



Inquiry and Innovation Time gives students the time and opportunity to wonder, to follow their passions, to create and innovate, and to believe in themselves. Learning during i<sup>2</sup> time is student-driven and teacher-facilitated. Students gain experience using design thinking to empathize with the needs of others, identify problems, brainstorm creative solutions, create prototypes, and then test, share, and evaluate their solutions.

**Join us for Professional Development  
at Echo Horizon School**  
[www.echohorizon.org/PD](http://www.echohorizon.org/PD)

Echo Horizon School is an independent school in Culver City, California serving students in Pre-Kindergarten through sixth grade, about 12% of whom are deaf and hard of hearing and fully mainstreamed with their hearing peers. The mission of Echo Horizon School and its Echo Center is to educate children in a collaborative environment that is academically challenging and developmentally appropriate. We actively promote mutual respect, individual responsibility, and ethical action. The Echo Horizon graduate is an inquisitive and critical thinker who brings creativity, kindness, and self-reliance to the life long journey of learning. The school has been recognized as an Apple Distinguished School since 2010 for innovation, leadership, and educational excellence.



## Elementary Making, A Design Thinking Experience



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## Reflect and Share

Reflect  
&  
Share

Record a video reflection on your cell phone and post to twitter with #SXSWedu #EchoPuppets

Introduce your house/car/puppet and describe it's features and how they meet the needs of your user. You can also include your response to one of the following questions:

A challenge I had was \_\_\_\_\_and I got past it by \_\_\_\_\_.

What surprised me most was \_\_\_\_\_.

If I had more time, the next thing I would do is \_\_\_\_\_.

Next time I would \_\_\_\_\_.

Something I learned about myself is \_\_\_\_\_.

A new skill I learned is \_\_\_\_\_

The part I liked the best was \_\_\_\_\_.

Notes

## DESIGN THINKING PROCESS





## House Challenge

see videos at [www.echohorizon.org/puppetvideos](http://www.echohorizon.org/puppetvideos)

Research  
&  
Empathize

Identify  
Needs

Generate  
Ideas

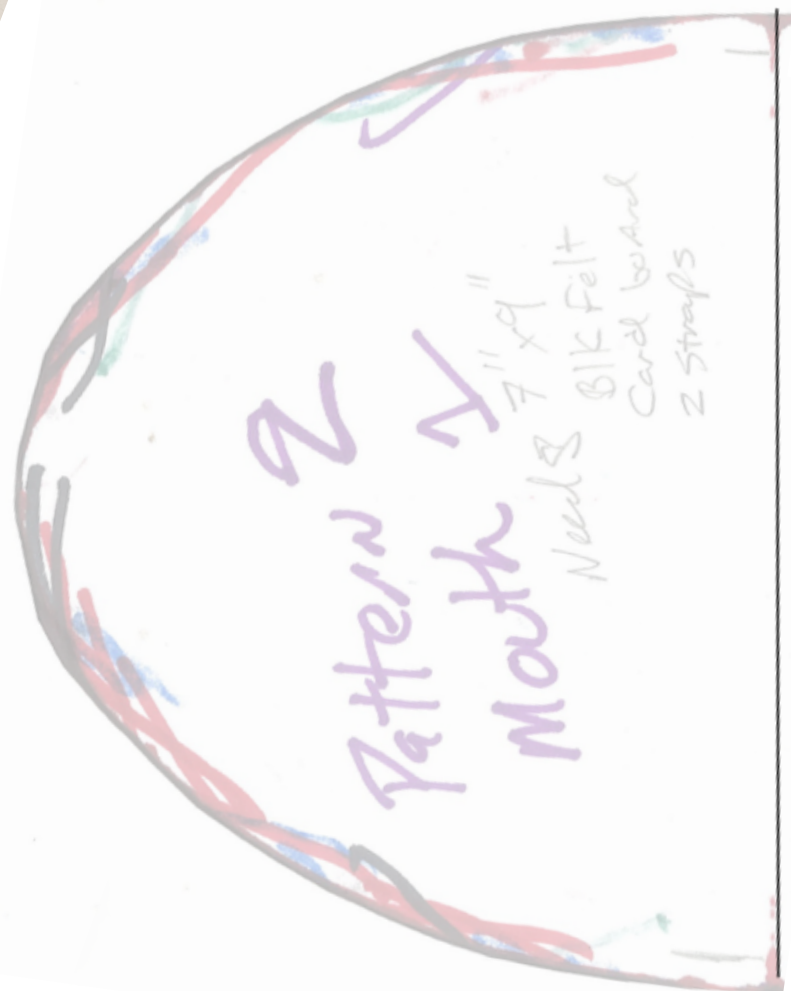
User needs

Ideas

How to build a mouth video at:  
[www.echohorizon.org/puppetvideos](http://www.echohorizon.org/puppetvideos)

### Materials for mouth:

- 6" x 9" piece of cardboard
- 7" x 9" piece of black felt
- two 4" straps from old laptop bag or made of duct tape
- Hot glue gun



Reflect & Share - see directions on inside back cover

Reflect  
&  
Share

# Car Challenge

see videos at [www.echohorizon.org/puppetvideos](http://www.echohorizon.org/puppetvideos)

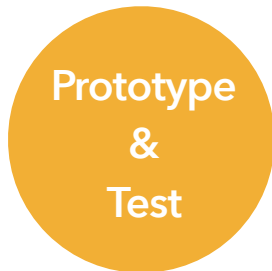
User needs:



Ideas



Rapid Lo-Res Prototyping - Design a car!



Reflect & Share - see directions on inside back cover



Plan your next Design Thinking Project here



## Puppet Needs Statements

\_\_\_\_\_ needs \_\_\_\_\_

so as to \_\_\_\_\_

\_\_\_\_\_ needs \_\_\_\_\_

so as to \_\_\_\_\_

Ideas :

Rapid Lo-Res Prototyping - Design a paper bag puppet!

Reflect & Share - see directions on inside back cover



Identify  
Needs

Generate  
Ideas

Prototype  
&  
Test

Reflect  
&  
Share

## Puppet User Profiles

see videos at [www.echohorizon.org/puppetvideos](http://www.echohorizon.org/puppetvideos)

Research  
&  
Empathize

**Tech Director** - This Tech Director loves discovering new tools and helping kids and teachers use technology to create, communicate, and collaborate. They like to be prepared when technical issues arise so their users won't have much downtime. Downtime is frowntime! Sometimes it's hard to know which tool or cable they will need to solve a problem.

**Principal** - This Principal comes to school every day with a list of things to do but somehow, other things come up and they never get to everything on the list. With a constantly changing schedule it can be challenging to be in the right place at the right time.

**Kindergarten Teacher** - This kindergarten teacher has to introduce kids to the building blocks of reading, writing, and math AND teach them how to be good friends while also tying shoes, putting on band aids, and giving hugs. It's hard to do all that at the same time!

**Math Teacher** - This middle school teacher loves math and wants kids to see how fun and useful math can be. With 180 students, all at different levels, this can be challenging. Their iPad and a ukulele are important tools in their classroom.

**Humanities** - This humanities teacher loves to connect their students with people from all over the world...if they could only get a reliable wireless connection...

**Hardware Developer** - This hardware developer has more ideas than LEDs and they sure do have a bunch of LEDs. Like finding the right color LED, it can be hard to sift through all of the ideas.

**Founder:** There never seems to be enough money.

i2

## Hi-Res Puppet Creation

### Materials for body:

12"x 60" piece of Polar Fleece (check the remnant bin!)

Sewing machine or hand sewing materials

Hot glue gun

### Directions

Fold fleece so it measures ~12"x 30" with fluffy side of fleece folded in

Cut out patterns on this page and the next page

Tape this to the bottom of the puppet pattern on the next page to create the full puppet pattern

Trace pattern with chalk onto the polar fleece

Sew around chalk outline of fleece, skipping (triangle) darts and mouth

Cut fleece around stitching, leaving slight seam around stitching

Cut darts and mouth directly on the lines of the pattern.

Sew darts

Turn puppet right-side out

Glue in mouth (see next page for materials and directions)

Puppet creation videos at:

[www.echohorizon.org/puppetvideos](http://www.echohorizon.org/puppetvideos)