



THE PAPER GIRLS SHOW

EDUCATIONAL GUIDE

EPISODE 9: 'SHRED' OF DIFFERENCE:
TOPICS: ENVIRONMENT & RECYCLING EPISODE

EPISODE SYNOPSIS

In Episode 9 of The Paper Girls Show, Queen Frivol is enraged to discover that her beloved Shredder, Melvin, has been recycling stuff from her prized junk pile at Uncle Seymour's Fix It Shop.

FEATURED STEAM TOPICS

BIG IDEA – Connecting *The 3 Rs – Reduce, Reuse, Recycle* – to actions children can take.

EXPLANATION FOR CHILDREN:

- **Reduce** means to use less of something;
- **Reuse** means to use something more than one and, if possible, in different ways;
- **Recycle** means to make new items out of old ones.

All of us can recycle by creating new things out of old objects or used materials that are not being used anymore. Everyday items made from paper, plastic, wood, and metals can be made into new things if we think about them in new ways. When we reuse and recycle, we

help reduce the impact of humans on Earth.

CORE CURRICULAR AIMS, N.G.S.S. & RELATED CONTENT STANDARDS

The standards and curricular aims listed below are linked to this episode's extension activities. Each activity is designed to promote children's understandings of earth science, visual arts, and engineering design as they explore ways to Reduce, Reuse, and Recycle.

1-Earth Science: Interdependent relationships in ecosystems: Animals, plants, and their environment

Communicate solutions that will reduce the impact of humans on land, water, air, and/or living things in the local environment.

Source: NGSS Lead States. 2013. Next Generation Science Standards: For States, By States. Washington, DC: The National Academies Press.

2- Visual Arts: Creating

- Engage in self-directed, creative making.
- Engage collaboratively in creative art-making in response to an artistic problem.
- Use observation and investigation in preparation for making a work of art.

- Make art or design with various materials and tools to explore personal interests, questions, and curiosity.

Source: National Coalition for Core Arts Standards. (2014). National Core Arts Standards: Visual Art, Grades Pre-K to 12. National Coalition for Core Arts Standards.

3- Engineering: Design

- Ask questions, make observations, and gather information about a situation people was to change to define a simple problem that can be solved through the development of a new or improved object or tool.
- Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

Source: NGSS Lead States. 2013. Next Generation Science Standards: For States, By States. Washington, DC: The National Academies Press.



ACTIVITY EXTENSIONS FOR EPISODE TOPICS

In episode 9 of The Paper Girls Show, children are introduced to the idea that used paper can be shredded and reused in new ways and to make items. Below is a brief listing of activities that invite children to rethink and reuse paper in new ways. In each activity the emphasis is on the process of thinking, design, and making rather than a perfect end product as children take the lead in their own investigations. Parents and teachers can support children in their work by asking prompting questions such as: How did you decide to use that scrap piece?; What will you need to help you?; What's working and where can we rethink your idea?; What is the next step or thing you need to do?

1. Functional 'Shredded' Papier-mâché Bowls

Encourage children to gather and tear used paper into small strips. They will also need to select a bowl to use as their base for the papier-mâché (coat the outside of the bowl with a release agent such as Vaseline). Once paper is torn, mix one part flour with one part water to make the paper mache paste. Children will dip the torn paper strips into the paste, removing excess with their fingers before layering on the outside of the bowl. Continue until the bowl is covered and smooth out the strips.

Let dry overnight and repeat with two additional layers. Once the final layer is dry, the base bowl can be separated from the papier-mâché. Children can paint or decorate as desired.

PROMPTING QUESTIONS

- Why is it important to reuse paper?
- How is reusing paper different from recycling it?
- What can we do to make the sides of our bowl thicker?

Kenya's Art

Written by Linda Trice

Illustrated by Hazel Mitchell

Charlesbridge Publishing

Kenya's Art shares the story of a young girl inspired to make art from recycled objects after a trip to an exhibit about recycling at a museum. The book shares great ideas for children to make use of broken toys or other found objects.

2. Recycled Paper People

Encourage children to gather used paper and think about how they can create their own moveable character from the paper scraps. Younger children may benefit from body models they can trace or actually use to affix their paper. Children will need scissors, paper scraps, small round brads or paper fasteners (if they want their characters to have movable limbs), glue, and markers or other decorative materials. Invite children to layer the paper scraps to create their own, unique character. Children can use their characters in story-telling experiences.

PROMPTING QUESTIONS

- Why is it important to use recycled objects in our artwork?
- What do you need to do to make the arms or legs of your person move?
- What does your person like to do?; How can you show that in their clothes or the way they move?

Website with Extension Information and Images:

Guggenheim's Kinetic Art Collection – Kinetic art refers to artworks that have moveable elements.

3. Handmade Paper from Shredded Paper Scraps

Encourage children to gather and tear used paper into very small pieces. Children will need a small screen to complete this project. An easy way to recycle materials to make this is to adhere a used window screen over an old picture frame with the glass removed. Once paper is torn, let it soak in a bowl of water overnight.

To create the paper pulp from the soaked paper you will need to help the children by blending the drained, soaked paper in a blender or food processor. Small batches will work best and you can add in more water if the paper isn't blending well. Pour the blended pulp over the screen – place the screen over a container or sink to catch the water as it drains off. Using a ruler or wooden stick, carefully spread the pulp into a thick uniform layer. At this point children can add dried flowers or leaves if desired by gently pushing them into the paper pulp. Place a flat heavy item (board) over the pulp mixture and press down to remove excess water. Once water is removed, turn the screen over and gently tap to remove the paper. Let dry for several days.

PROMPTING QUESTIONS

- Why do we need small pieces of paper?; What would happen if we used pieces that were too big?
- What will happen if we mix different colors or types of paper pieces into our handmade paper?
- Will our paper feel rough or smooth?; Why do you think that?

Extension Website with Videos for Children about Paper Making from:

Idaho Forest Products





ABOUT Angela Eckhoff, PhD

Angela Eckhoff, is an Associate Professor of Teaching and Learning and the Director of the Virginia Early Childhood Policy Center at Old Dominion University. Dr. Eckhoff studies the role of creativity in child development and learning, arts-based research and pedagogical practices, and early STEAM learning in both classroom and museum settings.

She is a co-editor of the Full STEAM Ahead column for Teaching Young Children from NAEYC as well as the author of ‘Provoking Curiosity’ and the four-book “Creative Investigations” series from Gryphon House Inc. Dr. Eckhoff holds a dual PhD from the University of Colorado–Boulder in educational psychology and cognitive science.