The Doreen Nelson Method of Design-Based Learning
6 1/2 Steps of Learning

Doreen Nelson Methodology
Backwards Thinking

1. What do I need to teach?
   (themes, concepts, standards)

2. Identify a Problem
   from the curriculum

3. Set Criteria for Assessment
   - List 'Won't want' and 'Needs'
     based on curriculum
     standard and content
     Plan evaluation

4. Let students Give It a Try
   - Build instant 3-D models
   - Present and get feedback
   - Ask 'Why' and 'How'
   - Assess according to preset criteria
   TALK TALK TALK WRITE

5. Teach Guided Lessons
   - Research information
   - Speak
   - Write
   - Compute
   - Make comparisons
   - Chart, diagram and map results

6. Students Revise Designs
   - Rebuild Models
   - Organize a sequence of
     Challenges
   - App ly lessons
   - Assess
   - Synthesize

Doreen Nelson Method of Design-Based Learning
Backwards Thinking

1/2. State as a ‘Never - Before - See’ Design Challenge

Process 6 1/2 STEPS
Welcome to
The Design-Based Learning
Heart Acre Project

Daarina Abdus-Samad
2005-2007, Second Grade
Norma Coombs Alternative School
Pasadena, California
California Standards Test
Second Grade
Math & English Language Arts Results
10% gain  5% is usual

Second grade Annual Standardized State Test score results
How DBL Works!

The curriculum content is disguised as hands-on challenges to teach observation, reasoning, and thinking skills.
Design-Based Learning Curriculum Integration Chart

POWERFUL IDEA

Standards

- Speaking
  - App. 2.0
  - Deliver well organized for mail presentations

- Reading
  - Comp. 3.4
  - Identify and analyze recurring messages across works

- Writing
  - Strategies 1.4
  - Organize and focus: identify topics, ask questions that lead to

Design Challenge
- Never-Before Seen...
- Recyclable City

Guided Lessons
- Share pieces of Recyclable City.
- Read NBarrio BoyO p. 29.
  - Discuss the messages of new experiences, city living, friendship.
- Write goals for city committees
- Keep notes of committee meetings.
- Research online information about recycling
Start with an abstract concept from the curriculum turned into a design challenge

Designing, building, measuring, discussing, analyzing, rebuilding and writing

Putting monthly challenges together
“The Criteria List”

a rubric for assessment.

<table>
<thead>
<tr>
<th>NBS Instant City Criteria</th>
<th>Don’t Want</th>
<th>Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Spend a lot of time</td>
<td>Sugar cube holds 4</td>
</tr>
<tr>
<td></td>
<td>Look like real city</td>
<td>Industry</td>
</tr>
<tr>
<td></td>
<td>Paint it</td>
<td>Lots of Dwellings</td>
</tr>
<tr>
<td></td>
<td>Label it</td>
<td>Everything has a function</td>
</tr>
<tr>
<td></td>
<td>Copy others, unless changed</td>
<td>Places to trade, be sick, learn, die.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ways to get around</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Open Space</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recreation space</td>
</tr>
</tbody>
</table>

Connections To Standards

- **Math**
  - Measurement
  - Distance
  - Capacity
  - Area
  - Perimeter
  - Counting

- **Art**

- **Social Studies** (Now & Long Ago)
  - Compare & Contrast

- **Language Arts**
  - Reading
  - Writing
  - Research
Monthly Long-Range Planning Boards

Interconnect the standards, curriculum and display challenges

Movement, Protection, Structures
The Heart Acre Project
Give it a Try

NEAR = A body covering represents them and their characteristics.

FAR = Point-of-View

Never-Before-Seen
“Body Object” (Oct.)
Never-Before-Seen

“Ways to Divide & Map the Land”
(Jan.)

NEAR = Everyone had a piece of the city of Pasadena.

FAR = Map Studies

Never-Before-Seen

“City Parcels & Ways to Manage”
(Feb.)

NEAR = All the pieces went together

FAR = Government
The Heart Acre Project
Protection & Movement

Never-Before-Seen
“Dwelling Place”  (March)
- Near = Shelters
- Far = Protection

Never-Before-Seen
“Ways to Move”  (April)
- Near = their way to get around their city
- Far = Movement Systems
Making Connections

A place that is similar but not the same

Movement

A transporter to NBS Future Living Place.

At the Jet Propulsion Lab
Culminating learning in June
Review & Synthesis

Never-Before-Seen “Future Living Space” (June)