

Introduction

- The *Heavy Work Activities with OTis™* deck includes 55 illustrated 6" x 8" cards depicting activities that are sure to provide lots of rich sensory input! Activities are divided into five color-coded sections:

Let's Move! No Props Everyday exercises that can generally be performed with no additional materials or tools required (please note that some of the modifications for these exercises do require additional props)

Let's Move! With Props Exercises as well as indoor sensory and play activities that require some common fitness tools or household items

Inside Helper Home care tasks that can pack a powerful heavy work punch

Outside Helper Common outdoor household activities that are sure to make you break a sweat

Out and About Activities that can be done out in the community for sensory on-the-go

- Card fronts: The card fronts include a picture of the activity to provide a clear reference to form and sequence.
 - Card backs: The back of each card provides additional details regarding the benefits of each activity as well as how to perform the activity safely. Cards are divided into the following sections:
 - **Targets:** skills utilized and strengthened during the activity; also lists sensory areas that will receive the most input (please see the *Glossary of Terms* on page 10)
 - **Directions:** how to complete the exercise or activity using step-by-step instructions; also provides warnings and contraindications
 - ***Challenges:** options to make the activity more difficult for clients who have mastered the skill and need an additional challenge
 - ***Problems and Adaptations:** a brief list of potential problems the client may experience as well as how the therapist, parent, or teacher can adapt the activity to provide a safe "just-right challenge"
 - ***Activity Suggestions:** fun ways to incorporate the exercise or activity into daily life, or therapy sessions
- *Please note that Cards 1–18 also have corresponding *Instruction Booklets* that provide additional details regarding the *Challenges, Problems and Adaptations, and Activity Suggestions* briefly mentioned on the card backs.

Benefits

- The term "heavy work" is used to describe activities that help to provide input to the muscles and joints of the body (proprioception) as well as a cardiovascular workout to improve heart and lung endurance. Many heavy work activities also provide vestibular input, challenging balance and coordination through varying heights and directions in space.

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- Incorporating heavy work before sit-down activities can be very beneficial for individuals who have a lot of energy and therefore experience difficulty with sustained focus and concentration. Research has found that engaging in heavy work—especially those activities that provide significant vestibular and proprioceptive input—can have a calming and regulating effect on participants for up to several hours.
- Many of these activities offer a rich sensory experience, providing opportunities for simultaneous vestibular, proprioceptive, tactile, visual, and interoceptive (internal body awareness) input while serving as a fun way to exercise, strengthen muscles, and improve balance and coordination.

General Guidelines

- If the participant has any physical limitations or medical diagnoses, please contact his/her physician for approval before engaging in any heavy work activities or using these cards.
- Complete these activities for the first time under the supervision of a licensed occupational therapist, physical therapist, or exercise physiologist if you have any concerns.
- These activities can be incorporated into the client's prescribed sensory diet to meet sensory processing and integration needs. To learn more about sensory diets, see Super Duper's® *Sensory Diet Combo* (#DIET-22).
- Always discontinue any activity or movement that causes pain or discomfort.
- Take frequent breaks to "check in" with your body or encourage the participant to do so by asking the following questions: How hard is my heart beating? Am I short of breath? Am I becoming very tired or fatigued? Do I have any muscle or joint pain? Have I become very hot or thirsty?

Using Props

- The first 16 activities require no props for the basic exercise. Modified versions of these exercises may require some additional tools or materials.
- Props for other activities are listed on each card.
- It may be helpful to gather the following supplemental materials before getting started:
 - Yoga/exercise ball (round or peanut ball)
 - Blankets or sleeping bags
 - Boxes to load and carry
 - Books, canned goods, or other heavy, stackable items
 - Ankle or wrist weights
 - Weighted vest
 - Yoga mat
 - Small free weights, medicine balls, or kettlebells
 - Resistance exercise bands
 - Clay, dough, or therapy putty

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**Please Note: Cards do not have accompanying Instruction Booklet pages.*

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Push a Shopping Cart



Yogarilla





Push a Shopping Cart

Targets: back, chest, core, and upper extremity strength; cardiovascular endurance; proprioceptive input

Directions:

1. Visit a store with various shopping cart options: full-sized, half-sized/mini, or child-sized carts are available at some large retail chains. Choose a cart that is an appropriate size.
2. Shop throughout the store for items as needed. Choose large, bulky, or heavy items for additional proprioceptive input. "Check in" on your body periodically to make sure you are not overloading your cart and over-taxing your muscles or endurance.
3. Avoid crushing delicate objects by carefully stacking/rearranging your items as you go.

Challenges, Problems, and Adaptations:

For a Challenge	Problems and Adaptations
 Load it up: Shop at bulk stores to use an oversized cart or push a heavily-loaded cart for additional input.	 Limited strength: Opt for a smaller cart (like a half-sized or mini cart) or load fewer items into the cart to grade down the challenge.
 Incline: Push your loaded cart up (or down) an incline for different types of graded input.	 Limited endurance: Ask a partner to assist with pushing the cart if you become unexpectedly fatigued while shopping.

Activity Suggestions:

- Plan of attack: Before going to an unfamiliar grocery store for a full shopping trip, plan a visit to "scope out" the store. You can even make notes on how the store is organized and take pictures of the aisle signs. Create a shopping list organized by aisle or item type to decrease the risk of having to walk back and forth across the store if energy conservation is a concern.
- Push and pull: Build strength and endurance by pushing and pulling a variety of different objects: wagons, baby or pet strollers, wheelchairs, etc. Always ask for permission/consent if you are offering to transport someone else, and focus on safety while doing so. Practice going up and down inclines, engaging brake systems, etc.



Rake Leaves



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#OTHW-55

Targets: core, upper extremity, grip, and intrinsic hand strength; bilateral coordination; crossing midline; deep tactile, proprioceptive, and vestibular input

Directions:

1. Find a plastic or metal leaf rake that is an appropriate size (handle length and fan head width).
2. Hold the rake handle with both hands: one near the end of the handle, and the other about half-way down toward the fan head. Stretch your arms out, and place the tines (points) against the ground.
3. Pull/drag the rake tines back toward you, scooping and pulling leaves as you go. Rake the leaves into a pile.

Challenges, Problems, and Adaptations:

For a Challenge	Problems and Adaptations
<p> Narrow fan head: Using a rake with a narrower fan head can require more time and energy since it covers a smaller amount of space with each pass.</p>	<p> Discomfort with handle length: Look for a rake with an adjustable-length handle; some also have adjustable-width fan heads as well.</p>
<p> Garden rake: Use a garden rake with shorter metal tines to break up and rake soil in your yard or garden.</p>	<p> Fatigue or time management: Use a lighter-weight plastic rake with a wider fan head to cover a larger area more quickly. Please note that these rakes may not remove all of the leaves as thoroughly as narrower, metal rakes.</p>

Activity Suggestions:

- Rake race: Challenge a friend to a friendly race to see who can rake a given area more quickly.
- Crash pile: Rake together a large pile of leaves to create a "crash pile" for yourself or a friend! Avoid raking sticks or other sharp debris into the pile.

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Vacuum



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Vacuum





Targets: back, core, chest, upper, and lower extremity strengthening; cardiovascular endurance; upper/lower body coordination; proprioceptive and vestibular input



Directions:

1. Utilize a vacuum that is an appropriate size and weight for the client to effectively and safely handle. Some vacuums have built-in assistance features such as forward self-propulsion which can help to cut down on the amount of effort needed to push the vacuum over floor surfaces (especially on high-pile carpets).
2. Adjust the vacuum settings based on the type of flooring.
3. Unwind/loosen the cord, and plug the vacuum into a convenient wall outlet.
4. Adjust the handle angle, turn the unit on, and vacuum the floor. Concentrate on slightly overlapping the vacuum's previous path to keep from missing large areas of the floor.
5. Use extendable wands and attachments to vacuum under and around furniture and in tight or hard-to-reach spaces.
6. Turn the vacuum off, lock the handle into place, empty the canister into a trashcan, unplug the unit, and re-wind the cord.

Challenges, Problems, and Adaptations:

For a Challenge	Problems and Adaptations
 Use a non-self-propelled vacuum.	 Decreased strength: Use a lightweight, hand-held, or stick vacuum as opposed to a full-sized canister model.
 Vacuum a large space or area with high-pile carpeting.	 Poor endurance: Vacuum only one room or space at a time. Take breaks or designate specific days of the week to clean each individual space.

Activity Suggestions:

- Leave no trace: Sprinkle a deodorizer powder or baking soda over a dry, carpeted area. Let the powder sit for about 10 minutes, and then vacuum over it. Try to get it all! (Bonus activity: Mix your own carpet powder by using baking soda and essential oils.)
- Beat the clock: Set a timer or play a song, and try to vacuum an entire pre-determined space within that time. Try to beat your time in the future—but don't cut any corners!

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Stretchy Bands



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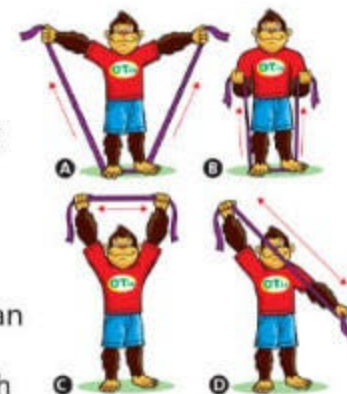
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Stretchy Bands







Targets: upper extremity, back, chest, and core strength; bilateral coordination; proprioceptive input; motor planning and praxis

Directions:

1. For all exercises: Choose a stretchy band that offers an adequate amount of resistance without being too challenging. Stand with your feet shoulder-width apart. Keep movements slow and controlled going in both directions.
2. Shoulder abduction: Place the middle of the band beneath your feet and hold one end in each fist. Your arms should be relaxed at your sides, palms facing forward. Pull both arms up in abduction at the same time. Hold briefly at the "top" of the exercise (as shown in *Image A*), and slowly lower your hands.
3. Bicep curls: Place the middle of the band beneath your feet and hold one end in each fist. Your arms should be relaxed at your sides, palms facing forward (arms in supination). Curl your arms up (elbow flexion). Hold briefly at the "top" of the exercise (as shown in *Image B*), and slowly lower your hands.
4. Lat pulldown: Start with the band held overhead, palms facing forward (*Image C*). Pull your arms apart and down, stopping at shoulder level. Hold briefly, then return to the starting position.
5. Diagonal pull: Start with your arms held straight out in front of your chest, grasping the band in closed fists. Pull arms in opposing directions diagonally (e.g., up to the right and down to the left; *Image D*), then bring them back to midline. Complete 5 reps in this direction, then switch (e.g., up to the left and down to the right).



Challenges, Problems, and Adaptations: For details, see *Instruction Booklet* p. 21.

For a Challenge	Problems and Adaptations
 Higher strength band	 Strength or grasp: complete without band
 Double the band	 Balance: perform seated
 Single-leg balance	 Pacing/control: complete with counts or metronome

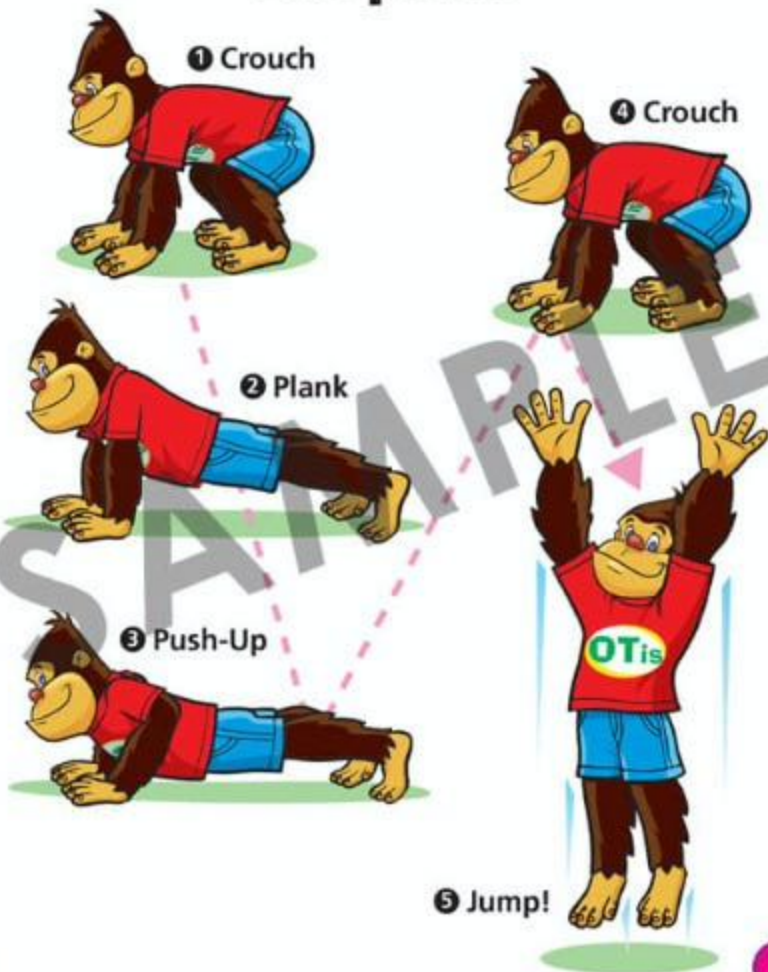
Activity Suggestions: stretch your imagination; follow the leader. See *Instruction Booklet* p. 21 for additional details.

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Burpees



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Burpees

Targets: bilateral and upper/lower body coordination; cardiovascular endurance; upper extremity, back, chest, lower extremity, and core strengthening; timing and rhythm

Directions:

1. Start in a slight squatting position with your knees bent, back straight, and your feet about shoulder-width apart.
2. Crouch: Lower your hands to the floor in front of you so they're just inside your feet, palms flat.
3. Plank: With your weight on your hands, kick your feet back so you're on your hands and toes, and in a push-up position.
4. Push-up: Keeping your body straight from head to heels, complete one push-up.
5. Crouch: With your weight on your hands, jump your feet back to their starting position, landing in another crouch.
6. Jump: Reach your arms over your head as you jump quickly into the air.
7. Repeat: As soon as you land with knees bent, get into a squat position and do another repetition.

Challenges, Problems, and Adaptations: For details and images, see *Instruction Booklet* p. 5.

For a Challenge	Problems and Adaptations
 Fancy jump: substitute a jumping jack, high-knee jump, or plyo jack for the regular burpee jump  Power lift	 Decreased strength and endurance: skip or modify the push-up and/or jump

Activity Suggestions: burpee book reading, burpee baseball relay. See *Instruction Booklet* p. 5 for additional details.

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