



BotSTEM – Erasms+ KA2 Project

2017-1-ES01-KA201-038204

Good practice template

1. Title of the activity/ Practice	The Hourglass Race
2. Origin of the activity	Group work carried out under JP Chauvin, J.P Dumont and E. Villard (Ecole maternelle Davayé, IEN Mâcon 4, 9 rue Flacé, 71000 Macon Saône-et-Loire) Summary: Over the course of the 8 sessions hereafter, the children, study, use, produce and compared hourglasses. They broach the concepts of time and speed.
3. Age of the students	3-4
4. Target group (type of the learners, size of the group)	General curriculum Small group of 2 -3
5. School subjects + topics concerned	Transdisciplinaire; physics, technology.
6. Educational goals of the practice	Objective: I am familiar with and have a feeling for the concepts of "faster than", "slower than", "first-place finisher", "last-place finisher", "at the same time as". Target concepts: Learning about the world of objects: using various technical objects in functional situations.
7. Duration	145 minutes in 9 sessions
8. Place	Classroom / outdoor /at home, etc.
9. Short description of the activity	
10. Evaluation	Questions, teacher's observation



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11. Materials/ Resources/ Technical requirements

- Learning About Hourglasses: 1) Introduction to the concept of flow
For the class: - punched bottles, - water- hand rags.
- 2) The hourglass as an object
For the class: - an hourglass made with two plastic bottles filled with semolina, - an hourglass identical to that above, but with non-punched caps
Compare the two hourglass' flow time
For each child: - two hourglasses per child:
- one red • with a lot of semolina,
 - one green • with a little semolina,
 - two boxes symbolising the two hourglasses
- Compare the time required for the sand to run out in the three hourglasses
For each child: - 3 hourglasses and 3 symbol boxes: • • •
- How can the time required for the sand to run out be changed?
For each child: - 3 hourglasses for the 4-year-olds, 2 hourglasses for the 3-year-olds, - a worksheet to record the final order
- How are hourglasses filled?
For the class: semolina, empty hourglasses, funnels
For each child:
- 3 hourglasses for the 4-year-olds,
 - 2 hourglasses for the 3-year-olds,
 - a results chart
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- Predict the order in which the hourglasses will finish the race, in accordance with semolina volumes
For each child:
- 3 hourglasses,
 - semolina,
 - funnels,
 - small jars,
 - filling cards,
 - results charts.
- Set up three hourglasses, comparing them two by two.
For each child:
- 3 hourglasses containing nearly-identical sand volumes
 - a results chart.

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12. Tips for educators/ Theoretical background (if applicable) or curriculum context	Source URL: https://imedia.emn.fr/sandbox/groups/map/wiki/619a4/attachments/5130e/Projet%20Fibonacci_Examples%20of%20learning%20units.pdf?sessionID=ff43c33c983cf9bcd86b56d17a387c45689174ad This unit is included in Fibonacci Project
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