

## CAROLE'S COMMENTARY: BENEFITS OF USING APPS

What would we do without our technologies? When was the last time you did a lengthy computation by hand? Used a paper map to get directions? Used notebooks to record grades for students?

I am an avid user of apps on my technology. And, of course, students are, as well. In fact, in my experience, students know more about useful apps than I do! And they have helped me during the conduct of many funded projects.

One of my projects, Project AMP (App Maker Pro) funded by the NSF, focused on the evaluation of existing apps in various fields, and the identification and production of new needed apps. In the first part of Project AMP, high school teachers and students worked with me to: 1) identify existing apps, 2) evaluate those apps, and 3) for apps with high evaluations, name their benefits.

This is the result of their work. Hope this is helpful. Please let me know your thoughts.

### For Students

**The greatest benefit for students is that, when using apps, they become active learners.**

- **Self-Assessment:** With apps, students can self-identify what they know well and where they need help. For them, this is a plus since most high school students are unwilling to admit to needing assistance.
- **Expanding Study/Interests:** Several apps not only review topics studied, but based on assessments, lead students into different applications or projects. (This embraces the individualized approach to learning.)
- **Storing Information:** As well as maintaining needed information for work on problems, projects, and papers, students' assessment results can be saved for use at a later time.
- **Using Tools for Computation, Data Collection and Display:** With apps, students can perform measurements, conduct complex computations, organize and graph data, and maintain their work for use at later times.
- **Preparing Presentations:** Students can employ photo and video apps to record explorations or presentations to classmates, friends, and families.
- **Communicating with Others:** Apps enhance student-to-student communication during group problem solving and project work in school, as well as out-of-school. Students can also communicate with their teacher or other experts when help is needed.

## For Teachers

**The greatest benefit for teachers is that they can meet the needs of most, if not all, students.**

- **Assessing Student Understanding:** With apps, teachers can assess students' depths of understanding of key concepts and skills in mathematics and the sciences, collect and maintain those assessments, and communicate with students about their progress in meeting academic goals.
- **Differentiating Instruction:** Apps provide opportunities for teachers to individualize instruction. Based on assessment results, apps can be used for review, re-teaching, practice, or enrichment.
- **Maintaining Data:** Apps provide means for collecting, maintaining, and updating folders with student performance data that can be retrieved at any time for work with students or communication with families.
- **Planning Daily Activities:** Apps help teachers establish and maintain dates for homework submissions, class presentations, and assessments. These dates can also be communicated to students.
- **Communicating with Students and Families:** Education does not stop when students leave the school building. Phone apps allow teachers to communicate with students, singly or in groups, at school or at home, and communicate with families of students.