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## INTELLECTUAL OUTPUT 03

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# SCIENTIFIC CREATIVITY

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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. We **will develop new scientific skills** and competencies through the incorporation of new proposals, spaces, methodologies, and resources that will increase the students' ability, creativity and the skills for innovation. These activities will be used **with 10 to 12 years old students**, promoting their motivation and creativity. The activities will be composed for **six working activities** which will contain the different activities that we will elaborate with our students.

With the **scientific creativity** promotion we will improve the thinking capacity of our students and the ability to go from basic notions to more complex ones; they will learn to resolve problems in a real situation; they will practice the construction of their own learning; they will train their **deductive capacity** and this will take them to create strategies and solutions of their own and they will get better with their physical environment and their appreciation from different spaces, shapes, parts and the group in general. Scientific creativity will take place inside the classroom through scientific experiments workshops.

All the **experiments** will be presented in an experiment manual. The format will be a paper card, it will contain all the material that we will need to accomplish the experiment, how you do it, **how it is related to everyday life** and other relevant details.

Scientific activity will be **boosted through observation, manipulation and research**. That will lead students to discover their immediate environment. Experimental and research activities will offer students the opportunity for learning in an independent and significant way.



## Title of the experiment

### ***Colourful celery***



## Description and application in everyday life

Students will learn about capillary action in the human body with this simple experiment using a vegetable: celery. This activity will allow the "young scientists" to talk about the circulatory system and "capillary" action. The tiny "vessels" in celery stalks carry coloured water to their leaves, just like the blood that travels through the body. Our veins carry oxygen to the heart.

This is a great way to introduce basic science concepts within the classroom through fun and visual experiments. The process where a plant absorbs water is called Osmosis. Students will only see the result after 24 hours, so this experiment is also about being patient in science.



## Aims

*Please list the objectives you want to achieve...*

- *The process of science involves observation, exploration, discovery, testing, and application.*
- *Scientists can test their ideas about human body with other living beings as plants.*
- *Test results sometimes require time to be seen.*
- *Scientists are creative.*



### Steps we must follow

- 1) Fill the jars or glasses about halfway with water and place them by sunlight.
- 2) Drop different colours of food colouring into each of the glasses.
- 3) Cut or rip stalks of celery and place them in the cups of coloured water.
- 4) Let the celery sit. Check every few hours with your child to see how the colours change.



### Materials needed

In order for teachers to be prepared for the proper implementation they should make a list of all needed materials and resources needed.

- Drinking glasses
- Water
- Food coloring
- Celery stalks
- Scissors (optional)



### Tips

Take the activity further by cutting a single stalk of celery into three pieces and submerging each section into a different cup of coloured water to see if the colours mix or blend in the leaves. Students should write down the reactions.