Spartanburg School District 3

Developed by
Brenda Black-Morrison, Keith Nix, Mary Beth Bobo, Else Smith, Megan Gregg, Jamie Bulman and Brooks Amick

1. Big Idea
Integrate STEM into our current district-wide curriculum.

2. Goals and Objectives
   - Promote problem solving (engineering design process) as standard way of thinking.
   - Integrate soft skills in all subject areas.
   - Modify inquiry based kit lessons to include components of STEM.
   - Create a positive atmosphere to ensure student interest.
   - Investigate community based problems using STEM model.
   - Implement district wide STEM professional development.

3. Learning Experiences
   - Target open inquiry lessons in math/science kits to include “T” and “E” ex: crayfish habitats (STC kits).
   - Have students design the habitat and determine what works/sustains survival.

4. Assessment
   - Note booking
   - Benchmark test
   - Authentic formative assessments
   - Lesson plans
   - Curriculum guides
   - Observation check lists
   - PASS (state testing)

5. Timeline
   Year 1 (K-8)
   - Conduct Awareness sessions.
   - Focus on math and science.
   - Correlate EbD with South Carolina standards.
   - Modify math and science lessons to include “T” and “E”.
   - Semester 1, STEM leadership team will implement EbD at beginning of year.
   - In December the leadership teams presents one modified STEM or EbD lesson to entire faculty.
   - Semester 2, include all math and science teachers in STEM to implement a minimum of one lesson.
   - Enlist math teacher at Cowpens and science teacher at Pacolet Middle School to STEM leadership team.
   - Enlist early childhood teacher to STEM Elementary leadership team.
   - Leadership team research field trip opportunities in industry.
   - Purchase materials.
   - Leadership team identify business partners.
   - Add all STEM lessons to curriculum.
   - STEM presentations by leadership team in student showcase at math and science night.
Year 2 (K-12)

Continue professional development with STEM, EbD and inquiry kits.
Combine K-8 with 9-12 for cohesive STEM cohort.
Continue modifying kit lessons to implement EbD.
Introduce STEM model to entire faculty.
At the beginning of the year enlist STEM leadership team members from ELA, SS and related arts.
Conduct at least one field trip to business and industry site.
Continue to purchase materials.
Contact additional business partners.
Continue to add STEM lessons to the curriculum.
STEM presentations at student showcase nights (all subject areas).

Year 3
Continue professional development.
Enlist all stakeholders including parents.
Continue K-12 collaboration.
Continue collaboration with local business and industry.
Develop integrated STEM curriculum to include teacher made lessons to supplement EbD.

6. Resources
   Engineering by Design budget
   FOSS, STC, Insight, Delta Science kits
   MOOTB Math out of the box kits
   Science labs
   Upstate science math center
   Informational text
   Update technology