ST Math Camp: Adventure

Teacher Guidance

The curriculum content is centered on a math topic and includes table game play, instructional stations, ST Math individual puzzle play and small group problem solving strategy discussions. The modules contain five sessions (30 to 45 minutes each) that can be covered in one week. However, the schedule can be adjusted. See **Pacing Guide**.

Camp Stations (Instructional Stations)

ST Math Camp: Adventure provides Camp Stations (Instructional Stations) as an effective learning model that engages students and offers opportunities to learn collaboratively, build student agency and accountability, and inform decisions for personalized intervention. Familiarize yourself with Camp Stations by reviewing the description for each station. It is very important that you plan procedures and set expectations for each station.

Camp Adventure offers three stations:

- Table Games.
- ST Math Individual Puzzle Play.
- Small Group Problem Solving.

The Camp Adventure Guide for students will be used during Camp Stations to provide students a space to share their thinking and record their work. Set expectations for each station by using the optional Camp Station Planner found in the **Session Agenda and Planning Tool**, the teacher planner. Learn more about the breakdown of the stations, assigning student roles, facilitating questions, and best practices in our **ST Math Camp: Adventure Camp Station Overview.**

Table Games

Camp Adventure includes the Table Games Station, which is focused on supporting the development and practice of specific math topics. In playing these games, students explore math concepts, engage in strategic thinking, apply their knowledge, challenge each other, and have fun with mathematics. All of the games can easily be replicated by the students for play at home. The game supplies that you need are listed in the Table Games Materials section of the module for each week. There is time built into Session 1 of each week for you to teach your students how to play the games.

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ST Math 1:1

The ST Math 1:1 Station is where students will individually play ST Math puzzles in their small groups. The teacher has the option to assign specific puzzles or have students continue their grade-level journeys from the previous school year.

Small Group Problem Solving (Strategy Discussions)

As students engage in the Small Group Problem Solving Station, the role of the teacher as facilitator is critical. Facilitation focused on the **Problem Solving Process** allows students and teachers to co-lead the learning. Students develop agency and accountability because they understand that their thinking is important. It is what leads them to a deeper understanding. Facilitation is thinking-driven, not answer-driven.

Discussion focus:

- Strategy sharing and exploration.
- Visual to symbolic connections (including word problems).
- Connections between and among concepts.
- Vocabulary connections.

Use **Engagement Strategies to Promote Discourse** to create an atmosphere that fosters rich math conversations. Engaging students in discussions around problem solving activities is a great way for students to explore connections, expand perspectives, and check and challenge each other. Problem solving activities provide a wonderful opportunity to facilitate classroom discussions on student work. Prior to problem solving time, be sure to review the problem. It is important to plan your goals and outcomes for the discussion prior to posing the problem to students.

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Planning for the Discussion	Before students begin working on the problem solving activity, anticipate their responses and think about the mathematics you want to highlight.
Monitoring during Problem Solving	As students are working during problem solving time, monitor and ask questions to facilitate their thinking. Select different examples of student work to share as a whole group. See the **Problem Solving Facilitation Bookmark** for sample questions.
Promoting Classroom Discussion Using Student Work	Order the work you selected to share from least sophisticated to most sophisticated. Include some work that has misconceptions and/or errors in reasoning. Ask students questions that engage them in discussions of both correct and incorrect reasoning. It is important for the teacher to remain in the role of facilitator and ask students questions to help them construct knowledge.

Mini-Math Game Design (Optional)

The Mini-Math Game Design is an optional activity that teachers can implement during the last week of Camp Adventure. Students design and create their own math games in small groups using the Design Process. Use the **Mini-Math Game Design Guide** to support discussions. Students will record their brainstorming ideas and evaluations of the games in the Mini-Math Game Design Booklet.

***Note**: Encourage students to iterate on one of the games they played during Camp Adventure or a game they like to play at home.

Camp Adventure Exit Tickets (Optional)

We have designed optional Exit Tickets for Camp Adventure. If you choose to use Exit Tickets for your program, we recommend that you administer them in the last session of the module.

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ST Math Camp Celebration (Optional)

On the final day of the program, consider hosting an ST Math Camp Celebration. This provides a wonderful opportunity for students to reflect on how their thinking and understanding of mathematics have grown. It is also a great time to celebrate the improvements in their mathematical strengths as they have worked on the program. Highlight these strengths: communication, mathematical thinking, understanding of concepts, perseverance, and agency.

As part of the celebration, students reflect on what they have learned throughout the camp. Call attention to what they have learned, the problem solving skills they have developed, how their mindsets have changed, and how they have grown in their mathematical knowledge. See the **Camp Celebration Guide** for suggested activities.

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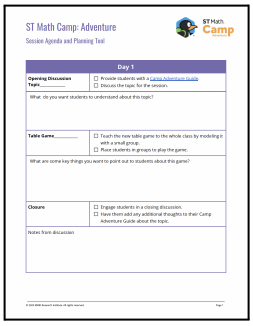
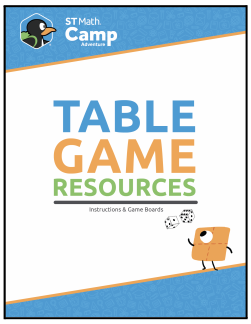
Planning with Your ST Math Camp Curriculum Is as Easy as 1-2-3 and 4

1. **Review the modules. Use the teacher planner to help with planning the sessions during the week.**

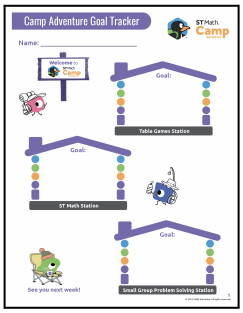


2. **Gather needed materials for Table Games.**

   ***Note**: Take time to play the games yourself to make sure you understand the directions and how they connect to the math topic.



3. **Review the Goal Setting Guide and determine what skill you want to develop with your students (time management, communication, strategies to reach goals, etc.). Use this skill to help craft your goal setting conversation with students.**



4. **Review the word problem and answer key. Anticipate student responses and think about the strategies you want to highlight.**

   ***Note**: The modules are designed to be driven by student thinking, not teacher telling. Encourage student use of the language found in the Problem Solving Process: **I see, I think, I try, I learn, I know**.