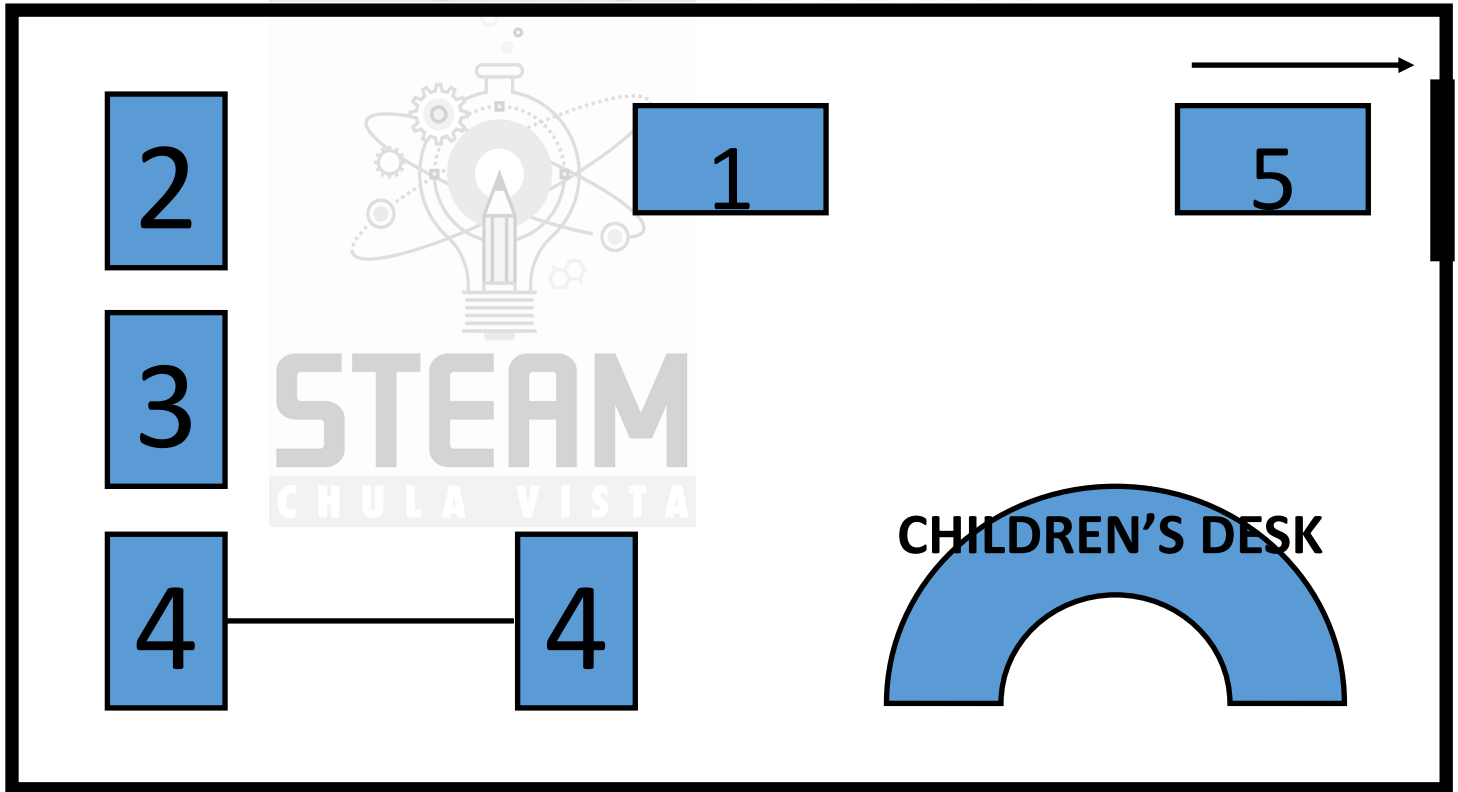


BOTTLE ROCKETS - 8/16/17 @ 4:30

CIVIC LIBRARY



SCHEDULE OF EVENT:

- 4:00PM: VOLUNTEER CHECK IN/ SET UP
- 4:30-4:45: INTRODUCTION
- 4:45-4:50: VIDEO AND Q&A
- 4:50-5:45: STATION 2,3,4 OPEN
- 5:20: LAST CALL STATION 2
- 5:25: STATION 2 CLOSED
- 5:40: LAST CALL STATION 3&4
- 5:45: STATION 3&4 CLOSE
- BEGIN INSIDE CLEAN UP
- 5:45: ALL PATRONS MOVE TO
- STATION 5, ROCKET LAUNCH
- 5:45-6PM: ROCKET LAUNCH IN PARK

STATIONS:

- 1 = INTRODUCTION AND VIDEO
- 2 = BOTTLE ROCKET ASSEMBLY
- 3 = ROCKET LAUNCH
SIMULATION (COMPUTER)
- 4 = BALLOON ON STRING ROCKET RACE
- 5 = BOTTLE ROCKET LAUNCH

QUESTIONS?

Jean L. Picard
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PROGRAM DESCRIPTION

1. Introduction

- a. Mr. David and Ms. Joanna
- b. Volunteers Ms. Sophia and Ms. Ellen

2. Topic introduction

- a. What is S.T.E.A.M?
- b. What is a rocket? Why is it so hard to get objects into space?
 - i. Tyranny of the Rocket -
https://www.nasa.gov/mission_pages/station/expeditions/expedition30/trvanny.html

c. Description of stations

- i. Bottle rockets-design bottle rocket fins and nose cone for launching in park. (<http://www.science-sparks.com/2012/03/12/making-a-bottle-rocket/>)
- ii. Computer simulation-try and design a rocket to get into orbit on computer simulation.(Kerbal Space Program)
- iii. Balloon race-shoot a balloon down a string to learn about thrust. (<https://sciencebob.com/make-a-balloon-rocket/>)

d. Introduction of videos

3. Videos

- a. <https://www.youtube.com/watch?v=C1TuxJRszVg> (Nat Geo - How rockets work)
- b. <https://www.youtube.com/watch?v=q0IONxf70qs> (NASA - How does NASA launch a rocket?)

4. Questions on videos

5. Break up tables to start stations

- a. Left tables - bottle rocket construction
- b. Right tables - computer simulation
- c. Center tables - balloon race
 - i. After patrons complete starting activity, move to different station

6. Close bottle rocket construction

7. Close computer simulation and balloon race

8. Launching in park

CHULA VISTA