



## INVENTORY OF TRUNK

### In the Mirror

IN

OUT

#### Activity Binder

- |                          |                          |                                             |
|--------------------------|--------------------------|---------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Librarian Instructions                      |
| <input type="checkbox"/> | <input type="checkbox"/> | Inventory Sheet                             |
| <input type="checkbox"/> | <input type="checkbox"/> | Book list/Introduction                      |
| <input type="checkbox"/> | <input type="checkbox"/> | Reflection Painting                         |
| <input type="checkbox"/> | <input type="checkbox"/> | Playing with Angles                         |
| <input type="checkbox"/> | <input type="checkbox"/> | Looking for Reflections                     |
| <input type="checkbox"/> | <input type="checkbox"/> | Consumable and Restocking List              |
| <input type="checkbox"/> | <input type="checkbox"/> | In the Mirror Reflection Supplement         |
| <input type="checkbox"/> | <input type="checkbox"/> | <i>Mirror</i>                               |
| <input type="checkbox"/> | <input type="checkbox"/> | <i>How Mirrors Work</i>                     |
| <input type="checkbox"/> | <input type="checkbox"/> | <i>The right question at the right time</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | Parent surveys                              |
| <input type="checkbox"/> | <input type="checkbox"/> | 3 laminated sheets                          |

#### Books

- |                          |                          |                                                                                                      |
|--------------------------|--------------------------|------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <i>A Child's Introduction to Greek Mythology</i> by Heather Alexander ("Echo and Narcissus" page 74) |
| <input type="checkbox"/> | <input type="checkbox"/> | <i>Experiments with Light and Mirrors</i> by Robert Gardner                                          |
| <input type="checkbox"/> | <input type="checkbox"/> | <i>I See Myself</i> by Vicki Cobb                                                                    |
| <input type="checkbox"/> | <input type="checkbox"/> | <i>Is It Symmetrical?</i> By Nancy Kelly Allen                                                       |
| <input type="checkbox"/> | <input type="checkbox"/> | <i>Just Ducky</i> by Kathy Mallat                                                                    |
| <input type="checkbox"/> | <input type="checkbox"/> | <i>Reflections</i> by Ann Jonas                                                                      |
| <input type="checkbox"/> | <input type="checkbox"/> | <i>Shadow</i> by Suzy Lee                                                                            |
| <input type="checkbox"/> | <input type="checkbox"/> | <i>Shadows and Reflections</i> by Tana Hoban                                                         |
| <input type="checkbox"/> | <input type="checkbox"/> | <i>Shadows and Reflections</i> by Barbara Taylor                                                     |
| <input type="checkbox"/> | <input type="checkbox"/> | <i>What Did They See?</i> By John Schindel                                                           |

#### Reflection Painting

- |                          |                          |                                                        |
|--------------------------|--------------------------|--------------------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Large, plastic, clear envelope filled with white paper |
| <input type="checkbox"/> | <input type="checkbox"/> | Small portion cups                                     |

Playing with Angles

- |                          |                          |                                                          |
|--------------------------|--------------------------|----------------------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | Large, plastic, purple envelope filled with angle sheets |
| <input type="checkbox"/> | <input type="checkbox"/> | Bin of pattern blocks                                    |
| <input type="checkbox"/> | <input type="checkbox"/> | 18 sets of hinged mirrors                                |

Looking for Reflections

- |                          |                          |                                                         |
|--------------------------|--------------------------|---------------------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | 3 Handheld mirrors                                      |
| <input type="checkbox"/> | <input type="checkbox"/> | Large soup pot with lid                                 |
| <input type="checkbox"/> | <input type="checkbox"/> | Copper tin                                              |
| <input type="checkbox"/> | <input type="checkbox"/> | Small Christmas tin                                     |
| <input type="checkbox"/> | <input type="checkbox"/> | 5 silver platters                                       |
| <input type="checkbox"/> | <input type="checkbox"/> | Variety of spoons and spatulas                          |
| <input type="checkbox"/> | <input type="checkbox"/> | CDs                                                     |
| <input type="checkbox"/> | <input type="checkbox"/> | 5 pairs of sunglasses                                   |
| <input type="checkbox"/> | <input type="checkbox"/> | Variety of reflective paper in various colors and sizes |
| <input type="checkbox"/> | <input type="checkbox"/> | Variety of Christmas ornament balls                     |
| <input type="checkbox"/> | <input type="checkbox"/> | Miscellaneous reflective surfaces                       |

To Be Provided by Borrowing Library\*

- |                          |                          |                                                |
|--------------------------|--------------------------|------------------------------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | 2 colors of washable tempera paint (blue, red) |
| <input type="checkbox"/> | <input type="checkbox"/> | 24 small paintbrushes                          |
| <input type="checkbox"/> | <input type="checkbox"/> | White Paper                                    |

\* Some of these materials are provided in the kit but may be recommended to purchase as they will not be restocked by NMSL in the future.

Checked by _____	Date _____
Checked by _____	Date _____

# Reflection Painting

## Beforehand:

Fold legal size copy paper in half. Prepare enough for each participant to have a minimum of one folded sheet.

## Materials:

- Legal size (8 1/2" x 14") white copy paper 24 lb
- 2 colors of washable tempera paint
- Small paint brushes
- 2 oz. size portion cups

## Set Up:

Put a tablespoon of paint into a portion cup. Put a second color in a different cup. Set these cups on the table with 5 paintbrushes. Set pre-folded paper on the table. Set up the prompt card.

## Questions to Extend Discoveries:

Model how to unfold a sheet of paper and show where to paint a design on the right side inside the unfolded sheet. Encourage the participants as they put the paint down to work quickly so that the paint does not dry. Then, ask participants to refold the paper on the existing crease so that the painted side is up against the unpainted side. Ask participants to rub the outside of the paper gently to help transfer the design and then reopen the paper.

Ask:

"What happened? What design do you see on the left side of the paper now?"

To extend: Have participants stand a rectangular mirror on its vertical edge on the crease in the paper. Ask, "What do you see?" Ask participants to keep looking at the place where the mirror is and then to remove the mirrors. Ask, "What do you see now?"

What is happening? Applying the mirrors at this point helps children to make a direct connection between the image created by folding the paper and the image of the original printed side created by the mirror reflection.

# Playing with Angles

## Beforehand:

Clean mirrors to remove fingerprints, smudges, etc. Periodically wipe down laminated angle sheets and pattern blocks.

## Materials:

- Hinged mirrors
- Laminated angle sheets
- Pattern blocks

## Set Up:

Set 5-8 hinged mirrors on the table, 5 laminated angle sheets, and a few handfuls of pattern blocks. Set up the prompt card.

## Questions to Extend Discoveries:

Encourage participants to experiment with keeping one mirror stationary while the second mirror is moved into different positions.

"How does your reflection change when you move one mirror?"

"How many images do you see?" (Encourage systematic adjustment by modeling slightly reducing or increasing the angle.) "Now how many images do you see?"

Demonstrate how the angle sheet can be used as a guide on which to place the hinged mirror. Ask the following questions as you interact with participants:

"What kinds of reflections do you make when you move both mirrors?"

"Can you position the mirrors so that half of your face is reflected?"

"Can you make your reflection upside down?"

"Experiment with moving the mirrors away from each other [increasing the angle]. Now what kind of face reflections can you see?"

# Looking for Reflections

## Beforehand:

Check to make sure that the reflective objects are in good shape and are still reflective. Replace as needed.

## Materials:

- Flat reflective surfaces including: mirrors, aluminum pans, metal spatulas, aluminum foil, CDs and reflective papers.
- Curved reflective surfaces including: sunglasses, pots, and spoons.

## Set Up:

Spread the different reflective objects and surfaces out on the table.

Set up the prompt card.

## Questions to Extend Discoveries:

Invite the participants to explore their images in the materials. Listen to their discoveries and extend them with the following questions:

"What do you notice about your reflection in the different objects?"

"In what object do you see the clearest image of yourself?"

"Where are you upside down? Where are you right-side-up?"

"Which object creates the funniest image of you?"

"Can you see more than one of yourself in any of the objects?"



"Try placing the mirrors one above the other [so that the hinge is horizontal] and move them closer and then farther away. What happens to your image?"

Ask participants to work with partners at their table to combine two hinged mirrors (4 mirror pieces). Ask, "What kind of reflections of yourselves can you see now?"

### **Pattern Block Symmetry:**

Model how to begin with the mirrors near a  $45^\circ$  angle, and how to place the pattern block in the corner where the mirrors touch. Ask the participants to experiment with the blocks to discover the "mirror images," also called symmetrical images. Ask the following questions:

"How many reflections of your design do you see?"

"Can you bring the mirrors closer together or farther apart to make your patterns look different?"

"How else can you design and reflect a pattern?"