

BEYOND SCHOOL PROJECT

LESSON ACTIVITY PLAN DRAFT

ACTIVITY	Pulleys - simple machines
The aim of the activity	Let's discover simple machines
Places where the event can be held	Classroom, Kairós - OBS
Age group for the activity	6 - 10

A. BEFORE OUT-OF-SCHOOL LEARNING ACTIVITY	
Educational tools	Datashow, computer, bring objects from home that work like simple machines
Method, technique and strategies	Video show, Discussion, experimentation
PRACTICE	
Introduction of the activity	Discussion about their function and importance.
Development of the activity	Try objects brought from home.
Evaluation of the activity	Level of interaction and answers obtained during the dialogue.



B. IN THE OUT-OF-SCHOOL LEARNING ENVIRONMENT	
Educational tools	
Method, technique and strategies	Guided tour
PRACTICE	

Introduction of the activity	Discuss the application throughout the history of simple machines and propose solutions and inventions for carrying out everyday mechanical tasks.
Development of the activity	Guided tour of “Kairos - OBS, Laboratory with legs to walk”, to see and experience their interactive modules of simple machines built by them.
Evaluation of the activity	Quizz about simple machines. (Appendix 1)

C. AFTER OUT OF SCHOOL LEARNING ACTIVITY



Educational tools	Several materials and components of simple machines
Method, technique and strategies	<i>Hands on</i> experiments, Inquiry based Learning
PRACTICE	
Introduction of the activity	Presentation of the challenges, rules and the available materials. Formation of the groups.
Development of the activity	Each group was given the necessary material to build their simple mechanism.
Evaluation of the activity	The built mechanism has to work

Appendix 1:





Sprockets and mechanics

1. Are toothed wheels mechanical systems that were invented to transmit movement with or without great effort?
2. In your system, which is the driver wheel and which is the follower wheel?
3. For each time the driver wheel makes one turn, how many turns does the follower wheel make?
4. Try reversing it.



Sprockets and mechanics

4. How is less effort made?

5. How is speed increased?


Schematics and others discoveries: