific instructional connections, intentional teaching opportunities and multi-disciplinary connections
3. Participants will complete an in-service evaluation form

