



## 2023 Team Up Challenge

### Instructions for Teachers: In-Person Setting

This document provides instructions for running the Team Up Challenge in person. The instructions should be used as a suggestion only; teachers should feel free to make modifications in order to suit their classes. Ideally there should be four students per team, however this matters more for the relay than the other three parts.

#### Preparing Materials

In advance of running the Team Up Challenge, we recommend teachers prepare each part as indicated below. Students may want to use scrap paper and calculators as well.

Part	Instructions
Team Paper	Print one copy of the problems per student and one answer sheet per team.
Crossnumber Puzzle	Print one copy of the puzzle sheet and clue sheets per team.
Logic Puzzle	Print one clue sheet and one answer sheet per student.
Relay	Print one copy of the problems and one answer sheet per team. Cut the problem sheets on the dotted lines.

**Team Paper:** Approximately 30 - 40 minutes

1. The paper contains 15 problems of increasing difficulty. Team members are encouraged to collaborate when solving the problems and should decide on a strategy for sharing the work. It is unlikely that there will be enough time for everyone to do every question.
2. Final answers are to be written on the Team Paper Answer Sheet.

**Crossnumber Puzzle:** Approximately 20 - 30 minutes

1. The team should divide themselves into two pairs; one pair will take the across clues and the other pair will take the down clues. The team will write their answers on the shared Crossnumber Puzzle sheet as they work through the puzzle.
2. The crossnumber puzzle is designed so that some clues make it possible to find a number directly, some clues rely on an answer from another clue, and other clues require a partially completed puzzle board. Since each pair within a team is working on a different set of clues, the pairs will need to work together to completely solve the puzzle.
3. If teams are struggling to start the puzzle, teachers can direct them to across clues 5, 10, 19, and 22, or down clues 3, 7, 12, and 27.



**Logic Puzzle:** Approximately 20 - 30 minutes

1. Students use the clues to solve the puzzle. Note that the clues are not given in a specific order, and at times students will need to combine the information given in several different clues.
2. Students can work through the puzzle individually, in pairs, or as a team. Answer sheets are provided for all students so team members have the option to work individually and then compare their work in order to find a solution they all agree with.
3. Students are encouraged to use the answer sheet to write any information they know from the clues in order to help them reach the final answer.
4. If students are struggling to start the puzzle, teachers can direct them to clues 1 and 6.
5. Teams hand in only one Logic Puzzle Answer Sheet.

**Relay:** Approximately 5 - 10 minutes per relay

1. The “Practice Relay” is intended to be used as a practice round so students can understand the way the relay works. The questions in the Practice Relay are easier than the rest of the relay questions. Also, Player 1’s questions are the easiest in all relays.
2. Each team member is assigned a number: 1, 2, 3, or 4. Each number corresponds to a specific problem in each relay. Players 2, 3, and 4 require the answer from Players 1, 2, and 3, respectively, to solve their problem. This is indicated in the problem with the phrase “Replace  $N$  below with the number you receive.” However, Players 2, 3, and 4 should be able to do some work on their problem while they’re waiting for the answer from their teammate.
3. The four team members should not see any of the relay problems in advance and should not talk to each other during the relay.
4. Before the relay starts, each student should have their relay problem face down in front of them. Player 1 should have the answer sheet.
5. Once the relay starts, all players can flip over their paper and start working on their problem. *Even Players 2, 3 and 4 should be able to do some work on their problem right away.*
6. When Player 1, Player 2, or Player 3 thinks they have the correct answer to their problem, they record their answer on the answer sheet and pass the sheet to the next player. Students should write only the numeric part of their answer and **not** include any units. When Player 4 thinks they have the correct answer to their problem, they record their answer on the answer sheet and wait for their teacher to check it.
7. If all four answers are correct, the relay is complete! Otherwise, the teacher will mark the relay as incorrect and pass the answer sheet back to Player 1 so the team can try again. The answer sheet has space for two attempts for each relay.