



## **EXPERIMENTAL SCIENCES CONTEST**

### **CULTURAL INTERSEK 2016**

## **HOMEMADE PROPULSION ROCKETS**

### **“SEK TOWARD THE INFINITE”**

## **CHAPTER ONE**

### **THE OBJECTIVE AND NATURE OF THE CONTEST**

**Art. 1.-** The present proposal aims to create awareness on the participants about the importance of ingenuity (cleverness, skillfulness) and scientific knowledge as mechanisms to achieve personal goals.

**Art. 2.-** The groups of students should design a homemade propulsion rocket that as far as possible must be mechanically propelled and will be tested in our launch field. The rocket will be tested in a vertical launch.

## **CHAPTER TWO**

### **CHARACTERISTICS OF THE PARTICIPATING ROCKETS**

**Art. 3.-** The rocket must operate from any form of mechanical propulsion, we do not recommend chemical propulsion because our Center does not guarantee the participating groups, the reagents that they might require.

**Art. 4.-** The rocket must not exceed 0.5m in length. The material and design are of free choice for the members of the participating groups. Improvised work will not be accepted.

**Art. 5.-** Each group will explain to the jury, the principles that will boost their rocket and the way in which it was built, materials, dimensions, etc.

## **CHAPTER THREE**

### **ORGANIZATION AND LOGISTICS**

**Art. 8.-** All the SEK School's participating should enroll a group of four students maximum.

**Art. 9.-** SEK - Ecuador International School will provide, for the oral presentation of the groups, the following materials and resources:



- Infocus
- Computer with Windows operating system with ports.
- Big screen.
- A table of 2m<sup>2</sup> surface
- Laser Pointer.

**Art. 10.-** The groups of participating students must record their work in two storage systems (e.g. CD and memory flash) and one of them should be delivered to the organizers at the time of their arrival to SEK Ecuador. The other one will be used if a problem arises.

**Art. 11.-** Each group will have ten minutes to make their exposure. The jury will stop any presentation that exceeds the time limit. This will lower the grade.

**Art. 12.-** Once the oral presentation has ended, the group will move on to our launch platform and will test their rocket in a vertical launch, if it fails in its first attempt, you will have two additional ones.

## CHAPTER FOUR

### THE JURY

**Art. 12.-** The Jury shall be composed of three members of the Department of Experimental Sciences who will observe and analyze all the presentations and launches and shall deliver the results at the time of the recognitions and awards.

**Art. 13.-** The opinion of the Jury will be final and will be supported by the rubric used by every one of its members. You can find the rules at the end of the document.

**Art. 14.-** Punctuality, use of the uniform, personal presentation and quality of expression will also be taken into account.

**Art. 15.-** The total score will be over TEN points. The group that makes more points will be the winner.

**Art. 16.-** Each criterion will be valued over a point. In the case of the number of attempts, the group that operates their rocket in the first attempt, will have a point, the group which operates it in the second attempt, will have 0.5 points and the one which operates it in the third attempt, will have 0 points.

**Art. 17.-** Any situation that does not appear in this document will be solved by the Jury.



**CHAPTER FIVE**

**THE RUBRIC FOR EVALUATION**

**Art. 16.-** Each member of the Jury (3) will evaluate the exhibitions based on the following rubric:

**CULTURAL INTERSEK 2016**  
**HOMEMADE PROPULSION ROCKETS**  
**“SEK TOWARD THE INFINITE”**

**ORAL EXPOSITION**

	Excellent	Very Good	Good	Average	
CLARITY					
ACCOMPLISHMENT OF THE TIME					
USE OF TECHNICAL TERMINOLOGY					
USE OF VISUAL AIDS RESOURCES					

**VERTICAL LAUNCH**

	Excellent	Very Good	Good	Average	
NUMBER OF ATTEMPTS					
CALCULOS OF LAUNCHING SPEED					
CALCULOS OF THE MAXIMUM HEIGHT REACHED BY THE ROCKET					

**COMPLEMENTARY ASPECTS**

	Excellent	Very Good	Good	Average	
PUNCTUALITY					
PERSONAL PRESENTATION					
UNIFORM					

**Experimental Science Department**

**SEK – ECUADOR (QUITO)**