

Development of a Curriculum

1. Need to pick an age group
2. I have picked Puppets as the Media for the learning. What are your thoughts?

Item	Discussion
Basic Art	Puppets <ul style="list-style-type: none">• Paper mashie• Cloth• Drawing/ Sketches
Software	Simple language to define the operation of what movements the puppet will do. <ul style="list-style-type: none">• Specific software type?• How does it get into the controller?• How does it make the controller do something
Technology	<ul style="list-style-type: none">• Electronics<ul style="list-style-type: none">○ Circuitry○ Controllers○ Sensors, Actuators• Design ... Problem solving, Thinking Skills• Science ...<ul style="list-style-type: none">○ Life○ Physics
Project Choices	<ul style="list-style-type: none">• Face ... Sensors• Arms, Legs ... Actuators• Sound Generation, Receiving• ?????

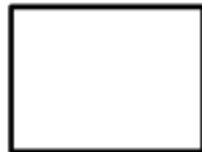
Doing a Puppet Project:

- General learning and attitude
- Science Elements
- Components of the circuitry, Software, Controller
- Picking a project
- Engineering Design
- Tinkering
- Reflecting and Sharing
- Presenting

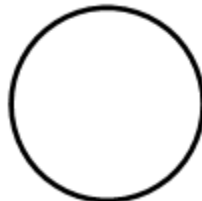
Combination of creating a Make work station for incorporating Adineo , Raspberry Pi microprocessors and software with creating the art form of puppets.

Hope to do the following:

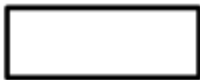
- Creating paper Masha figures and the design of the joints for the limbs
- Adding sensors and actuators for movement of the puppet
- Learning the software to control the movement.



Head
What moves?
What sensors do we need?



Body
What does it contain?
What moves?



Arms
What moves?
What actuators are needed?



Legs
What moves?
What actuators are needed?

- The Puppet will be either or both in a structure or free standing held by a person
- It will contain mechanical items
Simple Machines, Cams , Gears
Design challenges Science
Lever (lift heavy objects)
Wheel and Axle (turn objects)
Pulley (lift heavy objects)
Incline Plane (lift, split, move)
Complex machines
- The system will have a microprocessor to control the sensors and actuators for the movement of the puppet.