

# **Children's TherAplay**

JENNA EFFINGER FALL 2020



# **INVESTIGATION PHASE**

# REVIEW MATERIAL

## SENSORY TABLES

A PREVIOUS CLASS DESIGNED SENSORY TABLES TO BE USED IN THE SPACE. THESE TABLES HELP THE CHILDREN WITH DIFFERENT MOTOR SKILLS, CALMING NOISES, HELP WITH EVERYDAY TASKS, AND PLAY WITH DIFFERENT TEXTURES.

THERAPIST ENTRANCE: SOUTH SIDE OF BUILDING WITH LARGE STORAGE. BARN DOORS

RECEPTION/ PATIENT AREA: COLORFUL SPACE WITH GREEN BLUE AND PURPLE. RUSTIC WOOD THEME THROUGHOUT

DONOR WALL

GRADUATION TREE

PARTY AREA

STAFF BREAK ROOM

GYM

# CASE STUDIES



## ROMEDEVILLE HOME TO SENSORY ROOM FOR SPECIAL NEEDS COMMUNITY

SNOEZELEN ROOMS ARE DESIGNED TO REDUCE ANXIETY AND ENGAGE THE SENSES THROUGH THE USE OF **lights, sounds, and touch**. THE ROOM IS FLUSH WITH **colored lights, bustling bubbles, and raised surfaces that encourage touch**. . PEOPLE WITH AUTISM WILL GREATLY BENEFIT FROM THE SURPLUS OF SENSORY INPUT IN THE ROOM. INDIVIDUALS WHO MAY NOT BE VERBAL MIGHT LOOK AT THE BUBBLE TUBE AND, WHEN IT CHANGES COLORS, THEY MIGHT SAY “WHITE” OR “PINK”. THAT MAY TURN OUT TO BE ONE OF THE FEW WORDS THEY’RE SAYING AT THE MOMENT. THERE IS A PROJECTED IMAGE ON THE FLOOR THAT CHANGES AS YOU INTERACT WITH IT. “FINE MOTOR MOVEMENTS ARE PRACTICED WITH THE TOUCH SCREEN OR GRABBING THE WALL WHEELS AND SPINNING THEM.” THE ROOM ALSO **promotes choice**. “A LOT OF TIMES PEOPLE WITH SPECIAL NEEDS ARE GIVEN SCHEDULES,” SAID KORDAS. “THEY HAVE TO GO TO SCHOOL, THEY HAVE TO GO TO THERAPY, THEIR PARENTS MAYBE MAKE DECISIONS FOR THEM. BUT WHEN THEY’RE IN HERE, THE WHOLE POINT IS THEY CAN CHOOSE WHAT TYPES OF EQUIPMENT THEY WANT TO INTERACT WITH.” IF SOMEONE IS SENSITIVE TO SOUND, THE SPEAKERS CAN BE MUTED OR COMPLETELY TURNED OFF. **Everything in the room doesn’t have to be used at the same time.**

# RESEARCH

## The Effects of Sensory Design on Autistic Children

### SENSES

THE SENSORY DESIGN IS DESIGN FOR LIVING WHICH HOW SPACE FEELS, SOUNDS, LOOKS, SMELLS, AND FUNCTIONS CAN BE INCREDIBLY AFFECTING ONE OR MORE OF THE SEVEN SENSES WHICH CAN HAVE AN OVERWHELMING EFFECT ON THEIR LIFE. THEIR SENSES CAN BE EITHER OVER-DEVELOPED (HYPERSENSITIVE) OR UNDER-DEVELOPED (HYPOSENSITIVE) WHICH CAN RESULT IN FEELINGS OF ANXIETY, PHYSICAL PAIN, STRESS & OCCASIONALLY.

**Flickering light, reflections, glare** FROM DIRECT SUNLIGHT AND **shadow patterns** OF INTERIOR SHOULD BE **avoided** IN SPACES DESIGNED FOR AUTISTIC CHILDREN BECAUSE IT CAUSES **distress and anxiety**. TO AVOID THIS PROBLEM **Allocation of windows at both low and high levels** ALONG WITH **high-quality lighting**.

**Complex layouts, long corridors and frequent changes of level** SHOULD BE **avoided** BECAUSE IT WILL CAUSE **disorientation** AND CAUSE **stress** AND **anxiety**.

TO PROVIDE A QUIET ENVIRONMENT **soundproofing** SUCH AS ACOUSTIC CEILING AND A CLEANABLE CARPET SHOULD BE USED TO **avoid noisy spaces**. LOUD SPACES USUALLY CAUSE THE REPETITIVE BEHAVIOR DUE TO THEIR CHRONICALLY HIGH LEVEL OF STIMULATION.

DISTURBING AND **overly stimulating colors** CAUSE **distress and anxiety**. NEUTRAL, CALMING COLORS AND THE USE OF NATURAL MATERIALS SHOULD BE USED.

# RESEARCH

## Design for Special Education



SPECIALIZED EQUIPMENT AND FURNITURE SUCH AS FOAM WEDGES, THERAPY BALLS, WALKERS, AND SWINGS HELP STAFF AND STUDENTS TO CUSTOMIZE USE TO PARTICULAR NEEDS. THESE OPTIONS ARE IMPORTANT TO ACCOMMODATE A WIDE RANGE OF LEARNING ACTIVITIES BUT REQUIRE ADDITIONAL SPACE AND PLACEMENT CONSIDERATION. OVERHEAD ELECTRICAL OUTLETS ENHANCE VERSATILITY, FUNCTIONALITY, AND EMERGENCY PREPAREDNESS BY ALLOWING EQUIPMENT AND ROOMS TO BE MOVABLE.

CLASSROOM DESKS AND CHAIRS SHOULD HAVE CUSHIONED FEET TO REDUCE SOUND, AND BE TOO HEAVY FOR STUDENTS TO PICK UP OR MOVE EASILY. WEIGHTED PRODUCTS THAT ATTACH TO CHAIR AND TABLES PROVIDE AN ALTERNATIVE TO HEAVY FURNITURE. SOME STUDENTS BENEFIT FROM CARRELS ENCLOSED ON THREE SIDES TO REDUCE DISTRACTION, BUT A PORTABLE PRIVACY SCREEN CAN SERVE THE SAME PURPOSE.

SENSORY ROOMS INVOLVE A WIDE ARRAY OF ITEMS, INCLUDING ACTIVE SEATING TO ACCOMMODATE MOVEMENT, SOFT SEATING SUCH AS FOAM OR BEANBAG CHAIRS, TACTILE TEXTURED SURFACES, AND LIGHTED ELEMENTS.

# RESEARCH

## Sensory Processing in Autism: A Review of Neurophysiologic Findings

ATYPICAL SENSORY-BASED BEHAVIORS ARE A UBIQUITOUS FEATURE OF AUTISM SPECTRUM DISORDERS (ASD). AUTISM SPECTRUM DISORDERS (ASD) ARE DEFINED CLINICALLY BY IMPAIRMENT IN COMMUNICATION, SOCIAL INTERACTION, AND BEHAVIORAL FLEXIBILITY. COMMON CLINICAL COMPLAINTS ARE AVOIDING LIGHT TOUCH TO THE HEAD AND BODY AS OCCUR WITH GROOMING AND PARTICULAR CLOTHING. THE PSYCHOPHYSICAL TACTILE STUDIES LOOK AT THRESHOLDS AND SENSITIVITY USING VIBROTACTILE STIMULI. INDIVIDUALS WITH ASD ALSO EXHIBIT ATYPICAL VISUAL BEHAVIOR THAT CAN BE CONSTRUED AS ATTEMPTING TO AVOID VISUAL INPUT (E.G. COVERING EYES AT BRIGHT LIGHTS) OR TO SEEK ADDITIONAL VISUAL STIMULI (E.G. TWISTING FINGERS IN FRONT OF EYES).



# FURNITURE IDEAS

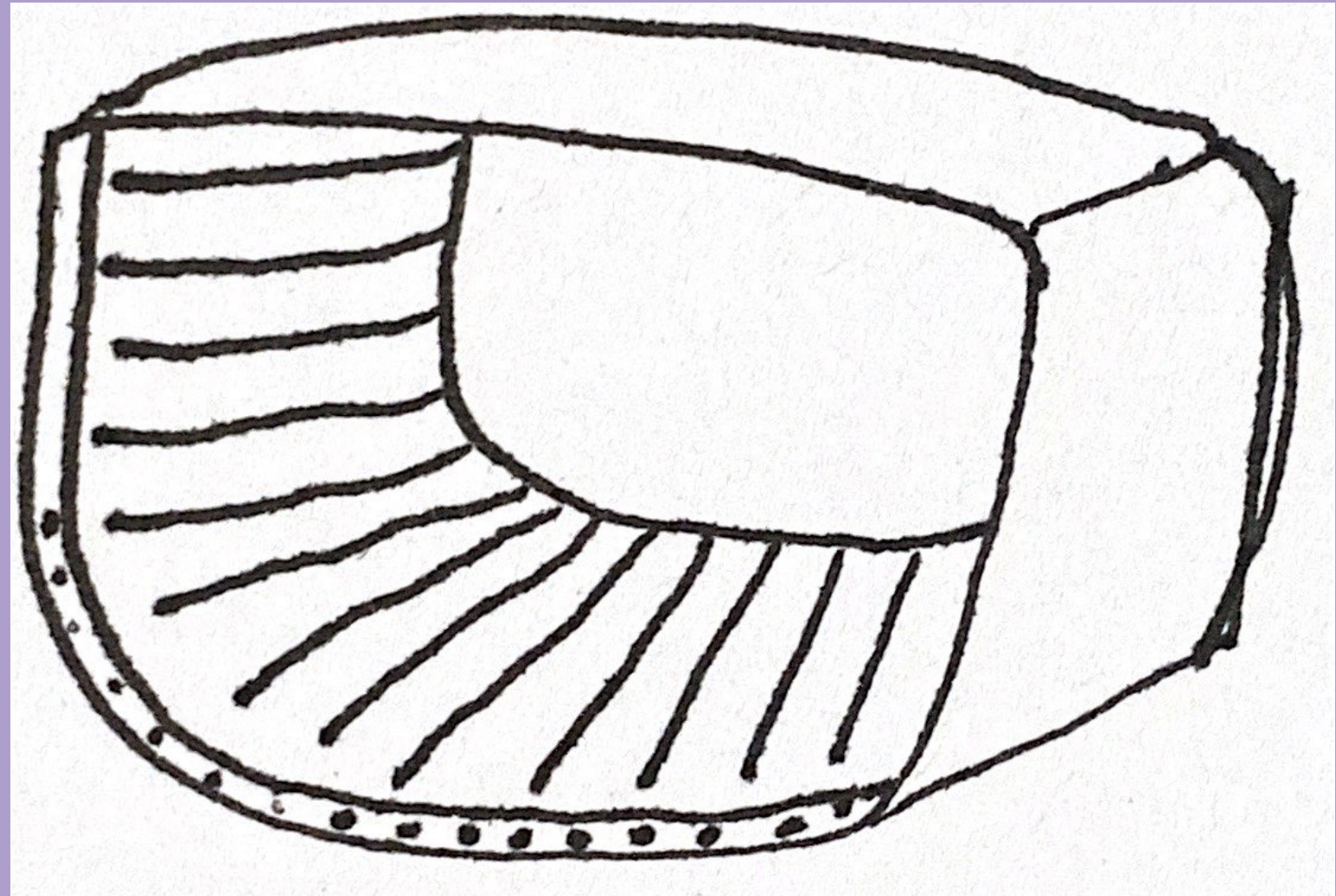
- NATURAL MATERIALS
- COMFORTING
- INTERESTING SOUNDS BUT NOT TOO LOUD
- CALMING LIGHTING





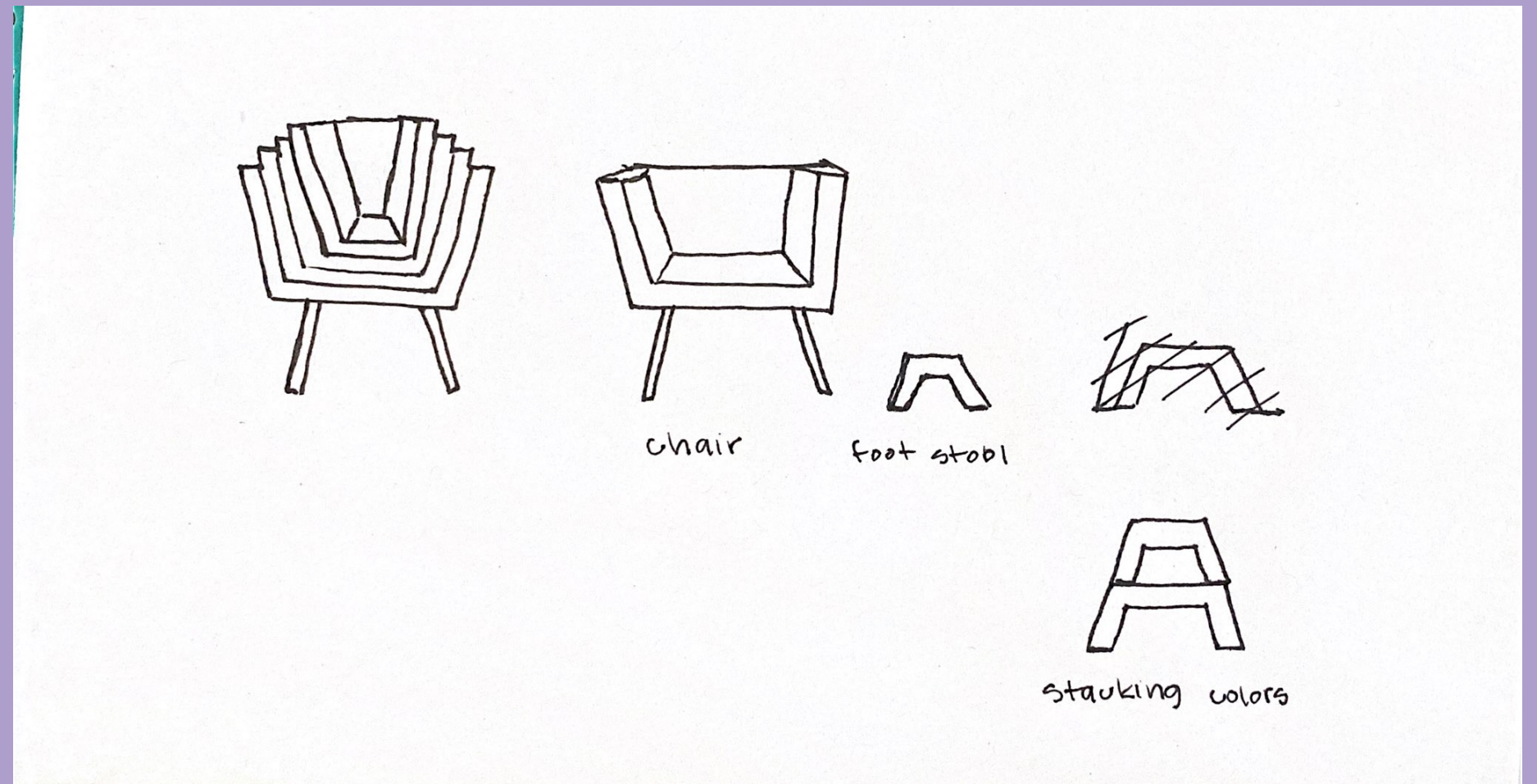
# CONCEPT 1

- PADDING
- NATURAL MATERIALS AND COLORS
- ROCK-ABLE
- BEADS IN THE BOTTOM THAT ROLL AND MAKE NOISE WHEN CHAIR IS ROCKED



# CONCEPT 2

- STACKABLE
- INTERACTIVE
- EACH PIECE A DIFFERENT COLOR
- SMALLEST PIECE COULD BE USED AS FOOT STOOL OR STEP STOOL



# MATERIALS

## PINE WOOD

- CHEAPER THAN OAK
- PINE'S NATURAL COLOR PAIRS WELL WITH OTHER PIECES
- EASY TO STAIN AND PAINT
- LIGHTER THAN OAK SO KIDS WILL BE ABLE TO PICK UP EASILY

# COLOR

## The Use of Color in Autism Spectrum Disorders

STUDIES HAVE REVEALED THAT 85% OF THE CHILDREN IN THIS SPECTRUM PERCEIVE COLORS **more intensely** IN COMPARISON TO CHILDREN DISPLAYING NORMAL DEVELOPMENT. **Duller colors** WITH WHITE AND GRAY UNDERTONES HAVE A **calming effect** ON CHILDREN IN THIS SPECTRUM. **Pale pink** HAS BEEN NOMINATED AS THE FAVORITE COLOR FOR CHILDREN WITH AUTISM IN THE TESTS CONDUCTED. MOREOVER, COOL COLORS SUCH AS **blue and green** ALSO HAVE A CALMING AND SOOTHING EFFECT. PRIMARY AND BRIGHT COLORS MUST ONLY BE LIMITED TO THE TOYS IN THEIR ROOMS.

# DIMENSIONS

## SEAT DESIGN CRITERIA

**SEAT PAN CONTOURS** - HALF BODY WEIGHT IS SUPPORTED BY AN 8% AREA UNDER THE "SEAT BONES" (ISCHIAL TUBEROSITIES). IF THE SEAT IS HARD AND FLAT THE PRESSURES CAN BE 85-100 P.S.I. SEAT CONTOURING AND CUSHIONING CAN BE USED TO DISTRIBUTE PRESSURE OVER A LARGER AREA AND ROTATE THE PELVIS FORWARD THE PROMOTE BETTER POSTURE.

**Seat Angle** - POSITIVE SEAT ANGLE HELPS USER TO MAINTAIN GOOD CONTACT WITH BACKREST. FOR MOST PURPOSES A **5 - 10 angle** IS RECOMMENDED.

## Seat Design Criteria

### FOR CHILDREN 5-10

FOR CHILDREN 5-10 YEARS OLD  
SEAT: 13 INCHES TALL  
BACK: 31 INCHES TALL  
SEAT DEPTH: 13 INCHES

# SITE VISIT

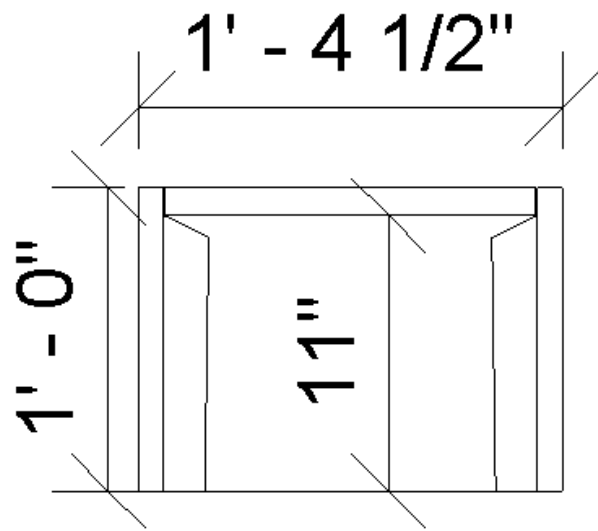
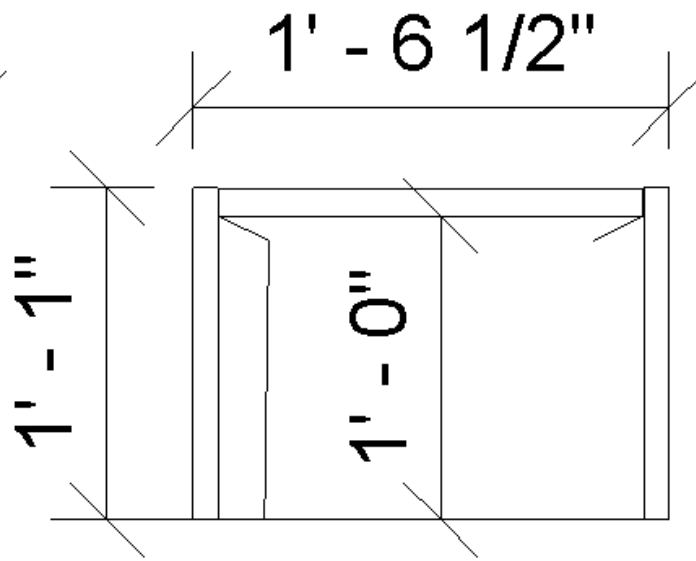
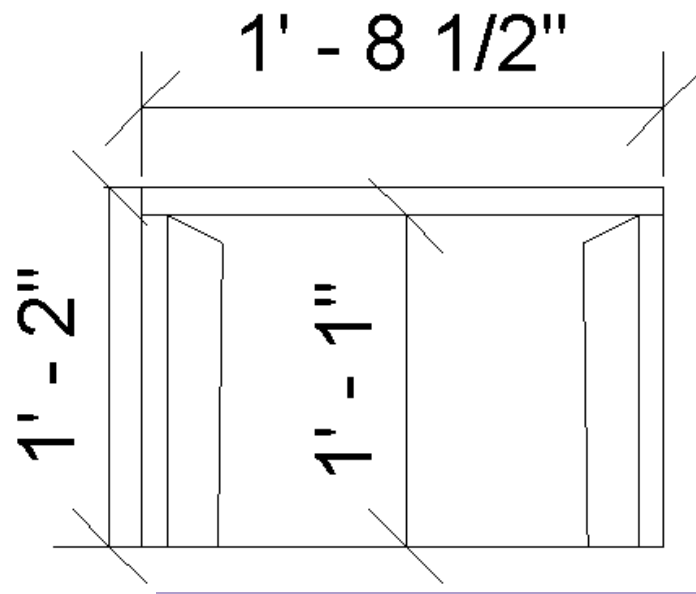
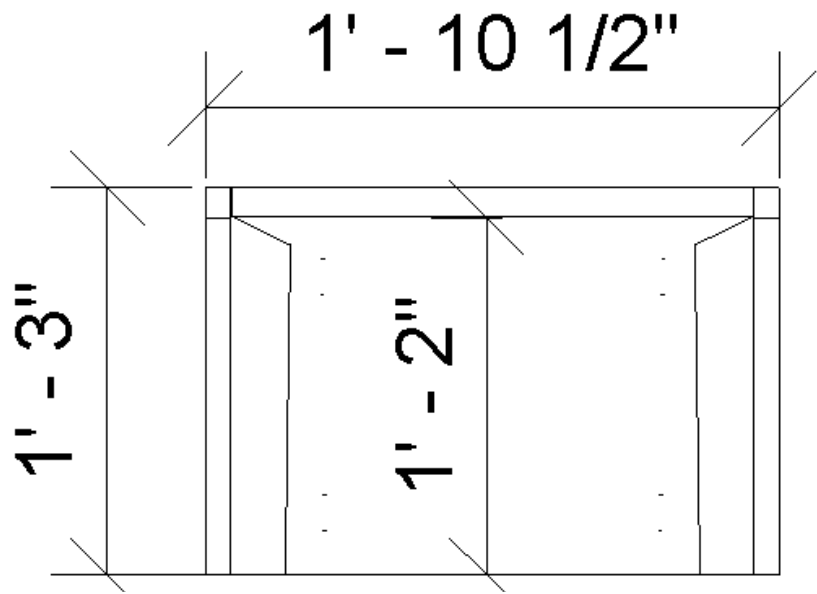
## Children's TherAplay

WHAT I TOOK AWAY THE MOST FROM MY OBSERVATION WAS THE INTERACTION OF THE CHILDREN. I GOT TO SEE HOW THE KIDS INTERACTED WITH ME WHILE THEY PASSED THROUGH THE VESTIBULE I WAS OBSERVING FROM. SOME OF THE KIDS IGNORED ME WHILE OTHERS WERE VERY FRIENDLY AND OUTGOING, MAKING SURE TO STOP AND SAY HELLO TO ME. I GOT TO SEE THE INTERACTION WITH THE CHILDREN AND THE THERAPISTS. THE CHILDREN THAT WERE PRESENT DURING MY OBSERVATION NEEDED TO BE TOLD A FEW TIMES BEFORE MOVING ON TO THE NEXT TASK. THEY EASILY GOT DISTRACTED. THE CHILD THAT I OBSERVED RIDING THE HORSE SEEMS TO LOVE IT. SHE WAS MUCH MORE OUTGOING WHILE ON THE HORSE, ENGAGING IN CONVERSATION WITH THE THERAPIST.



# **Design Development**

# PLAN VIEW

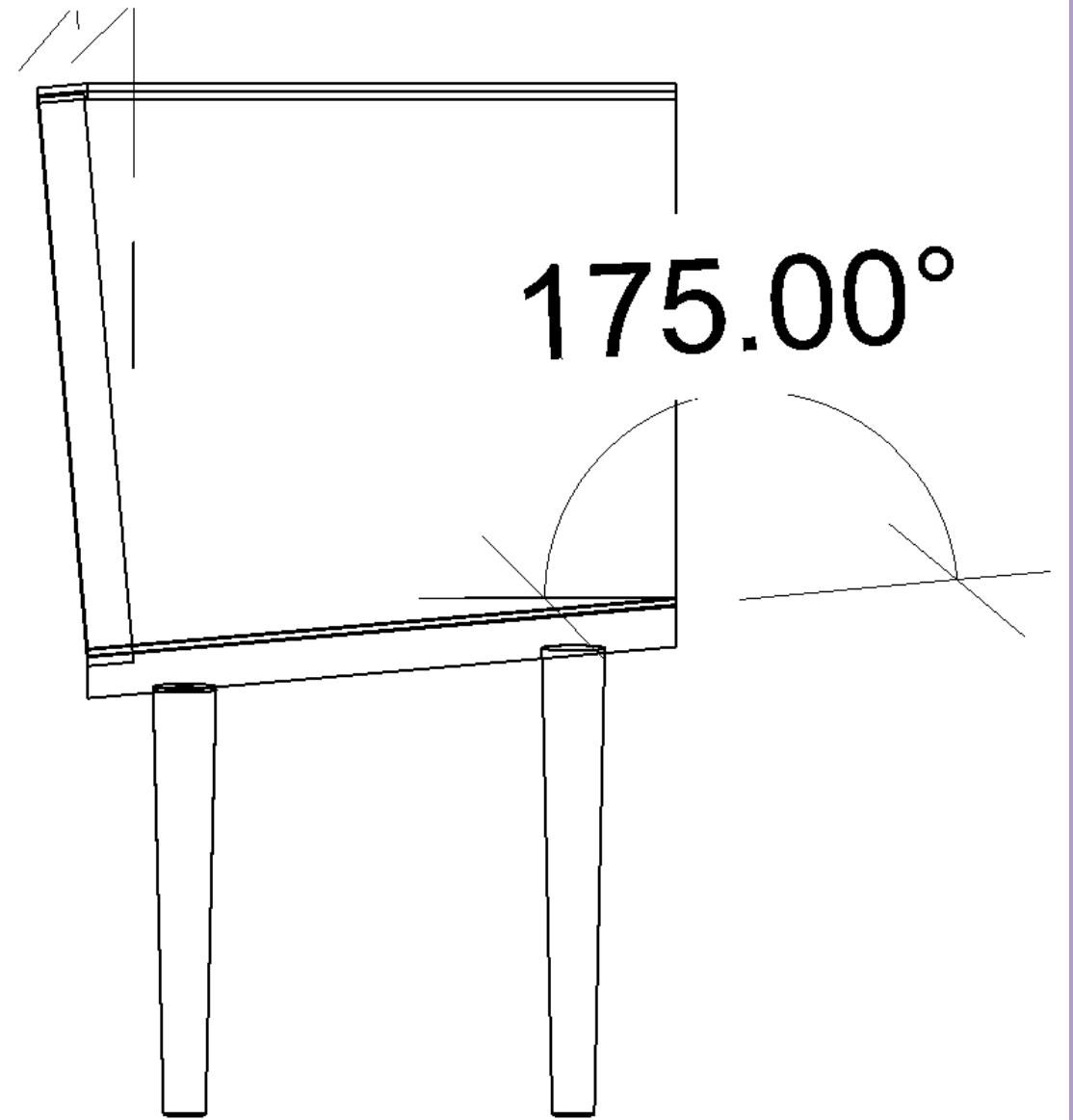




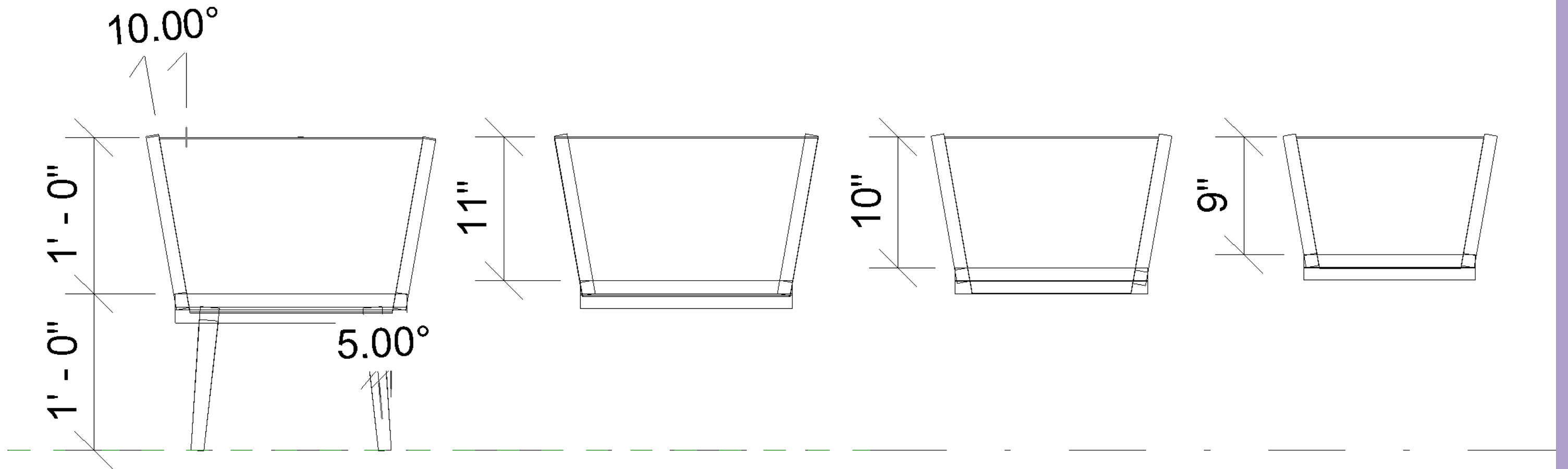
# SIDE VIEW

5.00°

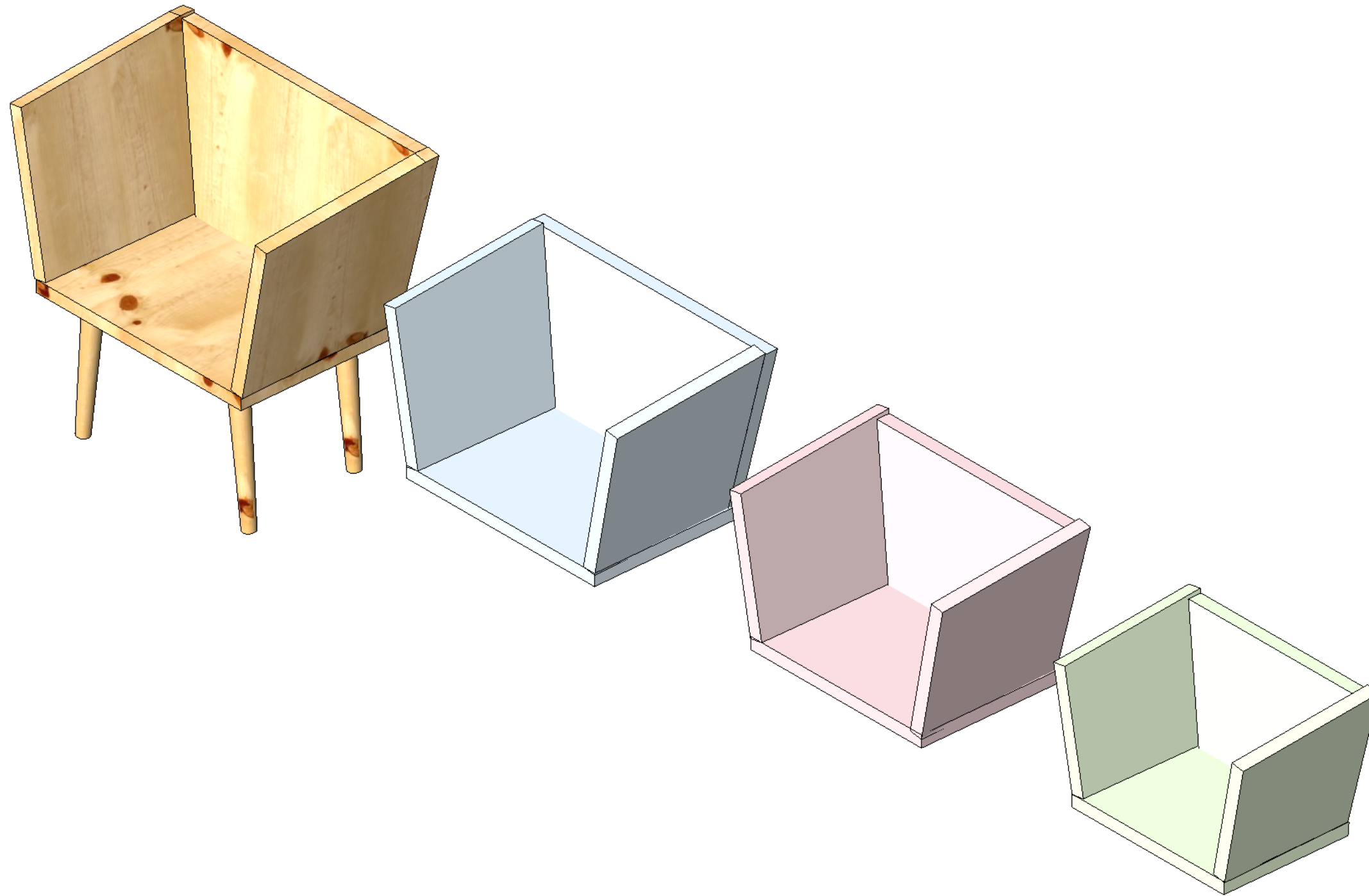
175.00°



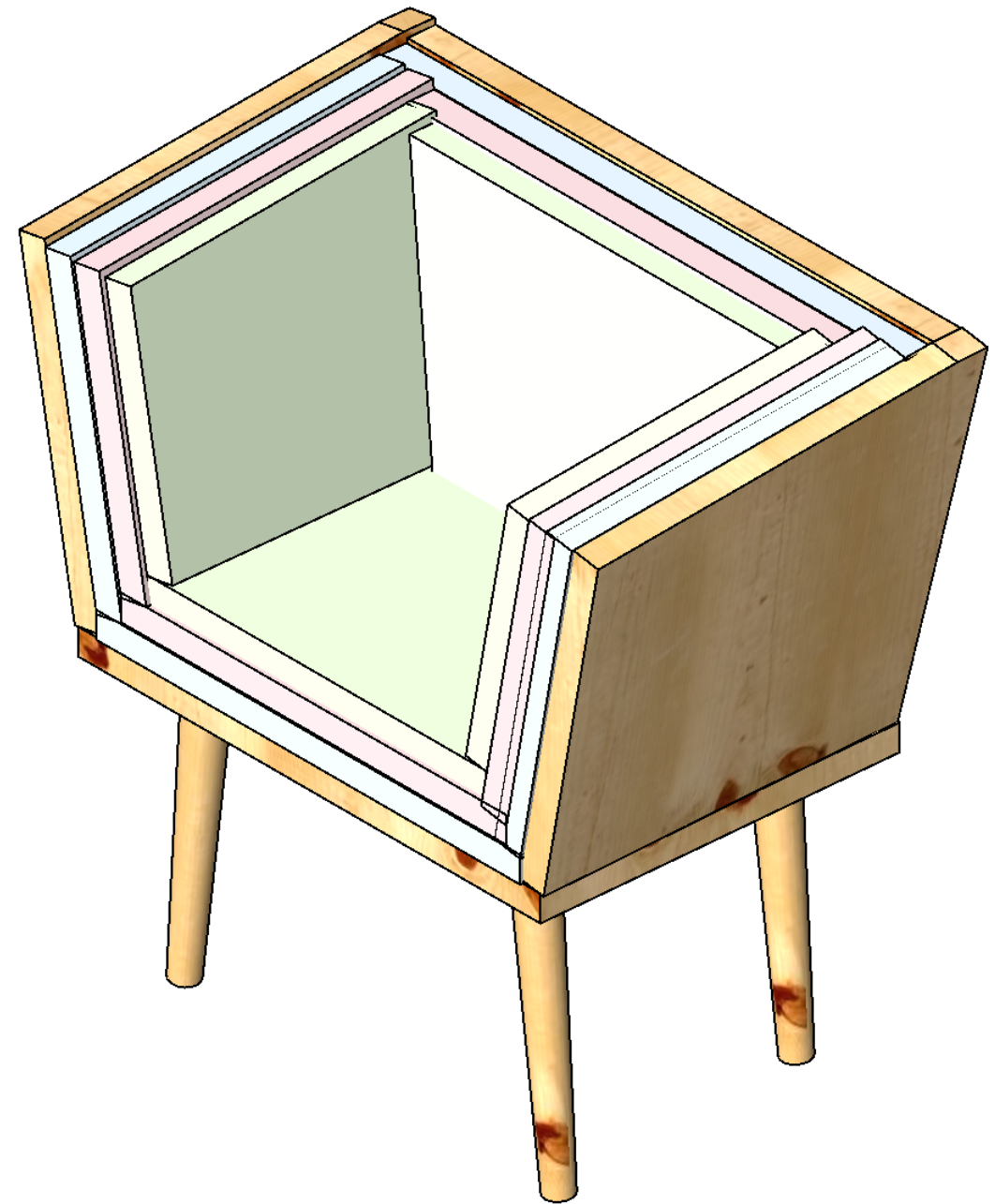
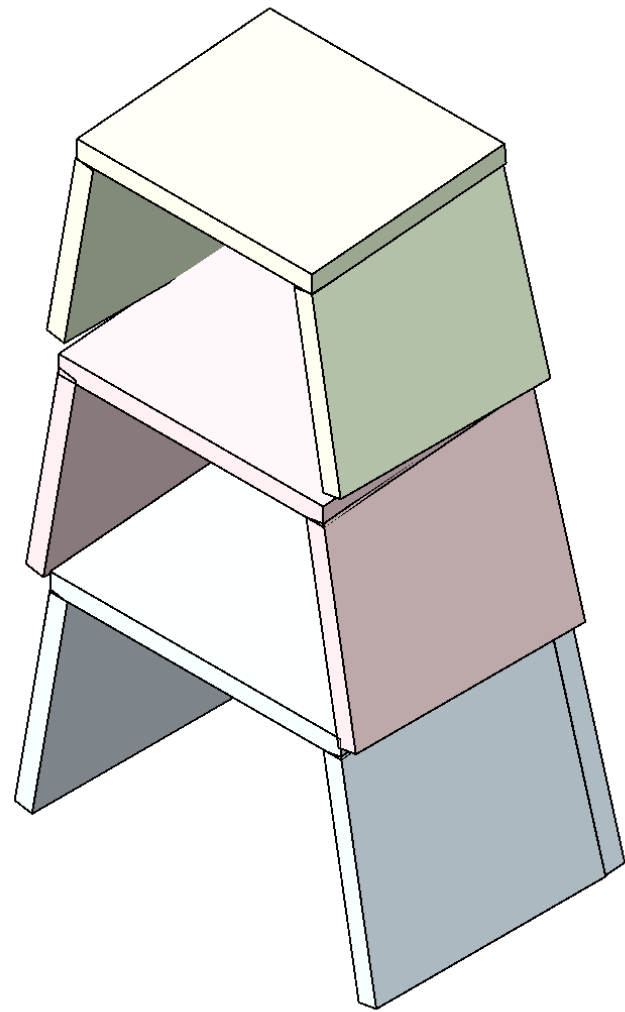
# ELEVATION VIEW



# ISOMETRIC VIEW

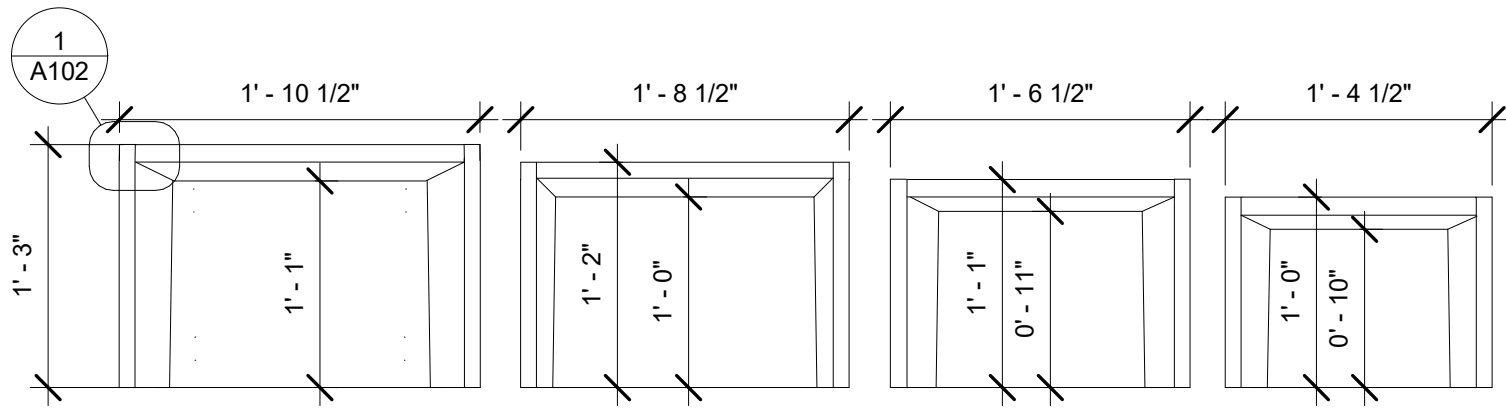


# PERSPECTIVE

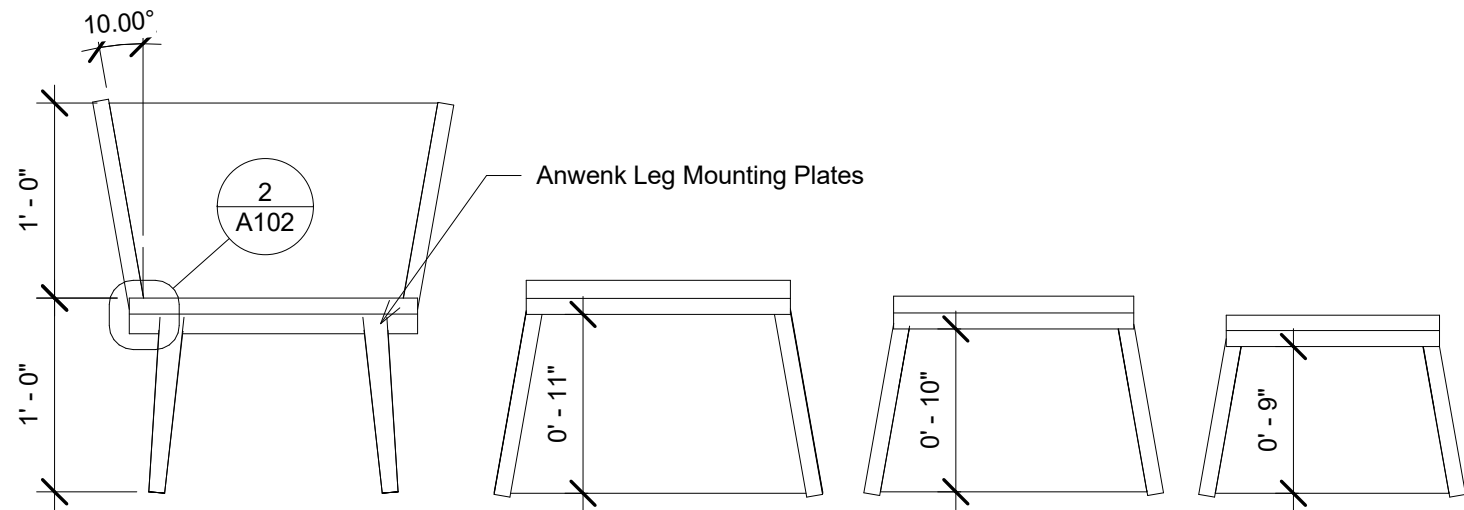


The image features two overlapping green rectangles on the left side. The front rectangle is a solid medium green, while the back one is a slightly lighter shade and is partially obscured. Both rectangles have a thin white border.

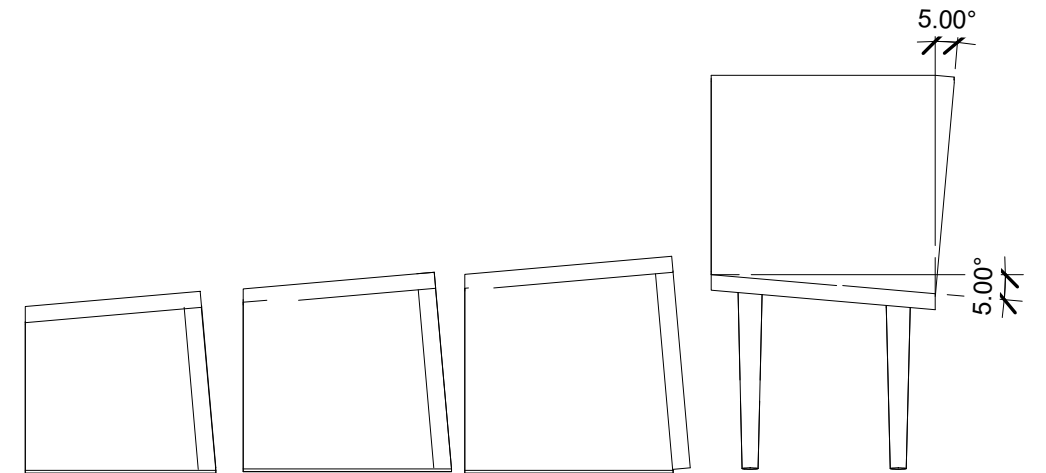
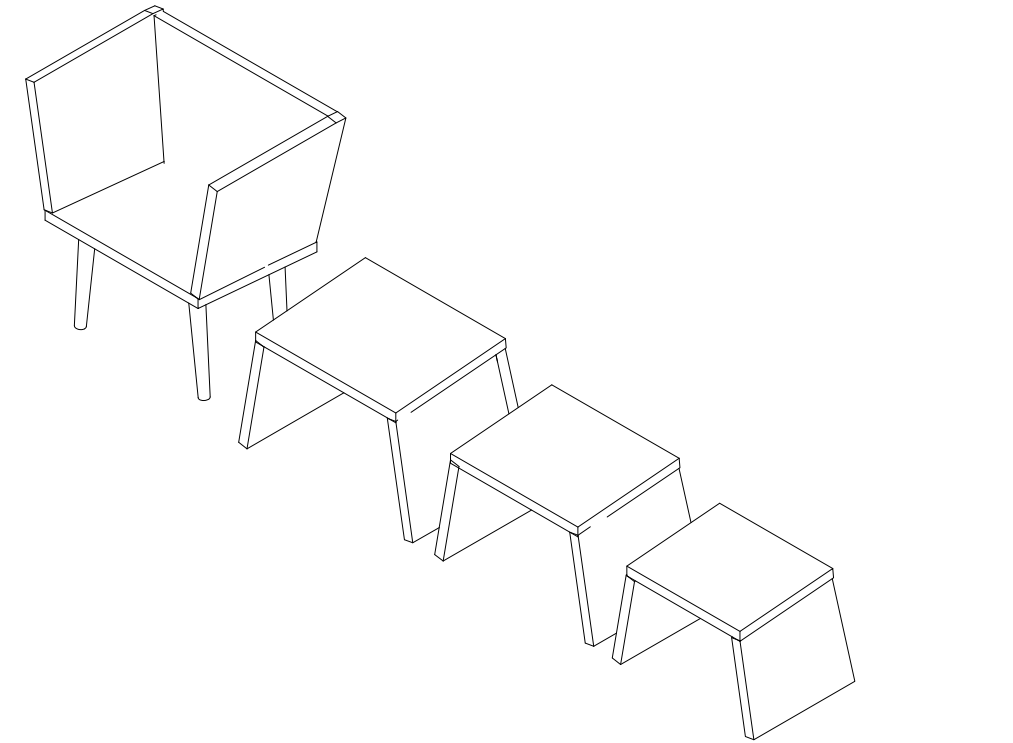
# **Construction Documents**



① Top View  
1" = 1'-0"



② Front View  
1" = 1'-0"



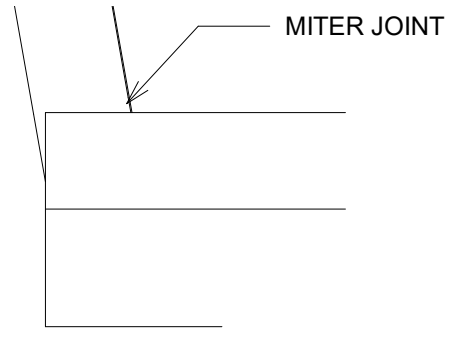
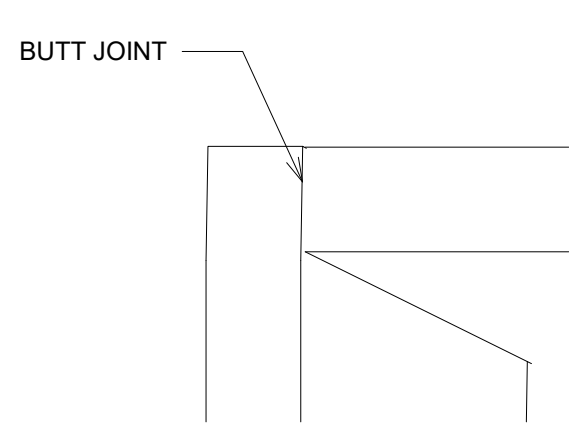
③ Side View  
1" = 1'-0"

Children's TherAplay  
Jenna Effinger

No.	Description	Date

Plan Views

Project number	Project Number	<b>A101</b>
Date	Issue Date	
Drawn by	Author	
Checked by	Checker	
Scale 1" = 1'-0"		



① **DETAIL 1**  
6" = 1'-0"

② **DETAIL 2**  
6" = 1'-0"

## FINISH SCHEDULE:

TAG: PT-1  
MFG: SHERWIN WILLIAMS  
COLOR: GREEN VIBES  
NMBR: SW 6928

TAG: PT-2  
MFG: SHERWIN WILLIAMS  
COLOR: ROSEBUD  
NMBR: SW 6288

TAG: PT-3  
MFG: SHERWIN WILLIAMS  
COLOR: RHYTHMIC BLUE  
NMBR: SW 6806

TAG: WD-1  
MTRL: PINE




**Children's TherAplay**  
**Jenna Effinger**

No.	Description	Date

Details		
Project number	Project Number	<b>A102</b>
Date	Issue Date	
Drawn by	Author	
Checked by	Checker	
		Scale 6" = 1'-0"