Julia Robinson Mathematics Festival

التعليم فوق الجميع | education above all

Painted Rock Treasure Hunt

Level	0 (Age group 4 – 5)
Resources Required	Smooth rocks, paint or indelible markers
Alternate Options for the Resources	Paper & Pen for inside treasure hunts
Strand Covered	Numbers & Operations
Targeted Skills	Compare two numbers between 1 and 20
Inspired by	Third Space Learning – Emma Johnson, Julia Robinson Mathematics Festival - Gordon Hamilton
Time Required	Set up time 10 minutes Game time 15 minutes
Previous Learning Required	Knowledge of numbers from 0-20
Support Required	High supervision

Rules of the Game:

Goal	The first team to have every member find a painted rock and order themselves from smallest to largest wins.
Rules	Each student needs to find one rock. Team members can help each other find rocks, but an individual can only be touching one rock at a time. This encourages collaboration and prevents one student from collecting and distributing all of the rocks for a team. Each team gets 3 chances to arrange themselves from smallest number to biggest number correctly.

Steps	Step 1: The teacher paints or draws different numbers (1-20) on rocks. You should have more rocks than students so that rocks are easier to find. Try to make at least 2 per student. If you have students help you to make these rocks, make sure that their numbers are easy to read. Step 2: Secretly hide rocks around an outside area that is safe for students to explore, like a playground, park, or field. Keep a few rocks in your pocket for students who are having trouble finding a rock. Step 3: Group students into teams of at least 3 students. Step 4: Send students to explore the outside area for painted rocks. Give them 10 minutes to hunt for the rocks. When every member on a team finds a rock, they will return to the teacher for the next stage of the game. Step 5: When every member of a team has found a rock, they order themselves from smallest to largest number on the rock while holding on to each of their rocks. Step 6: When the teacher determines that a team has successfully ordered every team member from smallest to largest, that team wins.

Images or Illustrations	 Image from MessyLittleMonster.com
Variations of the Game	• Paint multiple copies of rocks with digits 0-9. Students now need to each find 2 rocks, one for their right hand and one for their left. The rock in their left hand is the 10's place and the rock in their right hand is the 1's place. Students need to order themselves from smallest to largest based on these 2-digit numbers.
Enrichment	• Paint rocks with larger numbers, like numbers between 20-50. • Paint operators (+ or -) and equal signs on some rocks. Have students bring back rocks and order themselves to create a true mathematical equation (e.g. 1 + 2 = 3). You will need to have at least 5 students per team or have students bring back 2 rocks instead of 1. Use small numbers to make these equations easier to make.
Simplification	• Use smaller numbers, like 1-10. • Instead of having students find rocks, have students pick rocks from a bag without looking. Then, have teams compete to be the first to line up from smallest to largest. This will allow students to focus on the math in this game.