

GPS Logic Challenge

Teacher Information

Materials:

GPS Receivers – 1 or 2 per group
4 Containers for each group (with the clues inside)
Copies of the student worksheet
Pens or pencils
Calculators (optional for version 2)

Overview:

During this activity students will use the GPS receivers to find waypoints and collect four clues that will help them solve a logic problem.

Preparation:

1. Set up 20 waypoints on the schoolyard or other area and download the set of points to all of the GPS receivers. You may want to sketch a map of your area to help you keep track of the waypoints and clue locations.
2. Print out a copy of the *Logic Challenge Clues* and cut apart. Each group has their own set of 4 clues that have been color coded - Group 1 has clues in red text, Group 2 has clues in green, and so on.
3. Prepare the clues for the challenge by putting a clue in each of the containers and hiding them at the correct locations (see the list below).
4. Decide which version you are going to use. *Logic Challenge 1* provides the waypoint numbers, while *Logic Challenge 2* includes math problems that the students must solve to determine the waypoints they will visit.

Activity Directions:

1. Divide the students into 5 groups and give each group a receiver and a worksheet. Review the directions printed on the student worksheets. Remind students that they need to find the clues for their group only – extra clues will make it harder to find a solution.
2. Allow time for the groups to collect the four clues they need for the challenge.
3. After all the groups have correctly solved their problems, discuss any difficulties the teams had with the challenge. If you extra time left, give the groups a chance to try a different challenge.

Group Waypoints – Use this list to help you keep track of the locations of each group's clues.

001 – Clue 1-1	011 – Clue 1-3
002 – Clue 2-1	012 – Clue 5-4
003 – Clue 3-1	013 – Clue 4-2
004 – Clue 4-1	014 – Clue 3-4
005 – Clue 2-3	015 – Clue 1-4
006 – Clue 4-3	016 – Clue 5-2
007 – Clue 5-3	017 – Clue 2-4
008 – Clue 5-1	018 – Clue 2-2
009 – Clue 3-3	019 – Clue 3-2
010 – Clue 4-4	020 – Clue 1-2

Waypoints for Group 1
001 → 020 → 011 → 015

Waypoints for Group 2
002 → 018 → 005 → 017

Waypoints for Group 3
003 → 019 → 009 → 014

Waypoints for Group 4
004 → 013 → 006 → 010

Waypoints for Group 5
008 → 016 → 007 → 012