

Architects in Schools Sample Residency Planning Form

Grade Level: 4th & 5th

Residency Info:

Residency Topic/Focus: Early American Structures

Residency Goals:

- Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
- Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
- Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

Possible activities in support of residency goals:

- Architects in Schools Curriculum Guide lesson 4.69: How does it feel to be a structure
- Architects in Schools Curriculum Guide lesson 4.80: Building a Geodesic Dome - Toothpick and Marshmallow Structures
- Paper dowel structures
- Take home LEED scorecard.
- Architects in Schools Curriculum Guide lesson 4.88: What makes structures stand up?
- KCRB Tour

Other resources you plan to use during your residency:

Field trip of Knight Cancer Research Building

Session #1 Info:

Session #1 Date: January 29

Session #1 Time: 1-2pm

Session #1 Plan/Details:

Introduction:

- Introduce Design Professional
- Introduce the Knight Cancer Research Project.

Activities:

- Architects in Schools Curriculum Guide lesson 4.69: How does it feel to be a structure (15 minutes in the great room)

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- Look for shapes in structures

Conclusion

- Find shapes outside class
- Make shapes worksheet for homework

Materials needed for Session #1:

- Gatorboard for final presentation

Teacher follow-up before Session #2:

Shapes homework

Session #2 Info:

Session #2 Date: February 5

Session #2 Time: 1-2pm

Session #2 Plan/Details:

Introduction:

- Structure of the Knight Cancer Research Project.

Activities:

- Architects in Schools Curriculum Guide lesson 4.80: Building a Geodesic Dome
- Marshmallow / Toothpick shapes
- Marshmallow / Toothpick Geo domes

Conclusion

- Discuss historical Oregon structures

Materials needed for Session #2:

- Marshmallows
- Tooth picks
- Newspaper

Teacher follow-up before Session #3:

Complete shapes, geo domes, and structures

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Sample Residency Planning Form

Session #3 Info:

Session #3 Date: February 12

Session #3 Time: 1-2pm

Session #3 Plan/Details:

Introduction:

- Paper shapes

Activities:

- Architects in Schools Curriculum Guide lesson 4.88: What Makes Structures Stand Up?
- Paper structure holding up 2'x2' plywood with books until failure.

Conclusion

- Learning the strength of shapes

Materials needed for Session #3:

- Construction paper
- Scissors
- Tape
- 2x2 plywood

Teacher follow-up before Session #4:

- Using the shapes to start building historical Oregon structures.
 - Continue to work on the historical Oregon structures project.
 - Divide class into groups
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Session #4 Info:

Session #4 Date: February 26

Session #4 Time: 1-2pm

Session #4 Plan/Details:

Introduction:

- Introduction to paper dowel structures

Activities:

- Build structures with paper dowels
- Use shapes to start building historical Oregon structures

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Sample Residency Planning Form

Conclusion

- Understand dowel structures and connections

Materials needed for Session #4:

- Construction paper
- Tape
- Scissors
- (24) wood dowels

Teacher follow-up before Session #5:

Continue to work on the historical Oregon structures project.

Session #5 Info:

Session #5 Date: March 5

Session #5 Time: 1-2pm

Session #5 Plan/Details:

Introduction:

- Building structures
- Sustainability

Activities:

- Work session to complete the historical Oregon structures

Conclusion

- Analyze our project
- Take home LEED scorecard

Materials needed for Session #5:

- Construction Paper
- Glue
- Tape
- Scissors
- Rulers

Teacher follow-up before Session #6:

Continue to work on the historical Oregon structures project.

Architects in Schools

Sample Residency Planning Form

Session #6 Info:

Session #6 Date: March 19

Session #6 Time: 1-2pm

Session #6 Plan/Details:

Introduction:

- Painting/materials

Activities:

- Review LEED scorecard
- Painting historical Oregon structures

Conclusion

- Prep for KCRB tour

Materials needed for Session #6:

- Construction Paper
- Glue
- Tape
- Scissors
- Rulers
- Paint
- Paintbrushes

Teacher follow-up before Session #7:

Complete project

Session #7 Info:

Session #7 Date: April TBD

Session #7 Time: TBD

Session #7 Plan/Details:

Activities:

- Tour of the Knight Cancer Research project

Conclusion

- Discuss Knight Cancer Research project

Architects in Schools
Sample Residency Planning Form

Materials needed for Session #7:

- Permission slips
- Signed waivers