Galaxy Math Overview

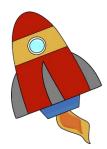
GALAXY MATH

TUTOR MANUAL INDIVIDUAL INSTRUCTION

Lynn S. Fuchs, Douglas Fuchs,
Caitlin Craddock & Pamela M. Seethaler

Research conducted on first-grade Pirate Math was supported by Award Number R01 HD053714 from the Eunice Kennedy Shriver National Institute of Child Health & Human Development to Vanderbilt University. The content of this manual and the research is solely the responsibility of the authors and does not necessarily represent the official views of the Eunice Kennedy Shriver National Institute of Child Health & Human Development or the National Institutes of Health.

In this Manual



The Galaxy Math Intervention program is presented in two sets:

- (1) Tutor Manual
- (2) Supplemental Materials Packet

This **Tutor Manual** contains the following:

Introduction

- Basic information about implementing Galaxy Math
- Schedule for implementation
- List of materials and how to copy materials

Lesson Scripts 1-45

Tutor lessons

Activity Guides

• Guides to core lesson components (tutors will refer to Activity Guides in the lesson scripts)

Fidelity of Treatment Checklist

• Checklist to ensure program is conducted with appropriate levels of fidelity

The **Supplemental Materials Packet** contains the following:

Student Worksheets

• 1 copy for each student on plain white paper

Posters

 1 copy for each tutor on plain white cardstock and folded in half for easy use

Flash Cards

• 1 copy of set for tutor on plain white cardstock (double-sided), then cut into 4ths

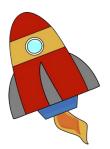
Game Boards

1 copy for each tutor on white cardstock (laminated for reuse)

Behavior Supports

- 1 copy of each Sticker Chart for each student on plain white paper
- 1 copy of Attendance Log for each student on plain white paper
- 1 copy of the Flash Cards score graph on plain white paper
- Replenish throughout tutoring program

Implementation



Galaxy Math Tutoring is conducted **three times** each week for **15 school weeks**. Each session lasts **30 minutes** and is conducted one-on-one.

Galaxy Math Tutoring does not replace your first-grade math curriculum. It is supplementary instruction for struggling students.

During each session, the tutor teaches a lesson to the student. Tutors could be mathematics specialists, special education teachers, or anyone capable of delivery of the intervention.

Daily Activities

MOBYS (Meet or Beat Your Score) – 5 minutes

• Student answers basic facts addition and subtraction problems in game format where he/she tries to meet or beat previous score.

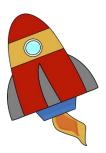
Lesson – 20 minutes

- Tutor teaches a lesson to the student.
- Lesson includes instruction on number sets and families for combinations up to 12 and basic number knowledge activities.

Game (Bingo, Aliens, Star Race) - 5 minutes

• Basic facts addition and subtraction are reinforced in game format.

Tutor Materials



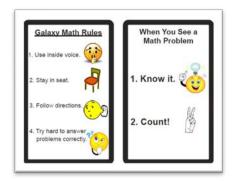
During each lesson, the tutor uses a lesson script to lead the lesson. The **Lesson Scripts** are in this Tutor Manual. The scripts are presented in order from Lesson 1 to Lesson 45. These scripts should be reviewed before delivery of the lesson and used as a guide. *The scripts should not be read verbatim*.



This lesson script is from Lesson 7. The first page provides a list of activities and necessary materials.

Many lessons refer to an **Activity Guide**. The Activity Guides are located in this Tutor Manual, after the lesson scripts. The Activity Guides provide a shortcut to information about each activity that occurs during a lesson.





During some lessons, tutor may show **Posters**. These posters are located in the Supplemental Materials. Tutors should use posters to remind students of rules or procedures, but fade them as soon as possible so that students do not become dependent on them.

Flash Cards are also located in the Supplemental Materials. They should be photocopied (2-sided) onto cardstock and cut into 4ths.

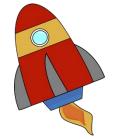


Behavior Supports are built into Galaxy Math. Students will have opportunities to earn points and prizes. The tutor will track these points on the **Attendance Log**. These are located in the Supplemental Materials.

Additional Materials are needed throughout the lessons. These items are needed, but not included in this manual: timer, dry beans (or counters), unifix cubes, base 10 blocks, two-color counters, and pawns for playing games.

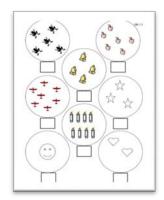


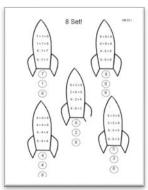
Student Materials



Here are sample materials used during each lesson.

Each student has a copy of the **Worksheets**. The worksheets should be copied front-to-back. Students write their work on their paper.







The final activity each day is a game. Students will play Bingo, Aliens, or Star Race. Extra (customizable) **Game Boards** are in the Supplemental Materials and can be reused by copying on cardstock or laminating.

Each student earns stickers on their **Sticker Chart** for each point they earn on the Attendance Log. When a student fills their sticker chart, he/she selects a small prize from a treasure box. (The treasure box is not included with this manual. Tutors should create a treasure box with prizes such as pencils, stickers, candy, etc.

