INTELLECTUAL OUTPUT 1

MATHEMATICAL CREATIVITY

4 Creativities Project
№2019-1-BG01-KA201-062354

INTRODUCTION

The aim of FCREATIVITIES project is to improve the teachers' abilities to generate a creative education, leading to the creation of students who are able to think, analyze and solve daily problems. With the following six activities we aim to equip the teachers with some easy to implement, fun to organize exercises to be used with **10 to 12 year old students**, focusing on enhancing their motivation, logical thinking and mathematical creativity. The very nature of mathematics provides a suitable platform for developing creativity. Mathematical creativity could be defined as the process that results in unusual and insightful solutions to a given problem, irrespective of its level of complexity. Mathematical creativity is observed when one generates a non-standard solution for a problem which may not be solved so easily using the conventional methods.

Title of the activity

A Par-fect Score

Description

This activity will reinforce the topic of integers in a fun exercise that links mathematics to a real life activity, golf.

The rules are simple and easy to follow, and its biggest advantage is that it can be adapted to fit the learning theme, the age and mathematical knowledge of the students. The activity provides an opportunity for students to learn about integers in a fun and innovative way.

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Aims

1. Students will develop an understanding of integers.

2. Students will gain experience with applying logic.

3. Students will be able to solve real life questions regarding integers

4. Students will practice adding and subtracting positive and negative integers

5. Students will practice verbal mathematical communication and work collaboratively.

Steps we must follow

1. Students will be working in pairs (mostly heterogeneous) and will assess their work when they are finished with the whole class.

2. As a whole class we will discuss the basic rules of golf and golf score cards at the beginning of the lesson. We will go through what par, eagle, bogie, double bogie, eagle, etc. all mean and what it means for the score of a golfer. This may take a little longer than expected because the concept of golf scoring may be confusing for some.

3. Scenario

Ms. O'Donnell believes she beat Rickie Fowler at a 9-hole round of golf last weekend! You have been learning about Integers all week. What a coincidence! Ms. O'Donnell needs YOU to help her verify the scores.

4. Golf Scoring Instructions

In golf, there is a number of strokes that have been predetermined for every hole on the course. This predetermined number is called par. Par is calculated based on the difficulty of the hole. If you go "over par," your score would be recorded as a positive number of strokes above the predetermined number, and that is not good. If you go "under par," then

your score would be recorded as a negative number of strokes below the predetermined number, and that is good! The goal of golf is to get the lowest score possible.

5. Questions

- Did Ms. O'Donnell beat Rickie Fowler's total score?
- If par is 36 strokes, who scored closest to par? Why?
- Ms. O'Donnell split coffee on the card, can you help her determine what she scored on Hole#3?

6. This should take each pair 15-20 minutes to complete. We will then discuss with the class when we have finished.

Materials (if needed)

Materials Required

- pencils
- instructions for scoring golf
- number lines (including negative numbers)
- calculators*
- score cards.

Tips

This game works well with grades 5 and 6. Some practice of adding and subtracting integers should be exercised before this activity.

Name: _____

A Par-fect Score

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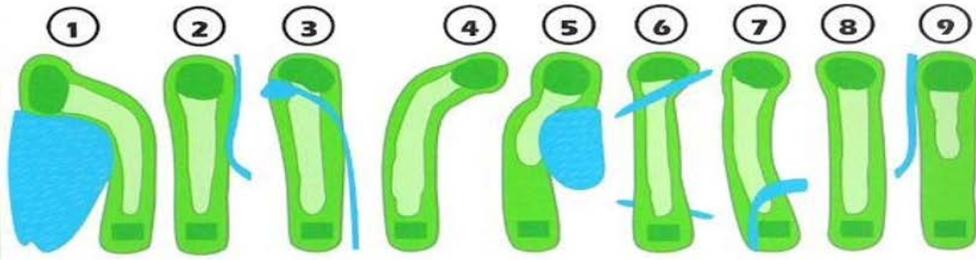
Hole #	ONE	TWO	THREE	FOUR	FIVE	SIX	SEVEN	EIGHT	NINE	TOTAL
Par	4	4	4	4	3	5	5	4	3	36
Rickie Fowler	par	par	double bogie	birdie	birdie	bogie	birdie	par	eagle	
Ms. O'Donnell	eagle	double bogie		par	birdie	bogie	eagle	par	bogie	37

How does golf score work?

	Value
Eagle	-2
Birdie	-1
Par	0
Bogie	+1
Double Bogie	+2

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